



# ASSESSING THE EFFECT OF INTERNAL CONTROL SYSTEMS ON THE PERFORMANCE OF THE MINISTRY OF TRADE AND INDUSTRY IN RWANDA

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**Abstract:** This study sought to analyse the effect of Internal Control Systems on the performance of public institutions in Rwanda, taking the Ministry of Trade and Industry as my case study. The following objectives guided the research into the effects of control environments, control activities, monitoring and review, and communication and information on the performance of public institutions. To determine the effects of risk assessment on the performance of public institutions, particularly the Ministry of Trade and Industry. A descriptive research design research design was used. A study population of 40 respondents, comprised of employees of different directorates and SPIU, was selected. (Respondents) were selected purposively. Data was collected from both primary and secondary using a questionnaire and documentation. The relationship was determined using Spearman's rank correlation. The results from the field showed that there was a strong relationship between the control environment and performance as indicated by R-square and adjusted R-square of 59.7% and 52.4%, respectively. The analysis showed that there is good practice in risk assessment in the Ministry of Trade and Industry, as evidenced by the mean. The results revealed that of the variation in the performance, 53.8% was caused by risk assessment. The research methodology used by a researcher included research design, study population, sample design, source of data, data collection techniques, and data processing and analysis in line with theoretical review; agency theory, stewardship theory, and attribution theory that related to the conceptual review of control environment, risk assessment, control activities, information and communication, and monitoring components. The R-square and modified R-square of 78.1 percent and 74.9 percent, respectively, demonstrated that there is a high association between control actions and performance. The results from the survey show that there is a relationship between monitoring and performance as indicated by R-square of 50.5% and adjusted R-square of 44.8%. The results from the field showed that there is a strong correlation between information and communication and performance as evidenced by R-square and adjusted R-square of 77.8% and 74.5% respectively. The researcher concluded that internal control systems has got major effects on the performance in public entities specifically MINICOM where OAG's reports reviewed Financial Statements Audit, Compliance Audit, and Performance Audit and found the following findings; misappropriation of government of resources, poor book keeping, ineffective recording of transaction, embezzlement of public funds and poor authorisation of government expenditures have been indicated in the audit reports. The researcher recommended that, the Ministry should encourage and motivate their employees to increase their compliance to control procedures and policies and employ an internal auditor in every public institution to monitor the effectiveness of the internal control systems.

**Key Terms:** Internal Control Systems, Environment, Risk Assessment, Control Activities, Monitoring, Information and Communication, Performance.

## I. BACKGROUND OF THE STUDY

Internal control systems, according to Cunningham (2004), begin as internal procedures with the positive purpose of assisting a firm in meeting its specified objectives. Internal controls are all the measures taken by an organization to protect its resources from waste, fraud, and inefficiency; to ensure the accuracy and reliability of accounting and operating data; to ensure compliance with the organization's policies; and to assess the level of performance in all organizational units. Oyelakin O. (2022).

This research focuses on the background to the study in which the concept of Internal Control Systems (ICSs) is put into regional

perspective as well as brings out the general perception that the institution of systems of internal control will always lead to improved performance. The research also brings into focus the scope of the study as covering Kenya. It tackles the justification of the research and brings out a diagrammatical representation linking internal controls and performance. (Mwindi, 2008). (Orobia, L. A., Padachi, K., & Munene, J. C., 2016; Kaplan, 2008; INTOSAI, 2004).

Internal control systems keep government agencies safe from fraud, waste, and abuse. Internal control systems are defined as "all of the co-ordinate procedures and measures employed inside a firm to secure its assets, monitor the correctness and reliability of its financial data, prorate operational efficiency, and adherence to mandated managerial standards. Non-financial internal control, on the other hand, is concerned with non-financial activities like as controls over a company's staff and operations, fixed asset controls, and even processes controls. Reid and Ashelby, 2000., Adegboyegun, A. E., Ben-Caleb, E., Ademola, A. O., Oladutire, E. O., & Sodeinde, G. M. (2020).

### Statement of the Problem

(Meinel, M., Eismann, T.T., Fixson, S., & Voigt, K. I. 2022). According to the Report of the Auditor General of State Finances for the year ended June 30, 2021, the audited Financial Statements Audit, Compliance Audit, and Performance Audit found the following findings: misappropriation of government resources, poor bookkeeping, ineffective recording of transactions, embezzlement of public funds, and poor authorization of government expenditures have been indicated in the audit reports.

### Objective of the Study;

The study focused on the following objectives: to examine the effect of the control environment on the performance of the Ministry of Trade and Industry; to determine the effect of risk assessment on the performance of the Ministry of Trade and Industry; to assess the effect of control activities on the performance of the Ministry of Trade and Industry.

### Research Questions

Is a lack of a good internal control system a major cause of fraud in the ministry? And what other major causes exist? Can a ministry with an effective internal control system prevent the menace of fraud? Does the ministry have an internal control system? If so, how effective is it? What kind of relationship exists between the detection and prevention of fraud and the internal control system?

