

Risk Management and Efficiency of Custom Operations in Nigeria

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ABSTRACT

This study examined the relationship between risk management and efficiency of custom operations in Nigeria. The study was anchored on Systems Theory, Contingency Theory and Institutional Theory. The study adopted survey research design. The population of this study consisted of 605 junior and senior staff of the Nigerian Customs service in Area 1 Command in Port Harcourt and Area 2 Command in Onne, Rivers State. Using Taro Yamane's formula and simple random sampling, the sample size consisted of 241 personnel of the Nigerian Customs service in Area 1 Command in Port Harcourt and Area 2 Command in Onne, Rivers State. The study made use of primary data and structured questionnaire as the data collection instrument. Frequencies, simple percentages, tables, charts and mean scores were used to analyse the demographic data of the respondents and the research questions while regression technique was used to test the hypotheses at 95% level of confidence (0.05 significant level). The results of the study showed that: Revenue risk, operational risk, security risk and fraud risk have negative and significant impact on the efficiency of custom operations in Nigeria. Hence, management of these risk has a significant impact on the efficiency of custom operations in Nigeria. Based on the findings, the study concluded that risk management plays a vital role in promoting and sustaining efficiency of custom operations in Nigeria. The study recommended among others that government should implement robust anti-corruption frameworks within the Nigeria Customs Service (NCS), including regular audits, strict penalties for corrupt practices, and the establishment of an independent oversight body to monitor customs operations.

INTRODUCTION

All of human history is defined by the dangers that people have faced and the measures they have taken to overcome them. It is worth noting that taking risks is an integral aspect of human endeavours. According to Yahaya, Lamidi, Kutigi, and Ahmed (2015), there are many hazards associated with human advancement. According to Chapman and Cooper (2016), risk is the potential for monetary gain or loss due to the unpredictability of an action's outcomes. Aduloju and Akindipe (2022) stated that risk is inherent in all human actions, businesses, and managerial responsibilities. In order to minimise its influence on corporate operation and performance, it is necessary for firms to grasp the dynamics of risk control via risk management. To safeguard their interests while accomplishing their objectives, organisations have made risk management a top focus in recent years. Power (2017) asserted that risk management has a pivotal role in how organisations function and operate. To reduce, manage, and keep an eye on the likelihood and effect of bad things happening, it entails finding, evaluating, and ranking risks, and then coordinating the use of resources to do just that. If a company can improve its risk management, it will be better able to achieve its goals, keep running, and benefit its stakeholders. Hedging, insurance, and diversification are some of the risk management tactics that are developed and put into action when risk is identified and measured (Damodaran, 2018). With the help of risk management, businesses may accomplish their goals, lessen the severity of potential dangers, and make the most of available possibilities. Therefore, a company's ability to stay in business depends on its profit or loss as well as its risk management system, which helps to achieve success by lowering uncertainty and increasing customer satisfaction.

Strategic planning relies heavily on risk management as it allows businesses to foresee both opportunities and threats, according to Hillson and Murray-Webster (2017). Incorporating risk considerations into strategy and goal-setting is made possible for organisations by this. By incorporating risk management into strategic planning, organisations may proactively establish plans to identify and address possible hazards as soon as they arise. Improved investment decisions and resource optimisation are the results of a better grasp of risks, which in turn leads to more resilient and flexible strategic plans. Being well-prepared for opportunities and threats allows organisations to allocate resources more efficiently. Furthermore, according to Lam (2022), a company's financial performance may be greatly enhanced by better risk management, which in turn reduces losses and increases profitability. Incorporating risk management practices allows organisations to keep their revenue streams consistent and safeguard their market position by reducing the likelihood of risks that could harm their operations or reputation. These risks include legal liabilities, compliance fines, and operational disruptions. Additionally, risk management helps operational efficiency by making processes strong and resistant to interruptions. Finding operational hazards and handling them well also reveals inefficiencies and improvement opportunities. In order to increase output while decreasing wastage, businesses should simplify their operations. So, to keep operations running during and after disruptive events, with little downtime and loss of productivity, organisations should adopt risk management techniques like business continuity plans (Hopkin, 2018). Although risk management is most often linked with avoiding danger, it really makes it easier to take calculated risks and be creative. By facilitating the taking of risks in light of well-defined consequences and opportunities, effective risk management aids businesses in finding a happy medium between the two. Therefore, businesses may encourage innovation and development by establishing a culture of measured risk-taking (Lechner & Gudmundsson, 2021).

International commerce, national security, and tax income are all greatly aided by the work of the Nigerian Custom Service (NCS), which is responsible for customs operations. Improving customs operations' efficiency, security, and overall effectiveness relies heavily on effective risk management. In order to keep customs operations running smoothly and efficiently, the Nigerian Custom Service (NCS) relies heavily on risk management strategies that include detecting, evaluating, and reducing potential threats. Effective risk management is crucial for custom operations due to the strategic significance of customs in facilitating commerce, guaranteeing national security, and producing income (World Bank, 2018). The ability for customs officials to sift through mountains of trade data in search of trends, patterns, and outliers that can indicate security concerns is another critical use of data analysis in risk management. Customs administrations may benefit from advanced data analytics methods like as data mining, statistical modelling, and machine learning in order to spot suspicious activities, detect trade transaction abnormalities, and prioritise inspections according to risk assessment algorithms (UNCTAD, 2020). In light of the above, the purpose of this research is to analyse how the Nigerian customs service's risk management practices affect the effectiveness of their customs operations.

