ISSN: 2958-2326

AJoCsOpen
Sharing Knowledge in Business

African Journal of Commercial Studies

Publisher's Home Page: https://ijcsacademia.com/

AFRICAN JOURNAL OF COMMERCIAL STUDIES

Research Paper | Peer Reviewed | Open Access

Factors Contributing to Low Enrollment to the Customs Accredited Clients Programme (CACP): A Case of Selected International Logistics Companies in Zambia

Oneil Kasongo[1*]

[1]*Graduate School of Business, Zimbabwe Open University in collaboration with University of Zambia*
* Corresponding Author

African Journal of Commercial Studies, 2025, 6(5), 157–172
DOI Link: https://doi.org/10.59413/ajocs/v6.i5.15

Article Info

Volume 6, Issue 5

Publication history:
Accepted on 15 September 2025;
Published: 14 October 2025

Article DOI:
10.59413/ajocs/v6.i5.15

Abstract

Globally, international trade is an important driver of development and economic growth. The procedures of customs procedures are very important in shaping the effectiveness and efficiency of international trade operation (ITO). Thus, the Government Republic of Zambia led the alteration by initiating the Customs Accredited Clients Programme (CACP). This research is very important as it will contribute positively to the decision makers in numerous international trade operators with evidence regarding the benefits of CACP. Although some empirical studies have been carried on Authorized Economic Operators programs, there are many noticeable gaps in these studies that pertains the factors that contribute to low uptake of AEO programs locally, regionally and globally. Thus, the intent of this study is to investigate the factors contributing to low enrollment of selected international logistics companies to the Customs Accredited Clients Programme (CACP Programme) in Zambia. The study was quantitative and adopted a descriptive research design. Quantitative data was analyzed with the help of a data analysis software known as SPSS Version 22. The study revealed no significant relationship between the approval time and enrollment of international trade operators to CACP ($p>0.05$). The study also revealed a negative significant relationship between lack of awareness and enrollment of international logistics companies to CACP ($p < 0.05$). The study further found a positive relationship between unfavorable requirement and enrollment of international logistic companies to CACP ($p > 0.05$). Thus, it is clear that unfavorable enrollments have contributed to the low enrollment of international logistics companies in CACP in Zambia. The study recommends that Zambia Revenue Authorities (ZRA) should revise and improve their enrollment requirements in order to increase enrollment of international logistic companies to CACP.

Keywords: ZRA, CACP, International Logistics Companies

1. Introduction

Globally, international trade is an important driver of development and economic growth. The procedures of customs procedures are very important in shaping the effectiveness and efficiency of international trade operation (ITO (Okoboi and Kyanzi, 2017). Research by Widdowson et al., (2014) established that for many years, governments around the world have developed and implemented policies aimed at protecting International supply chains from terrorist and other dangers while allowing lawful trade. For example, the terrorist acts of September 11, 2001 demonstrated how terrorists and other activist organizations might attack the global supply chain via containers or vessels, significantly disrupting international trade (Tegneman & Tryggvason, 2015). The catastrophe brought about drastic reforms in supply chain security. It formerly focused on lowering the risk of cargo theft and pilferage. Today, it is focused on policies, processes, and technologies designed to secure supply chain assets (Tegneman & Tryggvason, 2015). As a result, numerous security and customs efforts have been implemented worldwide.

Zambia led the change by introducing the Customs Accredited Clients Programme (CACP), a program that seeks to secure the supply chain and facilitate trade. This program offers accredited clients' privileges such as simplified customs procedures, reduced inspection requirements, and expedited customs clearance (Zambia Revenue Authority, 2019). Yet, despite these advantages, some studies revealed a deficiency in the enrollment rates among international trade operators globally due to a number of factors. Widdowson et al., (2014) established that failure to progress a customs endeavor has the potential to disadvantage exporters, who will face a range of inspection delays and charges if their cargo is not recognized as low risk by the destination company. As a result, this research aims to investigate the factors contributing to low enrollment of selected international logistics companies to the customs accredited clients programme (CACP Programme) in Zambia.