### Research Hypothesis

The research is intended to investigate the impact of internal control systems in the circumstances of embezzlement and fraud detection

in the Ministry. Therefore, the data to be collected in this exercise was used to test the following hypothesis. H1: An effective internal control system can help to prevent the detection of fraud in the ministry. H0: That an effective internal control system may not help to prevent fraud in the ministry. Research is poised to confirm whether or not the above hypothesis is true. For this purpose, the research has formulated the above hypothesis.

#### *Scope of the Study*

The influence of internal control systems on the performance of the Ministry of Trade and Industry was the subject of this study, which spanned three fiscal years from July 2019 to June 2022.

#### *Significance of the Study*

The topic to be analysed in this research has a relationship with the formation I got in my studies, and then this research helps to increase the knowledge required for my academic formation and the fulfilment of the award of a Master's degree in Finance and Accounting from the University of Kigali. The findings of this study help public institutions by providing information about their internal control systems and how to improve them in order to have better management performance. The study's findings serve as a foundation for future research in this area by other scholars. This study on the internal control systems helps policymakers, especially the Ministry's administrators and board members, understand the underlying weaknesses of the internal control systems. The study also assists them in designing, implementing, and evaluating their organizational internal control systems, addressing areas of weakness for the effective, efficient, and cost-effective operation of their ministry. These findings can also be used by the Ministry of Trade and Industry to ensure accountability to appropriate stakeholders like the government, community, professionals, employers, and students, as well as to monitor and promote accountability.

## II. LITERATURE REVIEW

It then reviews the literature that is related to the study objectives, empirical review, and conceptual framework and ends with the research gap.

#### *Theoretical Review*

This report does a comprehensive review of the literature on internal control. Systems are interconnected components or technologies used to turn policies into results.

#### *Agency Theory*

Naz, M. A., Ali, R., Rehman, R. U., & Ntim, C. G. (2022). An agency relationship is defined as a contract in which one or more people (the principals) hire another person (the agent) to execute a service on their behalf and delegate certain decision-making authority to the agent. The connection between two parties, investors and managers, is studied using agency theory.

#### *Stewardship Theory*

Rouault, J., & Albertini, E. (2022). Stewardship theory accepts that managers are stewards whose responsibility is to align their behaviors with the objectives of their principals. In this regard, management within various departments is responsible for providing all necessities that may impact the effectiveness of internal audit.

#### *Attribution Theory*

Spitzberg, B. H., & Manusov, V. (2021). Attribution theory is a social psychology theory that investigates how individuals understand events and behaviors as well as how they assign reasons to them

#### *Conceptual Review*

##### *Control Environment*

Han, Q., Wang, X., Li, Y., & Zhang, Z. (2022). The control environment influences the control awareness of the organization's personnel, which sets the tone for internal control.

##### *Risk Assessment*

Risk assessment is the process of evaluating the elements that influence the likelihood of the organization's objectives not being met. Wang, L., Cheng, Y., and Wang, Z. (2022).

##### *Control Activities*

Control activities are rules, processes, and mechanisms put in place to guarantee that management directions are followed correctly. Barinda, S., & Ayuningtyas, D. (2022).

##### *Monitoring*

Monitoring refers to the process of assessing the quality of an internal control structure over time. Since internal controls are processes, it is usually accepted that they tend to be adequately monitored in order to assess the quality and effectiveness of the system over time. Kalischko, T., & Riedl, R. (2022).

##### *Information and Communication System*

According to Al Qayoudhi, S. (2022), internal control requires that all pertinent information be identified, captured, and communicated in a form and time frame that enables people to carry out their reporting responsibilities.

##### *Empirical Review*

internal and external auditors should be continually updated and well-grounded in international reporting standards (IFRS) and principles in order to improve their knowledge and abilities in applying accounting processes and stay current with current challenges. Earnings management and value relevance during the mandatory transition from local GAAPs to IFRS in Europe, Capkun, V., Jeny, A., Jeanjean, T., and Weiss, L. A. (2008).

##### *Control Environment and Performance*

The tone of an organization is set by the control environment, which influences the control consciousness of its employees.

##### *Risk Assessment and Performance*

The requirement for performance testing for each individual component in a system is determined by risk assessment. Hence, for all the components that make up a system, a risk score or matrix is computed.

##### *Control Activities and Performance*

Control operations take place at all levels and in all departments of the company. Approvals, authorizations, verifications, reconciliations, and assessments of operating performance, as well as asset security and segregation of roles, are all included.

*Monitoring and Performance*

Performance monitoring is the systematic and periodic observation of performance over time in order to develop or verify performance records, to uncover inefficient and ineffective practices, to identify needs for services, and most importantly, to detect underperformance timely to avoid further deterioration.