Statement of the Problem

The Nigerian Customs Service's (NCS) ability to facilitate commerce, guarantee national security, and maximise income has long been seen as critically dependent on its risk management practices. But there are a number of obstacles that the NCS must overcome before it can adequately control hazards. In a number of ways, these difficulties impact customs operations and performance. In particular, risk management initiatives are hampered by the inefficiency and unreliability of customs processes caused by Nigeria's infrastructure difficulties. Poor transportation infrastructure, including roads, railroads, and ports, increases the likelihood of cargo damage or loss and causes delays. Effective risk management is further impeded by the absence of sophisticated technical methods for monitoring and tracking customs processes. Errors and inefficiencies are more likely to occur since many operations are still manual. Furthermore, risk management in Nigeria's customs operations is hindered by the widespread problems of corruption and bureaucratic inefficiency. Unpredictable delays, higher expenses, and corruption at any point in the customs procedure are all possible results. In addition to making it harder for companies to be open and honest, it damages faith in the system as a whole. Compliance becomes more complicated and time-consuming due to inadequate customs processes and excessive bureaucracy. Extra time and energy spent navigating bureaucracy could result in lost possibilities for growth. Risk management in customs procedures is further complicated by Nigeria's economically unstable

economy, which includes inflation and changing currency values. The profitability of trade operations and the cost of imported commodities are both impacted by sudden changes in exchange rates. While strong hedging methods are necessary for the management of these financial risks, they could be out of reach for many companies. Goods and services become more expensive due to high inflation rates, which impacts the entire cost structure of customs operations. Adapting price and cost strategies is essential for businesses to stay in business. One more point: customs operations in Nigeria are very vulnerable to security threats including terrorism, smuggling, and theft. Smuggling and theft are rampant, which makes customs enforcement more difficult and hurts lawful commerce. Companies are more likely to be involved in legal disputes and suffer financial losses as a result of these actions. The disruption of trade routes and the increased danger of goods being targeted are both caused by security risks posed by terrorism and insurgency, especially in certain parts of Nigeria. The effect of risk management on the efficiency and effectiveness of various businesses throughout the globe, including those in Nigeria, has been the subject of several investigations. No such investigations were conducted among the Nigerian Customs Service, as far as the researcher is aware. In other words, no research looked at how risk management affected the effectiveness of Nigeria's customs processes. Because of this informational vacuum, the researcher in this study set out to determine how risk management may enhance Nigeria's customs procedures.

Aim and Objectives of the Study

The aim of this study is to determine the impact of risk management on efficiency of custom operations in Nigeria. The specific objectives include to:

1. analyze impact of revenue risk on efficiency of custom operations in Nigeria;
2. examine the impact of operational risk on efficiency of custom operations in Nigeria;
3. determine the impact of security risk on efficiency of custom operations in Nigeria; and
4. investigate the impact of fraud risk on efficiency of custom operations in Nigeria.

Research Questions

In line with the specific objectives, the following research questions were raised and were answered in the course of this study:

1. What is the impact of revenue risk on efficiency of custom operations in Nigeria?
2. How does operational risk impact efficiency of custom operations in Nigeria?
3. What is the impact of security risk on efficiency of custom operations in Nigeria?
4. How does fraud risk impact efficiency of custom operations in Nigeria?

Statement of Hypotheses

In line with the objectives and the research questions, the following null hypotheses were developed and were tested in the course of this study:

H₀₁: There is no significant impact of revenue risk on efficiency of custom operations in Nigeria.

H₀₂: Operational risk does not have significant impact on efficiency of custom operations in Nigeria.

H₀₃: There is no significant impact of security risk on efficiency of custom operations in Nigeria.

H₀₄: There is no significant impact of compliance risk on efficiency of custom operations in Nigeria.

LITERATURE REVIEW

Conceptual Literature

Concept of Risk

The term "risk" is used to describe the potential for something bad to happen that might affect a desired result. Danger is the possibility of negative outcomes, such as damage or loss, and it is often accompanied with a lack of clarity on the future. The definition of risk given by Acerbi (2018) is the expectation of danger or an adverse, unforeseen problem. The term "negative departure from the plan" describes it as well. When it comes to businesses, risk is the possibility that an unpredictable or unanticipated event may have an undesirable impact on the organization's goals. The possibility of noncompliance with rules, which may result in fines, delays, and financial losses, was identified by Widdowson, Blegen, and Altemoller (2020) as risk within the framework of customs. The authors emphasise that in order to effectively manage customs risks, one must first discover, evaluate, and then lessen the impact of potential threats to international commerce.