For the past decade, government agencies around the world have developed and implemented a variety of measures aimed at protecting international supply chains from terrorist and other dangers while allowing legitimate trade (Widdowson et al., 2014). One of the developed projects is the SAFE Framework of Standards to Secure and Facilitate Global Trade (the SAFE Framework), which was established by the World Customs Organization (WCO) in 2005. It establishes norms and principles for use by all WCO members. More than 160 nations have implemented or intend to implement the SAFE Framework, which includes essential concepts such as Authorized Economic Operator (AEO) and Mutual Recognition (Widdowson et al., 2014).

The Authorized Economic Operator notion comes from the World Customs Organization (WCO). According to the World Customs Organisation (2012), an AEO is a party participating in the international movement of goods in any capacity that has been approved by or on behalf of a national Customs administration as meeting WCO or equivalent supply chain security standards. Authorized Economic Operators include manufacturers, importers, exporters, brokers, carriers, consolidators, middlemen, ports, airports, terminal operators, integrated operators, warehouses, and distributors. According to Widdowson et al. (2014), an AEO is a member of the international trade community who is assessed to pose a low Customs risk and should be granted increased degrees of facilitation. Where two nations have a Mutual Recognition Agreement (MRA), an entity's AEO status must be accepted by both economies' customs agencies. The concept of AOE relies around giving reliable corporate entities, also known as operators, with privileged status when it comes to security control and customs procedures, as well as ensuring transparency and equitable treatment for all certified AEO Operators (WCO, 2012).

As a result, Zambia Revenue Authority Customs Services Division have been trying to improve the security of the worldwide supply chain, and in early 2007, they established their own security program that incorporates the principles and standards of the World Customs Organization's (WCO) Authorized Economic Operators (AEO) program. The initiative was called the Customs Accredited Clients initiative. This program aims to establish, in collaboration with international trade operators, a scheme based on the WCO's Framework of Standards to secure and facilitate global trade, assisting Customs in exercising controls on imports and exports while maintaining trade facilitation and security (Zambia Revenue Authority, 2019). Customs selects a handful of traders to participate in the program from those who have a strong track record of compliance with Customs regulatory requirements in particular, as well as with national laws in general. However, traders are not required to wait for customs to choose them. Those who believe they are eligible and meet the established criteria can also apply. Traders who have been identified are then required to self-assess their business processes against a series of check lists that test business record management, financial viability, employee education and training, information access and exchange, cargo security, transport security, premises security, personnel security, trading partner security, crisis management and incident recovery, and process measurement, analysis, and improvement (Zambia Revenue Authority, 2019).

In terms of the implementation of the program, it consists of several stages which include; application for the program by a trader; self-assessment conducted by the trader against check list; due diligence evaluation by Customs of the self-assessment; comprehensive audit conducted by Customs; agreement on improvement program; and full or probationary admission to the program accompanied by a signed Memorandum of Understanding (Zambia Revenue Authority, 2019). The program's implementation began with raising awareness among individuals, businesses, and government departments interested in international commerce about the benefits of becoming an AEO and the certification standards.

A report by World Customs Organisation (2014) indicated that participants (international trade community) in the AEO program are stated to profit from a slew of short- and long-term trade facilitation benefits that substantially beyond the standard procedures provided to non-AEOs. Short-term trade facilitation benefits include, among other things, paperless processing of commercial shipments, remote Customs clearance procedures, expedited cargo release, prioritization in cargo clearance during periods of high threat, and priority response to requests for rulings from Customs authorities. Long-term trade facilitation benefits include lower business costs, improved internal controls, increased turnover, and more trustworthy and compliant operations. Tegneman and Tryggvason (2015) conducted a qualitative analysis and discovered that Swedish industry executives were generally satisfied with the benefits of AEO accreditation. For example, it is claimed that AEO certification supplied enterprises with some type of quality approval/stamp. That AEO-certified enterprises' trading patterns were perceived to be safe and secure, resulting in higher trade volume. In terms of costs, executives from AEO firms believed that the work and time spent in the certification process were significant in comparison to the money outlay. According to Tegneman and Tryggvason's (2015) research, Swedish Customs officials claimed that the AEO Program increased cooperation between customs officials and the EU while also standardizing standards. Research by Mwangelwa (2023) revealed that AEO accreditation had a positive effect on trade volumes for accredited (treated) firms in comparison to non-accredited (control) firms. The AEO accreditation also had a good influence on government revenue. A

reduction in the amount of time spent at the border implies that accredited firms had an opportunity to increase the frequency of their importations and supply more products to the market.