*Conceptual Framework*

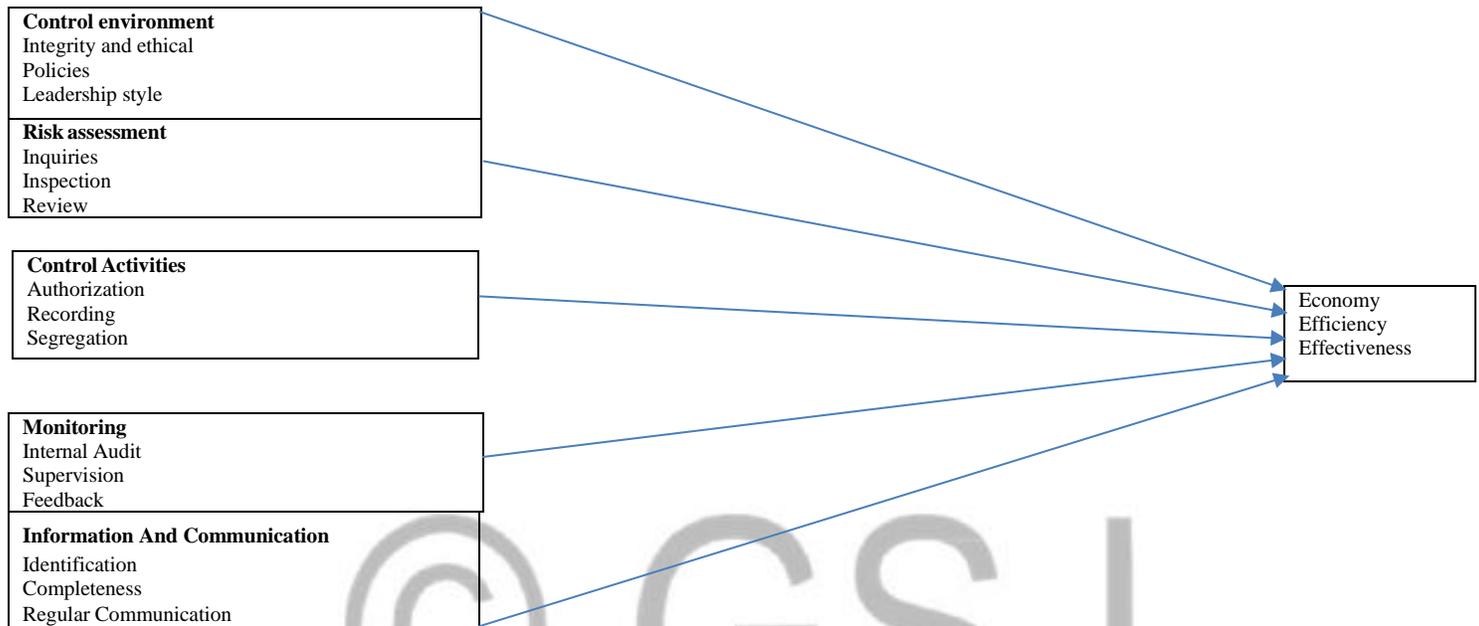
The independent variable, which is the internal control system, was measured by control environment, control activities, monitoring and review, communication and information, and risk assessment. The dependent variable, which is performance, is measured by the 3Es (economy, efficiency, and effectiveness).

*Information and Communication, and Performance*

**Figure 2. 1 Conceptual framework**

**Independent Variable: Internal Control System**

**Dependent Variables: Performance**



Source: Researcher 2022

Information and communication have a direct impact on the management of public institutions through control activities, control environment, risk assessment, monitoring, and review.

*Performance of Public Institutions*

As a notion, value for money requires that there be a yardstick against which to judge the performance of goals. However, determining where there is good value for money may be tricky (ACCA F9, 2010). Ahmed, A. C. A. (2010). Auditing ethics and ethical studies in various accounting bodies

*Research Gap*

Internal control mechanisms and the functioning of public institutions have been the subjects of several studies. However, none of these studies can be generalized to the Rwandan context because they were undertaken in a setting other than Rwanda. As a result, the goal of this study is to look at the influence of internal control systems on public-sector performance.

Hoai, T. T., Hung, B. Q., & Nguyen, N. P. (2022).

**III. METHODOLOGY**

This chapter presents a brief description of the area of study and the methodology that were used by the researcher.

*Research Design*

Research design is the blue print of research, according to Gupta, B. N., and Nitin Gupta, 2022. In this study, both descriptive and inductive research designs were used. According to Pandey, P., &

Pandey, M. M. (2021), In their work, qualitative researchers emphasise the social construction of reality, the intimate collaboration between researchers, and the environmental restrictions that shape it.

*Study Population*

Zamzam, S. M., Abdel-Aziz, M., Atef, A., Abdel-Naseer, U., Hamoda, M., Salah, M., & Hamdy, H. S. (2022). A defined population is "a set of cases from which a sample is drawn and to which a researcher wants to generalize."

*Sample Size and Selection*

A sample, according to Hamdy, H. S. (2022), is a portion of the population that is purposefully chosen for the purpose of inquiry. The sample size for my case study is 40 people. The researcher used a universal sampling technique.

*Data Collection Instruments*

The researcher was expected to gather material from primary sources such as a questionnaire and documentary footage. Sharma, D., & Kumar, N. (2022).

*Questionnaire Technique*

According to Severn, J. R., Throsby, D., & Petetskaya, K. (2022),

this technique is a research instrument consisting of a series of closed-ended questions on a five-point Likertscale for the purpose of gathering information from respondents, though they are often designed for statistical analysis of responses. The questionnaires were distributed to 40 employees.

*Documentary Technique*

The documentary style is employed to examine various theoretical and conceptual perspectives on development strategies and project management. To get reliable and helpful information and data for our investigation, we contacted a variety of sources. Nirwana, A. R., & Mukadar, S. (2021).