Classifications of Risks in Custom Operations

Risks associated with custom operations differ greatly from those associated with more standardised operations; these operations are common in niche businesses or those that cater to individual customer demands. The operational, financial, market, compliance, strategic, and reputational risks are the ones that Egiyi and Eze (2022) classify as being overarching. It is critical for organisations to identify, analyse, and manage each of these categories' distinct hazards.

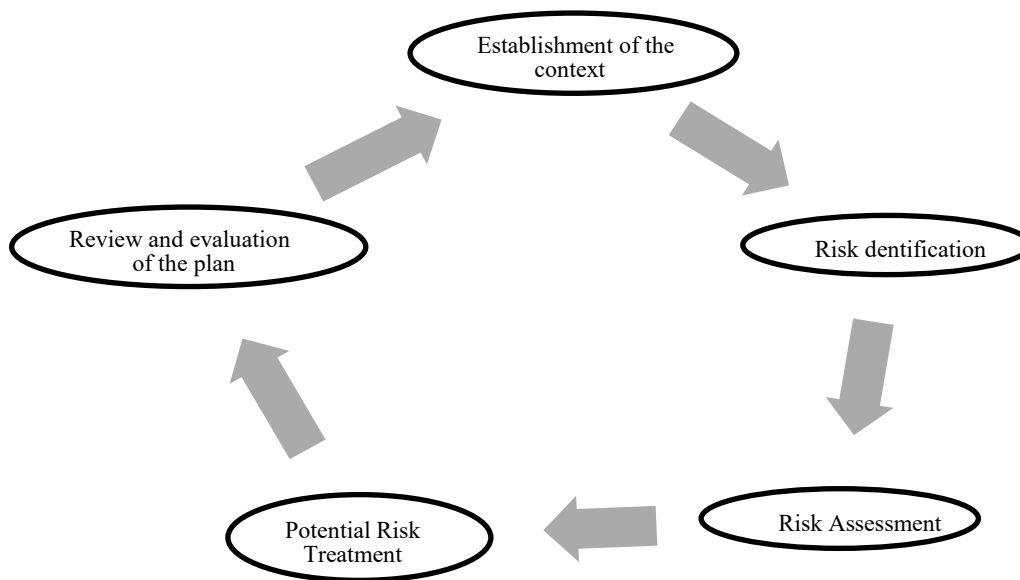
- i. **Operational Risk:** The potential for financial loss due to insufficient or malfunctioning internal processes, personnel, or systems, as well as external occurrences, is known as operational risk. The potential for financial loss due to insufficient or malfunctioning internal systems, procedures, and human mistake is known as operational risk in customs operations.
- ii. **Financial Risk:** All of the many ways that a business might experience financial loss are included in financial risk. Potential monetary losses as a result of changes in taxes, tariffs, and currency rates, as well as fines for non-compliance, are known as financial risk in the context of customs operations (Damodaran, 2018).
- iii. **Market Risk:** This pertains to demand fluctuations (Demand for bespoke operations may be very varied based on variables such as economic circumstances, industry trends, and customer preferences). These variations are caused by changes in the market environment. Revenue is very sensitive to demand fluctuations and competitiveness (new entrants or current rivals providing identical services may make the bespoke operations market more cutthroat).
- iv. **Compliance Risk:** Compliance risks include the possibility of legal or regulatory infractions, which may be especially difficult in customs operations owing to their unique character. As time goes on, certain rules may be imposed on custom operations.
- v. **Strategic Risk:** Concerning the organization's long-term objectives and strategies, strategic risks might be especially noticeable in custom operations because of their unique characteristics: discordance with consumer demands (custom operations need an in-depth familiarity with customer wants and requirements).
- vi. **Reputational Risk:** The possibility for harm to an organization's reputation is known as reputational risk. This kind of risk is especially significant in custom operations, where the importance of customer connections and trust cannot be overstated: quality problems (a company's reputation and revenue might take a hit if it delivers mediocre bespoke goods or services). customer unhappiness (custom operations need tight client cooperation).

Risk Management

The goal of risk management is to protect a company's assets and revenue from potential dangers. The many potential causes of these dangers include, but are not limited to, insufficient capital, potential legal action, mistakes in strategic management, accidents, and natural catastrophes. Management of risks entails identifying potential threats to an organisation, developing strategies to counteract them, and prioritising the use of available resources to deal with the most pressing threats (Hubbard, 2009). To safeguard the organisation and seize chances for value creation, risk management is defined by Power (2017) as the process by which an organisation deals with the uncertainties and exposures it encounters.

Risk Management Process

Organisations practise risk management when they systematically seek out, evaluate, and deal with any threats to their operations. Commonly, the process consists of the following steps: setting the scene, reviewing and evaluating the plan, identifying risks, treating them, and assessing their severity. Creating a solid plan for managing risks requires careful attention to each detail.



Establish the Context: At this point in the planning process, you should have a good grasp of both the external environment and the company's culture in order to comprehend the context in which your business functions. Without knowing there is a danger, you can't do anything about it.