Yet, despite the benefits accounts from firms that have gained AEO accreditation in other countries indicate that the accreditation procedure is complex, packed with indirect costs that harm small and medium-sized businesses, and takes at least six months. Conformity to security standards is considered the most expensive eligibility criterion, as it requires the firms' premises to adhere to the minimum business partnership management procedures, conveyance and container security, physical access controls, procedural security, information technology (IT) security, and personnel security (Okoboi and Kyanzi, 2017).

Research by Widdowson et al., (2014) also established Failure to progress a customs endeavor has the potential to disadvantage exporters, who will face a range of inspection delays and charges if their cargo is not recognized as low risk by the destination company.

Previous research also revealed that since the introduction of AEO, Firms spent more time on customs processes than before and argued that they were not receiving the promised benefits after being AEO recognized. The study also revealed that efficiency was left unchanged. The views on the achieved results of the AEO Program since their introduction have differed. It is clear that some research found good results, whereas others have revealed negative results (Tegneman & Tryggvason, 2015). However, in Zambia, only 11% of the international operators have enrolled to the program since the program was introduced in 2007. The numbers keep on declining every year (ZRA, 2019).

1.2 Statement of the problem

Despite Zambia Revenue Authority implementing the Customs Accredited Clients Programme (CACP) in 2007 based on the World Customs Organization (WCO) Framework of Standards (FoS) on Authorized Economic Operator (AEO) programme as a way of securing and facilitating global trade that would assist customs in exercising effective controls on imports and exports with minimum interventions at the border, a high number of International Logistics Companies in Zambia have not enrolled to this programme (ZRA, 2022). Evidently, Zambia Revenue Authority's Reports have complained that since the Customs Accredited Clients Programme (CACP) in 2007, only 11 % of International Trade Companies in Zambia have enrolled to the Programme (ZRA, 2022). However, it is not yet known why most of the International Logistics Companies (ILCs) have not enrolled for the programme.

Although some studies have been conducted on AEO programs, there are a number of huge noticeable gaps in these studies pertaining the factors contributing to low uptake of AEO programs globally, regionally and Zambia. For example, Okoboi and Kyanzi, (2017) failed to investigate the fact that AEO programs have a low acceptance in Uganda, the causes contributing to this low uptake are as follows. If these factors are not investigated, AEO programs in many countries will continue recording low uptake and imply that the cost of customs clearance will remain high, which will negatively impact the government's tax revenue.

If the factors contributing to low enrolment are not investigated, border congestion will not be reduced, international trade would not be carried out efficiently and Zambia's revenues through more efficient border crossings and revenue collections would not be boosted. Therefore, this study fills the gap in literature by investigating the factors contributing to low enrollment of international trade operators to the Customs Accredited Clients Programme (CACP), an AEO initiative in Zambia.

1.3 Objectives of the Study

1. To investigate the factors contributing to low enrollment of selected international logistics companies to the Customs Accredited Clients Programme (CACP Programme) in Zambia.
2. To ascertain the effect of lengthy CACP approval time on enrollment of selected international logistics companies in the customs accredited clients programme (CACP) in Zambia.
3. To ascertain the effect of unfavorable enrollment requirements on enrollment of selected international logistics companies in the customs accredited clients programme (CACP) in Zambia.

1.4 Research Hypotheses

The study was guided by the following research questions:

1. H0: Lengthy CACP approval time does not contribute to low enrollment of international logistics companies to the Customs Accredited Clients Programme (CACP Programme) in Zambia.
   H1: Lengthy CACP approval time contributes to low enrollment of international logistics companies to the Customs Accredited Clients Programme (CACP Programme) in Zambia.
2. H0: Lack of awareness does not contribute to low enrollment of international logistics companies to the Customs Accredited Clients Programme (CACP Programme) in Zambia.
   H2: Lack of awareness contributes to low enrollment of international logistics companies to the Customs Accredited Clients Programme (CACP Programme) in Zambia.
3. H0: Unfavorable enrollment requirements does not contribute to low enrollment of international logistics companies to the Customs Accredited Clients Programme (CACP Programme) Zambia.
   H3: Unfavorable enrollment requirements contribute to low enrollment of international logistics companies to the Customs Accredited Clients Programme (CACP Programme) Zambia.