*Validity and Reliability*

After selecting the research design, the researcher checked its validity and reliability. According to Quintão, C., Andrade, P., & Almeida, F. (2020), Validity and reliability in research design refer to the need to ensure that concepts used in the study measure what they are actually intended to and that this measurement is consistent and stable for all respondents.

*Data Processing*

According to Song, H., Li, M., Wu, C., Wang, Q., Wei, S., Wang, M., & Ma, W. (2022), data processing is concerned with classifying data into meaningful categories called codes.

*Editing*

According to Li, Q., Chen, X., Yuan, W., Lu, H., Shen, R., Wu, S., ... & Yua, W. (2021), editing is the process by which errors in completed questionnaires are identified whenever possible.

*Coding*

Coding, according to Costa, M. C., Gabriel, A. F., & Enguita, F. J. (2020), is the process of categorizing answers to queries into meaningful groups.

*Tabulation*

Tabulation is the technical name for a portion of the statistical data analysis process that entails counting to calculate the number of instances that fit into distinct categories. Zhang, Y., Lin, Q., Du, W., & Qian, F. (2022).

*Data Analysis*

The data collected from the primary and secondary surveys were compiled, sorted, edited, and coded to ensure the required quality and accuracy before being statistically analyzed using the statistical package for social scientists (SPSS). Descriptive Statistics for example Mean and Standard Deviation, and Inferential Statistics like Correlation Analysis and Regression Analysis.

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

Y= Performance  
 $\beta_0$ = Constant  
 $\beta_1 - \beta_5$ = Coefficient of Estimates  
 $X_1$ = Control Environment  
 $X_2$ = Risk Assessment  
 $X_3$ = Control Activities  
 $X_4$ = Monitoring  
 $X_5$ = Information and Communication  
 $\epsilon$ = Model's Random Error

*Ethical Consideration*

The researcher stated the study's goal as well as the sort of information that the respondents were asked to supply, detailed the purpose of the planned study and also explained to the respondents how they must contribute and what was expected of them throughout the period of delivering the introduction letter seeking access to information. Another ethical issue that was considered by the researcher was that of allowing sufficient time and persuading for some value of credibility.

*Limitations of the Study*

The following are some of the drawbacks that were discovered: Sample Profile, Technique, Data Collection Process, Equipment, Time; Financial Resources, and Literature Access;

*Overcoming the Limitations of the Study:*

Minimizing exclusion, maximizing ethics, overcoming practical issues, and exploring new opportunities for different ways of working:

**IV. DATA ANALYSIS, INTERPRETATION AND DISCUSSION**

The results of the respondents' biodata are presented in the first part. The findings relating to the study's goals are presented in the second through sixth parts of Yandell, B. S. (2017).

**General information about the Respondents;** This section presents information about the biodata of the respondents as indicated by table 4.1 to 4.4 below:

**Table 4. 1 Age of Respondents**

	Age (years)	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20 – 40	17	40.5	40.5	40.5
	41 and above	23	59.5	59.5	100.0
	Total	40	100.0	100.0	

Source: Field Data 2022

The results from the show that 40.5% of the respondents are between 20 and 40 years of age, whereas 59.5% indicated that

they are 41 years of age or older.

**Table 4. 2 Gender of Respondents**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	25	62.5	62.5	62.5
	Female	15	37.5	37.5	100.0
	Total	40	100.0	100.0	

Source: Field Data 2022

According to the results of the study, 62.5 percent of the respondents were male and 37.5 percent were female. According to the findings

of the study, the Ministry of Trade and Industry is gender sensitive, government, employing more than 30% of those recommended by the

**Table 4. 3 Academic Background of the Respondents**

	Academic Background	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Secondary	4	10.0	10.0	10.0
	Diploma	29	72.5	72.5	82.5
	Bachelor	2	5.0	5.0	87.5
	Master	5	12.5	12.5	100.0
	Total	40	100.0	100.0	

Source: Field Data 2022

The results from the field show that the majority of the respondents possess a diploma, 12.5% have a Master’s degree, 5% have a Bachelor’s degree, and 10% have a secondary certificate. as evidenced by 72.5% of the respondents who

**Table 4. 4 Experience of Respondents**

	Experiences	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 4 years	9	22.5	22.5	22.5
	5 - 9 years	19	47.5	47.5	70.0
	10 years and above	12	30.0	30.0	100.0
	Total	40	100	100.0	

Source: Field Data 2022

table 4.4; This is evidenced by 47.5% of the respondents having spent between 5–9 years and 30% having spent 10 years and above, while 22.5% are those with less than 4 years of experience at the Ministry.

**Table 4. 5 Descriptive Statistics on the existence of control environment**

	N	Mean	SD
Integrity and ethical values	40	3.2250	1.29075
Commitment and competence	40	3.7500	1.03155
Leadership philosophy and operating style	40	3.7500	1.27601
Authority and responsibility	40	3.7000	1.13680
Compliance with Laws and regulations	40	4.1000	.87119
Policies and Procedures	40	4.1000	1.03280
Valid N (listwise)	40		

Source: Field Data 2022

Table 4.5 shows the existence of a strong control environment in the Ministry of Trade and Industry. The results from the survey show that there is a strong control environment within the Ministry of Trade and Industry, as evidenced by a mean that is above 2.5. The results revealed that policies and procedures and compliance with the laws and regulations are very strong, as indicated by the mean of 4.1.