Plan Review and Evaluation: It is essential to regularly review and evaluate the plan to make sure the risk management techniques are still effective and relevant. The risk management strategy and its parts must be reviewed, updated, and monitored on a regular basis to achieve this.

Risk Identification: Once the context has been set, the following stage in risk management is to identify possible hazards. To identify risks, one must be knowledgeable about the following: the organisation, its operations, its manufacturing processes, its management systems, the market in which it operates, the climate in which it operates, its financial strengths and weaknesses, its vulnerability to unanticipated losses, and the legal, social, economic, political, and climatic environment in which it does business.

Risk Assessment: After a risk has been identified, it is necessary to evaluate it for likelihood of occurrence and possible severity of loss. These numbers may be easy to calculate, like the worth of a destroyed structure, or very difficult, like the likelihood of an improbable occurrence happening.

Theoretical Framework

Systems Theory provides the foundation for This study. The Austrian scientist Ludwig von Bertalanffy laid the groundwork for systems theory in the 1940s and built upon it in the 1950s. To better comprehend complex

systems spanning several fields, Bertalanffy first proposed the idea of component dependency and interaction (Bertalanffy, 1968). Katz and Khan (1966) subsequently applied systems theory to the field of organisations. He went on to say that systems theory presents the company as an organism with several interrelated elements, each with its own set of duties and obligations. Synergy is born out of this interconnectedness, which is referred to as interdependency (Checkland, 2005). Organisational operations and performance are impacted by corporate risk culture, and this theory has been used to explore this relationship. By introducing the concept of the environment—here meaning the organization's culture—system theory distinguished itself from classical and humanistic conceptions of organisations, which saw the latter as a machine. Similarly, a distinctive risk culture is created when different risk management ideas and practices within the company work together in harmony. Organisational operations and performance as a whole reflect the outcome of this collaborative effort.

Application of Systems Theory to the Study

A variety of explanations for the connection between risk management and customs operations may be found within the strong theoretical framework that Systems Theory offers. An organisation, according to Systems Theory, is like a system whose parts are all interconnected and reliant on one another. To accomplish the organization's goals as a whole, each subsystem must cooperate with all of the others. There are a lot of moving parts in customs operations, including logistics, paperwork, compliance, and financial transactions. A comprehensive approach is required for the management of the intricate web of interactions that is created when one activity affects and is affected by another. To effectively manage risks in customs operations, feedback loops must be identified and managed. Customs clearance delays, for instance, might affect supply chain operations, which in turn can cause more delays and higher costs. In order to successfully mitigate risks, it is essential to understand these feedback processes. Regulations, market circumstances, and geopolitical variables are always changing, which adds another dynamic element to customs operations. The significance of being able to adapt in such ever-changing circumstances is emphasised by systems theory. Further, according to Systems Theory, a company may maximise its efficiency and effectiveness by coordinating its many subsystems. As a result, additional operational subsystems like logistics, compliance, and finance must be integrated with risk management procedures for customs operations to have effective risk management. Through this integration, risk management is solidified as an essential component of day-to-day operations, rather than an isolated activity.

Empirical Literature

The effect of enterprise risk management (ERM) on capital market performance in emerging countries like Iran, Saudi Arabia, and Iraq was studied by Ikhyoon, Mohammad, and Farzaneh (2023). Significant data on the financial situations and performance of enterprises operating in developing countries was disclosed by the results of this research. Since the results in all three economic contexts were essentially different, it follows that the type and structure of the firm may impact ERM efficiency and performance.

Selected small and medium-sized enterprises (SMEs) in Lagos State were studied by Aduloju and Akindipe (2022) to determine the impact of risk control approaches on organisational performance. Using SPSS's regression analysis, we investigated the hypothesis, and the findings confirmed a positive and statistically significant link. connection and impact of controlling physical and financial risks on the operational efficiency of chosen SMEs.

The effect of enterprise risk management on the bottom lines of three insurance firms in the Zaria LGA was investigated by Ishenis, Yusuf, and Halima (2022). Based on the regression results, insurance companies in Zaria were found to have poor financial performance when it came to event identification, risk assessment, control activities, and information communication, and good financial performance when it came to risk response, internal environment, and objectives setting.

The impact of risk management on operational effectiveness was assessed by Egiyi and Eze (2022). Staff replies from a variety of Nigerian organisations provided the data. Based on the organisational culture theory, 510 employees from various companies filled out the survey. Statistical analysis at the 5% level of significance

reveals that risk analysis, assessment, threat, monitoring, and review all positively affect organisational efficiency.

In their 2021 study, Nasser and Norha looked at how different risk management strategies affected how well building projects turned out. The results showed that construction projects performed far better when risk management was included. This finding highlights the critical need of staffing projects with competent project managers who are well-versed in risk management and its primary functions.

In their study, Ogalo (2021) sought to quantify the effect of enterprise risk management strategies on business outcomes after controlling for employee competency. The main analyses made use of a final sample of 349 individuals chosen at random. The results demonstrated that the financial and non-financial performance of the firms in the Kingdom of Bahrain were positively impacted by risk culture and the exchange of risk information.