2. Review of Literature

2.1 Empirical Review

Erceg (2014) found that supply chain security certificates are important for companies because they can benefit from them. Benefits of the Authorized Economic Operators certificate for companies include savings in import and export procedures, reputation that AEO certificate brings, potential lower insurance premiums, and mutual recognition where Customs in one country accepts certificate and provides benefits based upon a company's AEO status in another country. The study also found that after Croatia entered EU, companies got possibility to apply for AEO certificate. First applications for AEO started in autumn of 2013 and 25 companies applied for AEO certificate. Until now no certificate has been approved since the process of approving is lasting at least 6 months. Tegneman and Tryggvason (2015) found that the AEO certification raises security awareness within companies as well as slightly reducing the overall workload when it comes to customs procedures. Other than that, the program offers limited benefits but companies hope that being certified will aid them in the future. The study also claimed that since the introduction of AEO some companies spent more time on customs procedures than they did before and claimed that they were not experiencing the proposed benefits after being AEO certified.

Laszuk and Ryciuk (2016) revealed that AEO certificate enables the organizations to become the trustful member of international supply chains and to comply high security standards. The certificate demonstrates company's reliability and commitment to upholding security procedures. It is also proof of the solvency of the company. The study also found that acquiring AEO status determines efficiency increase of company's activities and more efficient cooperation in the supply chain through time saving and reduction of bureaucracy related to international trade and transport. Those profits result from rarer cargo and documents controls, easier access to customs simplifications, reduced number of data placed on the summary declarations, possibilities to inform earlier about planned controls of the supplies, prioritized treating in the situation of choosing AEO unit for control, possibility to apply for choosing a control place. Currently, the AEO program has been developing steadily since its inception and there are now over 50 countries with operative AEO programs with over 30,000 certified companies. Additionally, there are another 11 country AEO programs in development. Barker (2011) showed that none of the industry executives surveyed considered that an Australian AEO scheme would offer net benefits. Instead, the executives believed that the scheme's costs would outweigh potential benefits. Okoboi and Kyanzi (2017) found that firms in Uganda that voluntarily sought and achieved AEO accreditation from URA experienced much reduced clearance time compared to peer firms that are not AEO accredited. The results further indicate that AEO accredited firms in Uganda were experiencing exponential growth in trade compared to peer firms that are not AEO accredited. Finally, the results show that the quantum of tax paid to government by AEO accredited firms was significantly higher than that paid by non-AEO accredited firms. Federation of East African Freight Forwarders Associations (2023) noted the need for more awareness to spur demand for the AEO program to meaningfully impact regional trade. Lamessa, (2017) indicated that the existing custom legal regimes are inefficient to regulate the AEO program and institutional structures relate to AEO was weak to organize and to take legal and administrative measure to correct problems affecting the regulation of the AEO program. Lack of adequate legal regimes and institutional frameworks created multiple problems in regulation of AEO companies in admission, in operation and in taking measures when there is an error in the operation.

Mwangelwa (2023) revealed that AEO accreditation had a positive effect on trade volumes for accredited (treated) firms in comparison to non-accredited (control) firms. The AEO accreditation also had a positive effect on government revenue. A reduction in the amount of time spent at the border implies that accredited firms had an opportunity to increase the frequency of their importations and supply more products to the market. Additionally, the reduced time spent at the border meant fewer costs incurred, a benefit that likely cascaded to the rest of the supply chain.

3. Materials and Methods

3.1 Research Design

The study adopted descriptive research design. Descriptive research design is a theory-based design, where the researcher is primarily interested in describing the topic that is the subject of the research. It is applied to case studies, naturalistic observations, surveys, and so on. This method includes data collection, analysis, and presentation. It lets the researcher clearly present the problem statement in order to allow others to better understand the need for the kind of research (Thakur, 2021). It was adopted because the brevity by which descriptive investigations are carried out means that their costs are not high, compared to other types of investigations. In addition, it enabled both the collection of quantitative data and qualitative data. More so, it allows to formulate hypotheses, as well as provide a large amount of valuable data for the development of future investigations (Javed, 2023).