**Table 4. 6 ANOVA<sup>b</sup>**

Model	Sum of Squares	DF	Mean Square	F	Sig.
1	Regression	3.448	6	.575	8.148
	Residual	2.327	33	.071	
	Total	5.775	39		

Predictors: (Constant), Control Environment

Dependent Variable: Performance Source: Field Data 2022

Table 4.6; The results from the survey show that the model is fit to predict the relationship between the study variables, as evidenced by P-values of 0.000 and F-statistics of 8.148. Since the P-values are less

**Table 4. 7 Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.773 <sup>a</sup>	.597	.524	.26557

Predictors: (Constant), Control Environment Source: Field Data 2022

Table 4.7; the results from the survey show that there is a strong relationship between the study variables as indicated by R-square and

adjusted R-square of 59.7% and 52.4%, respectively. This implies that of the variation in the performance of the Ministry of Trade and Industry, 52.4% is caused by the control environment.

Industry, 52.4% is caused by the control environment.

**Table 4. 8 Coefficients<sup>a</sup>**

Model		UnstandardizedCoefficients		StandardizedCoefficients		T	Sig.
		B	Std. Error	Beta			
1	(Constant)	-.151	.093			-5.516	.000
	Control Environment	.259	.078			.997	3.333
	Risk Assessment	-.074	.164			-.228	-.452
	Control Activities	-.095	.096			-.362	-.990
	Monitoring	.188	.044			.638	4.289
	Information	.211	.080			.548	2.623
	Communication	-.118	.037			-.364	-4.355

Dependent Variable: PerformanceSource: Field Data 2022

Table 4.8; The most significant variables in the relationship are communication and monitoring, with a P-value of 0.0001. The control environment and information come next, with P-values of 0.002 and 0.013, respectively. The results further indicated that risk assessment

and control activities are not statistically significant as the P-value is above 5%.

**The effect of Risk Assessment on Performance**

The results are presented in the findings below:

**Table 4. 9 Descriptive Statistics on the Existence of Risk assessment**

	N	Mean	SD
Inquiry of the management and the owners	40	4.2000	1.09075
Observation and inspection	40	4.0250	.97369
Review of the previous year	40	4.4000	.81019
Business processes mapping	40	4.1750	.78078
Valid N (listwise)	40		

Source: Field Data 2022

Table 4.9; The findings show that there is good practice in risk assessment in the Ministry of Trade and Industry. This is evidenced by the review of the previous year's reports with a mean of 4.40, the inquiry of management and the owners with a mean

of 4.20, business process mapping with a mean of 4.175, and observation and inspection with a mean of 4.025. The results revealed that the practice of risk assessment is very good since the mean is above 2.5.

**Table 4. 10 Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.773 <sup>a</sup>	.597		.538

Predictors: (Constant), Risk Assessment

Table 4.10; The results revealed that of the variation in the performance, 53.8% was caused by risk assessment.

performance, 53.8% was caused by risk assessment.

**Table 4. 11 ANOVA<sup>b</sup>**

Model		Sum of Squares	DF	Mean Square	F	Sig.
1	Regression	3.449	5	.690	10.081	.000 <sup>a</sup>
	Residual	2.326	34	.068		
	Total	5.775	39			

Predictors: (Constant), Risk Assessment

Dependent Variable: performance

Table 4.11; The results from the survey show that the model is fit to

predict the relationship between the study variables. This is evidenced by the P-value of 0.000 and F-statistics of 10.081.

**Table 4. 12 Coefficients<sup>a</sup>**

Model		UnstandardizedCoefficients		StandardizedCoefficients		T	Sig.
		B	Std. Error	Beta			
1	(Constant)	2.601	1.189			2.188	.036
	Inquiry of the management and the owners	.081	.048			.229	2.695
	Observation and inspection	-.057	.040			-.144	-3.140
	Review of the previous year	-.360	.108			-.759	-3.324
	Business processes mapping	-.031	.110			-.062	-.280

Dependent Variable: PerformanceSource: Field Data 2022

Table 4.12; The results further indicated that the review of the previous year's reports, inspection, observation, and inquiry of the management were statistically significant since their P values were less than 5%. Furthermore, the results indicated that business process mapping is not statistically significant since the P-value is more than 5%. The results further indicated that there was a negative relationship between observation and inspection (OI), review of the previous year's report (RPR), business process mapping (BPM), and

performance (P). Similarly, there is a positive relationship between the inquiry of the management or owners (IM) and performance.  $P = 2.61 + 0.81IM - 0.57OI - 0.36RPR - 0.031BPM$  Other factor remaining constant, an increase in the performance by one standard deviation led to inquiry by management to increase by 0.81 and a reduction of 0.57, 0.36 and 0.031 in observation and inspection, reporting of the previous year's report and business process mapping respectively.