The effect of risk management on the effectiveness of the Plateau State Inland Revenue Service was studied by Kawugana, Adamu, and Mubi (2020). The study's main takeaways are that no one person is responsible for an organization's risk management and that, to boost efficiency, risk management needs to be part of the company's official policy and have the backing of upper management.

Mohammad (2020) investigated how risk management techniques affect the efficiency and effectiveness of organisations. Insurance businesses in the Hashemite Kingdom of Jordan made up the study's population. The study found that majority of businesses tend to stay apart for a some time, according to this research. The results showed that risk management strategies do affect business output.

Enterprise risk management strategies and their impact on business outcomes were the subjects of research by Kakiya, Mose, and Rono (2019). Using multiple regression analysis, we tested our study hypotheses. Organisational performance was shown to be highly impacted by ERM governance methods.

The impact of risk management and operational information disclosure procedures on the financial performance of publicly listed corporations was studied by Erlane (2016). This research found that companies' annual reports might have an effect on their performance depending on how much information about risk management and operations they released.

Literature Gap and Contribution to Literature

It was clear from the examined empirical literature that research on the effects of risk management on the operations and performance of many organisations throughout the globe, including Nigeria, had recently developed. Nevertheless, the Nigerian Customs Service was not included in any of these studies, in contrast to other types of organisations such as SMEs, insurance businesses, deposit money institutions, and manufacturing corporations. To rephrase, prior research in this area was few, therefore no studies looked at how risk management affected the effectiveness of customs operations in Nigeria. The purpose of this research is to fill the resulting informational vacuum. In light of the above, the purpose of this research was to determine how risk management may enhance Nigeria's customs operations. Therefore, this study has contributed to the existing literature by empirically establishing the relationship between risk management and efficiency of custom operations in Nigeria. Specifically, the study has added to growing body of knowledge by ascertain the effect of revenue risk, operational risk, security risk and fraud risk on Nigeria custom efficiency.

METHODOLOGY

In this study, the researchers used a survey approach. Six hundred and five(605) junior and senior staff members of the Nigerian Customs agency from Area 2 Command in Onne, Rivers State, and Area 1 Command in Port Harcourt made up the population of this research. In order to choose the respondents at random, simple random sampling was used. However, using Taro Yamane's method at a significance level of 5% dictated the sample size for this investigation. What follows is the formula for Taro Yamane:

$$n = \frac{N}{1 + N(e)^2}$$

Where,

n = sample size

N = Population size

e = level of significance/ tolerable error (0.05)

1 = Constant

$$n = \frac{605}{1 + 605 * (0.05)^2}$$

$$n = \frac{605}{1 + 605 * (0.0025)}$$

$$n = \frac{605}{1 + 1.5125}$$

$$n D= \frac{605}{2.5125}$$

n = 241 (approximately)

This study's sample size was therefore 241 members, including both junior and senior officials, from the Nigerian Customs service in Port Harcourt's Area 1 Command and Onne, Rivers State's Area 2 Command.

In addition, the research relied on primary sources for its data collection. The study's demographic data was analysed in three stages using percentages, frequencies, and tables, while the data for the secondary variables was derived using a structured and self-administered questionnaire. Second, the research questions and other elements in the research instrument were subjected to univariate analysis utilising weighted mean, percentages, frequencies, tables, and the research instrument itself. Thirdly, we used the regression approach to examine theoretical claims that we had previously developed by doing the bivariate analysis. The data analysis was made easier with the help of SPSS version 25.0.

DATA ANALYSIS AND DISCUSSION OF FINDINGS

In this chapter, the data that were obtained from the respondents are presented and analysed, and the conclusions are described in great detail as follows:

Data Presentation

Table 1: Questionnaire Administration and Retrieval

Particulars	Number of Cases	Percentage
Copies of Questionnaire Administered	241	100.0
Copies of Questionnaire Retrieved	228	94.6

Copies of Questionnaire Not Retrieved	13	5.4
Copies of Questionnaire Completed but Invalid	8	3.3
Copies of Questionnaire Completed and Valid	220	91.3

Source: Authors' Field Survey, 2024.

It can be seen from table 1 that out of the two forty-one (241) copies of the questionnaire that were given to the respondents (junior and senior staff members of the Nigerian Customs service in Area 1 Command in Port Harcourt and Area 2 Command in Onne, Rivers State), two hundred twenty-eight (228) of them were returned, which is equivalent to 94.6% of the total. Thirteen (13) of the questionnaires, which is equivalent to 5.4% of the total, were not returned. In spite of this, out of the total number of questionnaires, eight (8) copies, which represents 3.3% of the total, were found to be invalid. On the other hand, two hundred and twenty (220) copies of the questionnaire, which represent 91.3% of the total, were properly filled out and thus served as the foundation for the data analysis for this research.