3.2 Study Population and Sampling Strategy

The study targeted 200 employees in the procurement department, logistics department, finance department, and operations department at African Leopard Logistics, Atosh Transport Limited, Compass Logistics, Forlan Logistics

Limited, Cargo Management and Logistics Zambia Limited, Global Logistics Limited, Chipangano Express Logistics Limited, Sesten Logistics Africa, Hill & Delamain, Kilimanjaro Sea Masters Limited. The employees in these departments were considered in this study because they are responsible for managing the shipment of goods through customs by completing documentation such as customs forms and bills of lading, coordinating with vendors to ensure that deliveries arrive on time and in full and providing customers with information regarding order status and delivery schedules. The study employed a simple random sampling to ensure unbiased representation of employees from African Leopard Logistics, Atosh Transport Limited, Compass Logistics, Forlan Logistics Limited, Cargo Management and Logistics Zambia Limited, Global Logistics Limited, Chipangano Express Logistics Limited, Sesten Logistics Africa, Hill & Delamain, Kilimanjaro Sea Masters Limited. A comprehensive list of 200 employees from the procurement department, logistics department, finance department, and operations department was obtained. The names of employees were replaced with a unique number. The numbers representing all 200 individuals was printed out and each number was cut into individual pieces of paper. Thereafter, all the pieces of paper with numbers were placed into a large bowl and the researcher thoroughly mixed the pieces to ensure random distribution. Further, the researcher randomly drew numbers from the bowl until the predetermined sample size was reached. This process ensured that every individual had an equal chance of being selected. In addition, the researcher created a table listing the selected numbers along with their corresponding names and contact information for easy reference and further communication. The Slovin Formulae (the formula for sample size calculation for a finite population) was employed to determine the sample size for the study. This statistical technique considers factors such as desired effect size, significance level (typically set at 0.05), and statistical power (often set at 0.80 or higher). In addition, the required sample size was calculated to detect significant relationships or differences between variables related to stakeholder support and business analytics uptake. In addition, the sample size was determined based on the total population (200 employees). The sample size calculation incorporated adjustments for expected response rates and potential attrition during data collection. Furthermore, the selected sample size is crucial as it ensures adequate statistical power to detect meaningful relationships and patterns within the data. This robust sampling approach enhanced the study's credibility and applicability providing insights that can inform policy and practice in leveraging stakeholder support for effective project management. Below is the sample size calculation using Slovin Formulae.

$n=N/(1+N(e^2))$
$n=200/(1+(〖0.05〗^2))$
$n=200/(1+200(0.0025))$
$n=200/(1+0.175)$
$n=200/(1.5)$
$n=133$

3.3 Data Collection Procedures

The study adopted a quantitative method approach that captured both numerical data. Therefore, a structured electronic questionnaire were distributed to employees at African Leopard Logistics, Atosh Transport Limited, Compass Logistics, Forlan Logistics Limited, Cargo Management and Logistics Zambia Limited, Global Logistics Limited, Chipangano Express Logistics Limited, Sesten Logistics Africa, Hill & Delamain, Kilimanjaro Sea Masters Limited. The questionnaire utilized Likert scales and closed-ended questions to quantify perceptions of factors contributing to low enrolment of international logistics companies in the CACP Program in Zambia. In this study, KoBo Toolbox facilitated efficient distribution and collection of responses, ensuring anonymity and confidentiality to encourage honest feedback. KoBo Toolbox was selected for its user-friendly interfaces, ability to customize surveys, and robust data management features, facilitating widespread distribution and collection of quantitative data. The KoBo Toolbox was selected because it accurately captured participant responses, preserving the integrity of quantitative data. In addition, the KoBo Toolbox facilitated streamlined data collection and analysis processes, optimizing researcher time and resources. In terms of the strategies that were applied, the researcher implemented protocols for data security, confidentiality, and participant anonymity to uphold ethical standards and enhance data integrity.

3.4 Data Analysis

Data analysis is the process of systematically applying statistical and/or logical techniques to describe and illustrate, condense and recap, and evaluate data (George Town University, 2024). Therefore, all analyses were done using IBM SPSS Statistics 22 and data was analysed using descriptive and inferential statistical analysis methods which included multiple regression analysis and correlation analysis to examine relationships between variables.