**The effect of Control Activities on Performance**

**Table 4. 13 Descriptive Statistics on the existence of control activities**

	N	Mean	SD
Authorization of transactions	40	4.6750	.47434
Segregation of duties	40	4.1750	.95776
Reconciliation	40	3.9750	1.84651
Recording	40	4.4250	.71208
Reliability of financial statements	40	4.1500	1.05125
Valid N (listwise)	40		

Source: Field data 2022

Table 4.13; The results show that authorization of transactions has a mean of 4.675, segregation of duties with a mean of 4.175, Table 4. 14 Model Summary

reconciliation 3.975, recording 4.425, and reliability of financial statements 4.150. This is evidenced by a mean that is above 3.0.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.884 <sup>a</sup>	.781	.749	.19282

Predictors: (Constant), Control Activities

The R-square and adjusted R-square show that of the variation in the performance 78.1% and 74.9% respectively are caused by control activities.

**Table 4. 15 ANOVA<sup>b</sup>**

Model		Sum of Squares	DF	Mean Square	F	Sig.
1	Regression	4.511	5	.902	24.264	.000 <sup>a</sup>
	Residual	1.264	34	.037		
	Total	5.775	39			

Predictors: (Constant), Control Activities

Dependent Variable: Performance

Table 4.15 The results show the P-value is 0.000 and the F-statistics is 24.264.

**Table 4. 16 Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients		T	Sig.
		B	Std. Error	Beta			
1	(Constant)	2.311	.493			4.690	.000
	Authorization of transactions	.171	.083	.211		2.056	.048
	Segregation of duties	-.299	.042	-.745		-7.179	.000
	Reconciliation	.015	.008	.073		2.839	.007
	Recording	-.144	.051	-.266		-2.795	.008
	Reliability of financial statements	-.026	.033	-.072		-.796	.432

Dependent Variable: Performance

Table 4.16; statistically significant at 5%. The most significant variables are segregation, with a P-value of 0.000, followed by reconciliation, recording, and authorization of transactions, with P-values of 0.007, 0.008, and 0.048, respectively. The results also indicated that the reliability of financial statements is not statistically significant at 5%. The results further indicated that there is a positive relationship between authorization (O), reconciliation (R), and

performance. Similarly, there is a negative relationship between segregation of duties (S), recording (Rc), reliability of financial statements (Rf), and performance. The results further revealed that there is a positive relationship between control activities and the performance of the Ministry of Trade and Industry.

$P = 2.311 + 0.17A + 0.015R - 0.299S - 0.144Rc - 0.026Rf$   
This means that, holding other factors constant, an increase in the performance by one standard deviation, authorization and

reconciliation increased by 0.17 and 0.015, respectively. Similarly, an increase in the performance by one standard deviation, segregation, recording, and reliability of reports was reduced by 0.299, 0.144, and 0.026, respectively.

**The effect of Monitoring on Performance**

The results from the survey are summarized in the tables below:

**Table 4. 17 Descriptive Statistics on the Existence of Monitoring**

	N	Mean	SD
Existence of internal audit	40	4.4500	.81492
Regular supervision	40	3.9750	1.02501
Periodic Feedback	40	4.2000	.99228
Handling customer complaints	40	4.4750	.81610
Valid N (listwise)	40		

Source: Field data 2022

Table 4.17; This was reflected in the existence of the internal audit indicated by the mean of 4.45, regular supervision indicated by the mean of 3.975, periodic feedback with a mean of 4.2 and handling

of complaints with a mean of 4.475. The results revealed that there is good monitoring of activities as evidenced by the mean, which is above 3.0.

**Table 4. 18 Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.711 <sup>a</sup>	.505	.448	.28579

Predictors: (Constant), Monitoring Source: Field data 2022

Table 4.18 tests the relationship between monitoring of activities and performance using Pearson’s R-square and adjusted R-square. The results from the survey show that there is a relationship between

study variables as indicated by an R-square of 50.5% and an adjusted R-square of 44.8%. This therefore means that of the variation in the performance, 44.8% is caused by monitoring.

**Table 4. 19 ANOVA<sup>b</sup>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.916	4	.729	8.926	.000 <sup>a</sup>
	Residual	2.859	35	.082		
	Total	5.775	39			

Predictors: (Constant), Monitoring  
Dependent Variable: Performance

Table 4.19 tests the fitness of the model to predict the relationship between monitoring and performance. The results from the survey show that the model is fit to predict the relationship between the

study variables, as evidenced by a P-value of 0.000 and an F-statistics of 8.926.

**Table 4. 20 Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.673	.287		9.317	.000
	Existence of internal audit	-.102	.416	-.215	-4.960	.003
	Regular supervision	-.143	.059	-.381	-2.447	.020
	Periodic Feedback	-.002	.001	-.004	-2.19	.045
	Handling customer complaints	-.105	.085	-.222	-1.241	.223

Dependent Variable: Performance Source: Survey data 2022

Table 4.20; Tests the relationship between the study variables as evidenced by the P-values of 0.003, 0.20, and 0.045, respectively. The findings indicated that there is a negative relationship between the existence of the internal audit (EIA), regular supervision (RS), periodic feedback (PF), handling of the customers’ complaints (HCC), and performance.  $P = 2.673 - 0.102EIA - 0.143RS - 0.002PF - 0.105HCC$

This implies that an increase in performance by one standard deviation, the existence of an internal audit, regular supervision, periodic feedback, and the handling of customers’ complaints went down by 0.102, 0.143, 0.002, and 0.105 respectively.