DATA ANALYSIS AND RESULTS

Demographic Analysis

This section below presents the findings of the examination of the respondents' demographic data:

Table 2: Demographic/Personal Data of Respondents

Observation	Frequency	Percentage
Age		
20-29 years	26	11.8
30-39 years	38	17.3
40-49 years	102	46.4
50 years and above	54	24.5
Total	220	100.0
Gender		
Male	132	60.0
Female	88	40.0
Total	220	100.0
Marital Status		
Single	48	21.8
Married	160	72.7
Divorced	6	2.7
Widowed	6	2.7
Total	220	100.0
Educational Qualification		

NCE/OND	40	18.2
HND/ BSc.	140	63.6
MSc.	26	11.8
PhD	14	6.4
Total	220	100.0
Working Experience		
1-4 years	32	14.5
5-9 years	42	19.1
10-14 years	76	34.5
15 years and above	70	31.8
Total	220	100.0

Source: Authors' Field Survey, 2024.

A large percentage of respondents were within the age category of 40-49 years, according to the age distribution in Table 2. There was a clear majority of married respondents when looking at the distribution of marital status compared to the total number of respondents who were single, divorced, or widowed. As for the respondents' levels of education, most had a Bachelor of Science or Higher National Diploma, and most had between ten and fourteen years of experience.

Univariate Analysis

Tables, frequencies, basic percentages, and weighted mean scores are used to answer the research questions in this section.

Table 3: Analysis of Questionnaire Items on the Impact of Revenue Risk, Operational Risk, Security Risk and Fraud Risk on Efficiency of Custom Operations in Nigeria

S/N	Questionnaire Items on	SA (%)	A (%)	U (%)	D (%)	SD (%)	MEAN \bar{X}	DECISION
Q1.	Revenue shortfalls (e.g., from smuggling or under-invoicing) impact the overall efficiency of customs operations.	76 (34.5%)	90 (40.9%)	10 (4.5%)	18 (8.2%)	26 (11.8%)	3.78	Accepted
Q2.	Revenue risks, such as fraud or evasion, lead to delays in the processing and clearance of goods.	92 (41.8%)	71 (32.3%)	11 (5.0%)	24 (10.9%)	22 (10.0%)	3.85	Accepted
	Operational Risk							
Q3.	Very often, Nigerian custom service encounter operational risks such as system downtime or technical failures during customs processing.	91 (41.4%)	88 (40.0%)	6 (2.7%)	16 (7.3%)	19 (8.6%)	3.98	Accepted

Q4.	Delays in customs procedures due to operational inefficiencies significantly affect the overall performance of customs operations.	78 (35.5%)	78 (35.5%)	9 (4.1%)	34 (15.5%)	21 (9.5%)	3.72	Accepted
	Security Risk							
Q5.	Security risks, such as the threat of smuggling and illegal arms trafficking, impact the efficiency of customs operations.	60 (27.3%)	124 (54.4%)	10 (4.5%)	14 (6.4%)	12 (5.5%)	3.94	Accepted
Q6.	Security threats, such as the infiltration of criminal networks, disrupt the smooth functioning of customs operations.	72 (32.7%)	112 (50.9%)	4 (1.8%)	22 (10.0%)	10 (4.5%)	3.97	Accepted
	Fraud Risk							
Q7.	Fraudulent practices, such as bribery and corruption among customs officials, impact the efficiency of customs operations.	78 (35.5%)	78 (35.5%)	10 (4.5%)	30 (13.6%)	24 (10.9%)	3.71	Accepted
Q8.	Very often, customs service encounters cases of document falsification (e.g., fake invoices, misclassification of goods) during customs processing, and how does this affect operational efficiency.	81 (36.8%)	81 (36.8%)	11 (5.0%)	21 (9.5%)	26 (11.8%)	3.77	Accepted

Source: Authors' Field Survey, 2024.

Figure 3 displays the results of the univariate analysis of items 1–8 on the effect of revenue risk, operational risk, security risk, and fraud risk on the efficiency of Nigeria's customs operations. These findings provide statistical evidence that all survey questions regarding the effect of revenue risk, operational risk, security risk, and fraud risk on the effectiveness of Nigerian customs operations were accepted and agreed upon by the respondents. Therefore, the effectiveness of custom operations in Nigeria is affected by revenue risk, operational risk, security risk, and fraud risk.

Bivariate Analysis

The investigation began with the formulation of four null hypotheses. So, in this part, we use regression approach to evaluate these predictions.

Decision Rule: Reject the null hypothesis (H_0) at 5% level of significance if the *p-value* is less than *alpha value* (0.05). Contrarily, accept the null hypothesis (H_0) at 5% level of significance if the *p-value* is greater than *alpha value* (0.05).

Testing of Hypothesis One

H₀₁: There is no significant impact of revenue risk on efficiency of custom operations in Nigeria.

Table 4: Regression Analysis of Revenue Risk and Efficiency of Custom Operations in Nigeria

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.795	.101		7.861	.000
	Revenue Risk	-.837	.125	.959	-6.696	.000
R-Square = 0.926						
Adjusted R-Square = 0.925						
F-statistic = 3503.209						
Sig Value = 0.000						

a. Dependent Variable: *Efficiency of Custom Operations*

Source: Field Survey, 2024 (SPSS 25.0 Output)

Table 4 reveals that the revenue risk has a negative value of -0.837, as shown by the findings. The conclusion that can be drawn from this is that the profitability of customs operations in Nigeria is negatively impacted by the risk of revenue. Based on this, it can be deduced that an increase in revenue risk would result in a drop in the efficiency of customs operations in Nigeria whenever there is such an increase.