4 Research Findings

4.1 Demographic Characteristics

Table 1 presents the study respondents' demographic information for a sound understanding of their background.

Table 1: Demographic Characteristics

Demographic Characteristics	Frequency	Percentage
Gender		
Male	72	65%
Female	38	35%
Department		
Logistics	34	30.9%
Finance	12	10.9%
Operations	24	21.8%
Procurement	17	15.5%
Other	23	20.9%
Educational Qualifications		
Certificate	6	6.0%
Diploma	12	11.0%
Degrees	86	78.0%
PhD	5	5.0%
Work Experience		
0-2 Years	14	12.7%
3-5 Years	42	38.5%
6-8 Years	27	28.5%
9-11 Years	12	10.9%
12 and Above Years	15	13.6%

In table 1 above, 65% (72) of the respondents were males while 35% (38) of the respondents were females. The study revealed that majority of the respondents who participated in the study were males. In terms of department, 30.9% (34) belonged to the logistics department, 15.5% (17) belonged to the procurement department, 10.9% (12) belonged to the finance department, and 21.8% (24) belonged to the operations department and 20.9% (23) belonged to other departments. In terms of educational qualification, 6% (5.5) of the study participants held certificates, 11% (12) held diplomas, 78% (86) held undergraduate degrees, and 5% (6) held PhD. In terms of work experience, 12.7% (14) of the respondents had 0-2 years of experience, 38.5% (42) of the respondents had had 3-5 years, 24.5% (27) had 6-8 years of experience, 10.9% (12) had 9-11 years of experience and 13.6% (15) had 12 and above years of experience. The study revealed that majority of the participants had 3-5 years of experience.

4.2 Descriptive Statistics

Descriptive statistics were used to describe and summarize the data regarding the variables. The primary goal of descriptive statistics analysis was to calculate frequencies, mean, standard deviation, skewness, and kurtosis. Skewness shows a symmetrical distribution of data, while kurtosis provides information about the flatness of the data distribution (Pallant, 2016). In addition, skewness and kurtosis were used to assess the data for violations of normality. According to George and Mallery (2010), skewness and kurtosis values between +2/-2 provide evidence that there is no significant deviation from the normal univariate distribution of the data.

Data were collected using a 1-5 Likert scale with 1-Strongly disagree, 2-Disagree, 3-Neither agree nor disagree, 4-Agree, and 5-Strongly agree. Thus, mean values significantly greater than 3.5 mean that, on average, respondents agreed/strongly agreed with the factor statement, while mean values significantly less than 2.5 means that, on average, respondents disagreed/strongly disagreed with the factor statement. Mean values between 2.5 and 3.5 indicate that, on average, respondents neither agreed nor disagreed with the statement about the factor.

Table 2. Descriptive Statistics of Study Variables

Table 2. Descriptive Statistics of Study Variables

Descriptive Statistics									
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Mean	Std. Deviation	Skewness	Kurtosis
						Statistic	Statistic	Statistic	Statistic
TIME1	6	20	64	14	6	2.9455	0.86562	0.106	0.82
TIME2	6	24	71	3	6	2.8091	0.80703	0.363	1.919
TIME3	5	17	77	3	8	2.9273	0.80945	0.451	2.181
AWARE1	11	35	36	26	2	2.9455	0.86562	0.106	0.82
AWARE2	14	34	37	17	8	2.7364	1.09776	0.289	-0.476
AWARE3	11	35	36	26	2	2.7545	0.98787	-0.01	-0.752
AWARE4	11	57	33	7	2	2.3818	0.82375	0.688	0.876
AWARE5	14	51	45	0	0	2.2818	0.67907	-0.416	-0.801
AWARE6	33	44	33		0	2	0.77814	0	-1.339
AWARE7	11	49	32	16	2	2.5364	0.92545	0.422	-0.257
REQMT1	2	11	77	18	2	3.0636	0.63934	-0.055	2.271
REQMT2	2	13	77	17	1	3.0182	0.62047	-0.246	2.041
REQMT3	3	20	71	16	0	2.9091	0.65729	-0.496	0.872
REQMT4	7	25	71	7	0	2.7091	0.68195	-0.797	0.77
REQMT5	5	13	76	15	1	2.9455	0.68852	-0.616	2.022
REQMT6	3	18	73	14	2	2.9455	0.68852	-0.101	1.674
ENROL1	9	24	42	26	9	3.0182	1.0578	-0.037	-0.467
ENROL2	7	22	41	33	7	3.1	1.00412	-0.204	-0.403
ENROL3	6	26	39	32	7	3.0727	1.00192	-0.092	-0.531
ENROL4	4	31	38	31	6	3.0364	0.96667	0.051	-0.637
ENROL5	26	47	30	7	0	3.1636	0.86233	0.287	-0.595
ENROL6	3	20	49	30	8	3.1818	0.91051	0.001	-0.152