**The effect of Information Communication on Performance**

The results are summarized in the tables below.

**Table 4. 21 Descriptive Statistics effective information communication**

	N	Mean	Std. Deviation
Effective flow of information	40	4.4500	.50383
Notice board	40	4.2000	.79097
Regular communication	40	4.5750	.67511
Complete information	40	4.0250	1.31046
Identification of information	39	4.6410	.62774
Valid N (listwise)	39		

Source: Field data 2022

Table 4.21; Findings show that their effective flow of information is indicated by the mean of 4.45, there is a notice board on which information is communicated as indicated by the mean of 4.20, regular communication was indicated by the mean of 4.57, complete information with a mean of 4.025, and identification of information indicated by the mean of 4.410.

**Table 4. 22 Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.882 <sup>a</sup>	.778	.745	.19644

Predictors: (Constant), Information and Communication

Table 4.22 tests the relationship between information communication and the performance of the Ministry of Trade and Industry using the Pearson correlation coefficient. The R-square and adjusted R-square show that of the variation in the performance, 77.8% and 74.5%, respectively, are caused by variation in the information communication.

**Table 4. 23 ANOVA<sup>b</sup>**

Model		Sum of Squares	DF	Mean Square	F	Sig.
1	Regression	4.470	5	.894	23.168	.000 <sup>a</sup>
	Residual	1.273	33	.039		
	Total	5.744	38			

Predictors: (Constant), Information and Communication

Dependent Variable: Performance

The table above tests the fitness of the model to predict the relationship between information communication and the performance of the Ministry of Trade and Industry. The results show that the data fits within the model. This was evidenced by a P-value of 0.000 and the F-statistics of 2. 168. This therefore means that the model can be relied upon to predict the relationship between the study variables.

**Table 4. 24 Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	T	
1	(Constant)	3.349	.403		8.314	.000
	Effective flow of information	.307	.091	.396	3.368	.002
	Notice board	-.133	.054	-.270	-2.451	.020
	Regular communication	-.254	.062	-.444	-4.115	.000
	Complete information	-.052	.027	-.176	-2.101	.039
	Identification of information	-.347	.065	-.560	-5.320	.000

Dependent Variable: Performance Source: Field data 2022

Table 4.24 tests the significance of the constructs of information communication in explaining the relationship between the study variables. The results show that all the tested constructs are statistically significant at a 5% level of significance. The most significant variables include identification of information and regular communication with a P-value of 0.000, followed by effective flow of information, notice board and complete information as evidenced by the P-values of 0.002, 0.02 and 0.039, respectively. The results further indicated that there is a negative relationship between notice board (NB), regular communication

(RC), complete information (CI), identification information (IF) and performance. Similarly, there is a positive relationship between effective flow of information (EF) and performance.  $P = 3.347 + 0.307EF - 0.133NB - 0.254RC - 0.052CI - 0.347IF$   
The results from the survey show that an increase in the performance by one standard deviation, effective flow of information increased by 0.307. Additionally, an increase in the performance by one standard deviation, the use of notice boards, regular communication, complete information, and the identification of information went down by 0.133, 0.254, 0.052, and 0.347 respectively.

### *Discussion*

Control Environment Objectives; Having a strong internal control environment can provide management of the ministry and stakeholders reasonable assurance. Risk Assessment Objectives; Risk assessment is management's process of identifying risks and rating the likelihood and impact of a risk event. An internal control assessment can be performed at the same time. Control Activities Objectives; Control activities are human and automated instruments that help avoid or mitigate hazards that might obstruct the achievement of the organization's goals and missions. Monitoring Objectives; Monitoring helps to ensure that control activities and other planned actions to effect internal control systems are carried out properly and in a timely manner, and that the end result is effective internal controls. Information and Communication Objectives; Information is communicated within the company through internal communication, which flows up, down, and across the ministry.

## V. SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

### *The effect of the Control Environment on the Performance of the Ministry of Trade and Industry*

The results revealed that policies and procedures and compliance with the laws and regulations are very strong, as indicated by the mean of 4.1. These are followed by commitment and competence, and leadership philosophy and operating style, with a mean of 3.75. Authority and responsibility were evidenced by a mean of 3.70, whereas integrity and ethical values were evidenced by a mean of 3.225. The results from the survey show that the model is fit to predict the relationship between the study variables, as evidenced by P-values of 0.000 and F-statistics of 8.148. Since the P-values are less than 5% and the F-statistics is above 2.5, the model can be relied upon in the prediction of the relationship between the study variables. The results from the survey show that there is a strong relationship between the study variables as indicated by R-square and adjusted R-square of 59.7% and 52.4%, respectively. The results show that there is a negative correlation between the control environment and performance. The most significant variables in the relationship are policies and regulations and authority and responsibility, with a P-value of 0.000. These are followed by integrity and ethical values and compliance with the laws and regulations as indicated by the P-value 0.002 and 0.013, respectively. The results further indicated that commitment and competence, leadership philosophy and operating style are not statistically significant as the P-value is above 5%. The results further revealed that there is a negative relationship between policies and procedures, leadership philosophy and operating style, commitment, competence, and performance.