Decision on the First Hypothesis: The first hypothesis was tested at 5% level of significance. The result showed the *p-value* to be 0.0000 while the *alpha value* is 0.05. Following the decision rule, i.e. since the *p-value* (0.0000) is less than the *alpha value* (0.05), we therefore reject the null hypothesis one (H_{01}) and conclude that there is a significant impact of revenue risk on efficiency of custom operations in Nigeria. Lastly, the R-square and adjusted R-square values of 0.926 and 0.925 respectively showed that about 93% of variation in efficiency of custom operations in Nigeria is explained by revenue risk while the *p-value* of the F-statistic (0.000) indicates that the model is statistically significant.

Testing of Hypothesis Two

H₀₂: Operational risk does not have significant impact on efficiency of custom operations in Nigeria.

Table 5: Regression Analysis of Operational Risk and Efficiency of Custom Operations in Nigeria

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.343	.297		7.895	.000
	Operational Risk	-.367	.084	.405	-4.369	.000
R-Square = 0.904						
Adjusted R-Square = 0.903						
F-statistic = 2608.009						

Sig Value	= 0.000
a. Dependent Variable: <i>Efficiency of Custom Operations</i>	

Source: Field Survey, 2024 (SPSS 25.0 Output)

Table 5 reveals that the operational risk has a negative value of -0.367, as shown by the findings. It may be deduced from this that the possibility of operational risk has a detrimental impact on the effectiveness of customs operations in Nigeria. The conclusion that can be drawn from this is that when there is an increase in the operational risk, there will be a decrease in the efficiency of customs operations in Nigeria.

Decision on the Second Hypothesis: The second hypothesis was tested at 5% level of significance. The result showed the *p-value* to be 0.0000 while the *alpha value* is 0.05. Following the decision rule, i.e. since the *p-value* (0.0000) is less than the *alpha value* (0.05), we therefore reject the null hypothesis two (H_{02}) and conclude that operational risk has significant impact on efficiency of custom operations in Nigeria. Lastly, the R-square and adjusted R-square values of 0.904 and 0.903 respectively showed that about 90% of variation in efficiency of custom operations in Nigeria is explained by operational risk while the *p-value* of the F-statistic (0.000) indicates that the model is statistically significant.

Testing of Hypothesis Three

H₀₃: There is no significant impact of security risk on efficiency of custom operations in Nigeria.

Table 6: Regression Analysis of Security Risk and Efficiency of Custom Operations in Nigeria

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.645	.300		8.824	.000
	Security Risk	-.448	.082	.322	-5.463	.000
R-Square		= 0.879				
Adjusted R-Square		= 0.878				
F-statistic		= 2011.235				
Sig Value		= 0.000				
a. Dependent Variable: <i>Efficiency of Custom Operations</i>						

Source: Field Survey, 2024 (SPSS 25.0 Output)

In accordance with the findings presented in Table 6, the value of security risk is a negative -0.448. It may be deduced from this that the operational effectiveness of customs in Nigeria is negatively impacted by the presence of security risks. The upshot of this is that there would be a decrease in the effectiveness of customs operations in Nigeria due to the fact that there will be an increase in the possible threats to security.

Decision on the Third Hypothesis: The third hypothesis was tested at 5% level of significance. The result revealed the *p-value* to be 0.0000 while the *alpha value* is 0.05. Following the decision rule, i.e. since the *p-value* (0.0000) is less than the *alpha value* (0.05), we therefore reject the null hypothesis three (H_{03}) and conclude that there is a significant impact of security risk on efficiency of custom operations in Nigeria. Lastly,

the R-square and adjusted R-square values of 0.879 and 0.878 respectively showed that about 88% of variation in efficiency of custom operations in Nigeria is explained by security risk while the p-value of the F-statistic (0.000) indicates that the model is statistically significant.

Testing of Hypothesis Four

H₀₄: There is no significant impact of compliance risk on efficiency of custom operations in Nigeria.

Table 7: Regression Analysis of Fraud Risk and Efficiency of Custom Operations in Nigeria

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.449	.965		6.681	.000
	Fraud Risk	-.191	.050	.417	-3.839	.000
R-Square = 0.911						
Adjusted R-Square = 0.910						
F-statistic = 3790.644						
Sig. Value = 0.000						
a. Dependent Variable: <i>Efficiency of Custom Operations</i>						

Source: Field Survey, 2024 (SPSS 25.0 Output)

A negative value of -0.191 is assigned to the fraud risk, as shown in Table 7. It may be deduced from this that fraud risk has a negative impact on the efficiency of customs operations in Nigeria. This implies that when there is an increase in the fraud risk, there will be a reduction in the efficiency of customs operations in Nigeria.