### *The effect of Risk Assessment on the Performance of the Ministry of Trade and Industry*

The findings show that there is good practice in risk assessment in the Ministry of Trade and Industry. This is evidenced by the review of the previous year's reports with a mean of 4.40, the inquiry of management and the owners with a mean of 4.20, business process mapping with a mean of 4.175, and observation and inspection with a mean of 4.025. The results revealed that the practice of risk assessment is very good since the mean is above 2.5. The results

revealed that of the variation in the performance, 53.8% was caused by risk assessment. The results from the survey show that the model is fit to predict the relationship between the study variables. This is evidenced by the P-value of 0.000 and F-statistics of 10.08. The results indicated that there is a positive relationship between risk assessment and performance. The results further indicated that the review of the previous year's reports, inspection, observation, and inquiry of the management were statistically significant since their P values were less than 5%. Furthermore, the results indicated that business process mapping is not statistically significant since the P-value is more than 5%.

### *The impact of Control Activities and the Ministry of Trade and Industry's Performance*

The results show that authorization of transactions has a mean of 4.675, segregation of duties has a mean of 4.175, reconciliation 3.975, recording 4.425, and reliability of statements 4.150. The results revealed that there is good practice in control activities in the Ministry of Trade and Industry. This is evidenced by a mean that is above 3.0. The R-square and adjusted R-square show that of the variation in the performance, 78.1% and 74.9%, respectively, are caused by control activities. The results show the P-value is 0.000 and the F-statistics is 24.264.

### *The effect of Monitoring on the Performance of the Ministry of Trade and Industry*

The results from the survey show there is good practice in the monitoring activities in the Ministry of Trade and Industry. This was reflected in the existence of the internal audit indicated by the mean of 4.45, regular supervision indicated by the mean of 3.975, periodic feedback with a mean of 4.2 and handling of complaints with a mean of 4.475. The results revealed that there is good monitoring of activities as evidenced by the mean, which is above 3.0. The results from the survey show that there is a relationship between study variables as indicated by an R-square of 50.5% and an adjusted R-square of 44.8%. This therefore means that of the variation in the performance, 44.8% is caused by monitoring.

### *The effect of Information Communication on the Performance of the Ministry of Trade and Industry*

The findings show that there is an effective flow of information, as indicated by a mean of 4.45; a notice board on which information is communicated, as indicated by a mean of 4.20; regular communication, as indicated by a mean of 4.57; complete information, as indicated by a mean of 4.025; and identification of information, as indicated by a mean of 4.410. The results from the survey revealed that they had effective information communication within the Ministry of Trade and Industry since all the constraints that were used to measure information communication had a mean that was above 3.0. The results from the survey show that there is a strong correlation between the study variables. The R-square and adjusted R-square show that of the variation in the performance, 77.8% and 74.5%, respectively, are caused by variation in the information communication.

### *Conclusion*

The conclusions have been made as the objective of the study, and the important point to note here is that internal controls may exist in an organization but their effectiveness may change over a period of time. If internal controls were effective last year, that does not guarantee that they will be effective this year too.

*The effect of the Control Environment on the Performance of the Ministry of Trade and Industry*

The results from the survey showed that there is a strong relationship between the study variables as indicated by R-square and adjusted R-square of 59.7% and 52.4%, respectively. The results further showed that there is a negative correlation between the control environment and performance.

*The effect of Risk Assessment on the Performance of the MINICOM*

The results revealed that of the variation in the performance, 53.8% was caused by risk assessment. The results further indicated that there is a positive relationship between risk assessment and performance. Therefore, risk assessment is a key variable in the performance of public entities, in this case, MINICOM.

*The impact of Control Activities and the Ministry of Trade and Industry's Performance*

The results showed that R-square and adjusted R-square show that of the variation in the performance, 78.1% and 74.9%, respectively, are caused by control activities.

*The effect of Monitoring on the Performance of the Ministry of Trade and Industry*

The results from the survey show that there is a relationship between study variables as indicated by an R-square of 50.5% and an adjusted R-square of 44.8%. This therefore means that of the variation in the performance, 44.8% is caused by monitoring.

*The effect of Information Communication on the Performance of the Ministry of Trade and Industry*

The R-square and adjusted R-square showed that the variation in the performance, 77.8% and 74.5%, respectively, is caused by variation in the information communication.

*Recommendations*

To the Ministry of Trade and Industry; The Ministry should encourage and motivate their employees to increase their compliance with control procedures and policies. There should be close collaboration and communication among employees about the importance of internal control systems. Finally, all the information should be open to different users who help the public institutions identify their weaknesses through advice, recommendation, criticism, and challenge, thus solving the effects of the control environment on the performance; effects of risk assessment on the performance; effects of control activities on the performance; effects of monitoring on the performance; effects of communication and information on the MINICOM. To the Government; The Republic of Rwanda should employ internal audit employees and other control measures in every public institution to monitor the effectiveness of the internal control systems. Provide training to all employees on the importance of internal control systems and accounting systems. Employ more employees to have segregation of duties.

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