Decision on the Four Hypothesis: The fourth hypothesis was tested at 5% level of significance. The result revealed the *p-value* to be 0.0000 while the *alpha value* is 0.05. Following the decision rule, i.e. since the *p-value* (0.0000) is less than the *alpha value* (0.05), we therefore reject the null hypothesis four (H₀₄) and conclude that fraud risk has a significant effect on the efficiency of custom operations in Nigeria. Lastly, the R-square and adjusted R-square values of 0.911 and 0.910 respectively showed that about 91% of variation in efficiency of custom operations in Nigeria is explained by fraud risk while the p-value of the F-statistic (0.000) indicates that the model is statistically significant.

Discussion of Findings

This study's results showed a negative correlation between revenue risk and the effectiveness of Nigeria's customs procedures. The inverse connection also demonstrates that customs operations in Nigeria would become less efficient as revenue risk rises and become more efficient as revenue risk falls. A correlation between revenue risk and the efficacy of Nigeria's customs operations was also shown by the first hypothesis's testing results. Therefore, it is reasonable to assume that the effectiveness of Nigeria's customs operations is negatively and significantly correlated with revenue risk. The implication of this is that reduced revenue limits the Nigeria Customs Service (NCS)'s ability to invest in modern technologies, training, and infrastructure and this will further weaken its capacity to perform efficiently. Consistent with previous research, this conclusion states that revenue risk is a substantial and detrimental kind of financial risk that impacts performance

(Ikhyoon, Mohammad and Farzaneh, 2023). Another takeaway from this research is that operational risk is inversely related to how efficient Nigerian customs processes are. In addition, the negative association demonstrates that when operational risk increases, customs operations in Nigeria become less efficient, and vice versa when operational risk decreases. The second hypothesis also found that operational risk is significantly related to how efficient Nigerian customs procedures are. It follows that operational risk is significantly inversely related to the effectiveness of Nigeria's customs operations. The implication of this is that poor operational systems will delay trade clearance, increase transaction costs, and hinder the Customs Service's ability to meet international standards. According to Kawugana, Adamu, and Mubi's (2020) research on the Inland Revenue service in Plateau State, operational risk significantly affects organisational efficiency. This claim is confirmed by their findings. Furthermore, this study's results showed that security risk is strongly inversely related to the effectiveness of Nigeria's customs procedures. Furthermore, the negative association demonstrates that when security risk increases, customs procedures in Nigeria become less efficient, and vice versa when security risk decreases. Additionally, the third hypothesis demonstrated a statistically significant correlation between security risk and the efficacy of Nigeria's customs procedures. It follows that there is a negative and statistically significant correlation between revenue risk and the efficacy of Nigeria's customs operations. The implication of this is that security risks will divert the Nigeria Customs Service focus from trade facilitation and revenue collection to enforcement activities, stretching its limited resources. This confirms what Kakiya, Mose, and Rono (2019) found: that security risk significantly lowers organisational performance. Finally, the study's results showed that customs processes in Nigeria are less efficient when fraud risk is present. Furthermore, the negative association demonstrates that when fraud risk increases, customs procedures in Nigeria become less efficient, and vice versa when fraud risk decreases. The fourth hypothesis also found that customs processes in Nigeria are much more efficient when fraud risk is included. Based on the data, it seems that customs processes in Nigeria are less efficient when fraud risk is high. The implication of this is that fraud risk undermines the credibility of the Customs Service, disrupts accurate revenue collection, and deters legitimate trade activities. This confirms what Erlane (2016) discovered, that there is a negative relationship between fraud risk and the financial performance of publicly traded companies and operational information disclosure standards.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The relationship between risk management and efficiency of custom operations in Nigeria has been shown in this research. The research found that efficiency of customs operations in Nigeria is considerably and adversely affected by revenue risk, operational risk, security risk, and fraud risk. As a result, customs operations in Nigeria will become less efficient as the risks of revenue loss, operational risk, security breach, and fraud all rise. As a result, the effectiveness of Nigeria's customs operations is highly dependent on the control of these risks. Based on the findings, the study therefore concluded that risk management plays a vital role in promoting and sustaining efficiency of custom operations in Nigeria.

Recommendations

The researchers proposed the following recommendations based on the findings:

1. In order to mitigate revenue risk, the Nigeria Customs Service (NCS) should fully implement and integrate advanced digital platforms such as blockchain technology, electronic single window systems, and AI-powered valuation tools as this will minimize human intervention, reducing the risk of under-declaration, misclassification, and revenue leakages
2. In order to mitigate operational risk, the Nigeria Customs Service (NCS) should invest in modern infrastructure and continuous workforce capacity building to handle trade volumes effectively.
3. In order to mitigate security risk, the Nigeria Customs Service (NCS) should enhance border surveillance and control using advanced technologies and cross-border collaborations. This can be achieved by deploying drones, thermal imaging cameras, and AI-powered surveillance at porous borders.

4. In order to mitigate fraud risk, the Nigeria Customs Service (NCS) should establish a robust anti-fraud framework, including whistleblower programs and stringent penalties for fraudulent practices among customer officers and members of the general public.

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