In table 2 above, the mean ranged from 2.00 to 3.1818, while the standard deviation ranged from .02047 to 1.09776. The skewness of all variables ranged from -0.797-0.688 which ranged from -2 to +2, while the kurtosis of all variables ranged from -1.399 to 2.271, which ranged from -2 to +2. From this, it can be concluded that the variables did not seriously deviate from normality.

4.3 Principal Component Analysis

Principal component analysis is a statistical technique used to reduce the dimensionality of a dataset while preserving as much variance as possible (Bai et al., 2021). It achieves this by transforming the original variables into a new set of uncorrelated variables, called principal components. These components are linear combinations of the original variables and are ordered so that the first component explains the maximum variance in the data, the second component explains the second most variance, and so on. Principal component analysis (PCA) is widely used in various fields such as image processing, finance, biology, and social sciences to simplify complex data sets and to identify patterns and relationships between variables. It is particularly useful when dealing with large datasets with many variables, as it helps in visualizing and interpreting data more effectively.

Principal component analysis was used to reduce the indicators to components that are easy to interpret. In order to conduct a principal component analysis, the following assumptions were evaluated:

Assumption 1: there are multiple variables measured at the continuous level (ordinal data is also considered). The questionnaire had 18 statements that measured four constructs at the ordinal level of measurement (strongly disagreed, disagreed, neither agree nor disagree, agreed and strongly agreed).

Assumption 2: There should be a linear relationship between all variables. This was tested using the correlation matrix. The level of correlation considered worthy of a variable's inclusion is usually $r \geq 0.3$ (Laerd Statistics, 2015). In this data set, all the variables had correlations greater than 0.3.

Assumption 3: there should be a large sample size - 10 cases per variable was a rule of thumb used to determine this assumption (Tabachnick and Fidell, 2014). There were 19 variables that met the minimum factor loading of 0.6; this translates into a minimum of 190 cases. The data set for the analysis had 288 cases. Thus, this assumption was not violated.

Sampling Adequacy

To test for the sampling adequacy, the data set was tested using the Kaiser-Meyer-Olkin (KMO) index (Kaiser, 1974). The Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity are statistical tools commonly used in the context of factor analysis to assess whether a dataset is suitable for this type of analysis. The KMO measure evaluates the sampling adequacy of data for factor analysis and is calculated by considering the partial correlations between variables and then taking into account the sum of these correlations relative to the sum of all correlations. The KMO index ranges from 0 to 1. Higher values close to 1 indicate that the variables in the dataset are suitable for factor analysis. Lower values closer to 0 suggest that correlations between variables are too weak for reliable factor analysis. On the other hand, Bartlett's test evaluates whether the correlation matrix among variables is an identity matrix, which would indicate that variables are

not correlated and hence not suitable for factor analysis. The null hypothesis for Bartlett's test is that the correlation matrix is an identity matrix (variables are uncorrelated). If Bartlett's test yields a significant result (typically $p < 0.05$), then the null hypothesis is rejected, indicating that correlations between variables are sufficiently large for factor analysis thus, a non-significant result suggests that the dataset does not have sufficient correlations among variables for meaningful factor analysis. For this data, the KMO was 0.813, which is satisfactory. For the individual items KMO measures, all were above 0.6. The Bartlett's test of sphericity is statistically significant (i.e., $p < 0.05$). Thus, the correlation matrix was not an identity matrix (see Table 4 below). This indicates that the data was suitable for principal components analysis.

Table 3: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.813
Bartlett's Test of Sphericity	Approx. Chi-Square	2358.485
	df	153
	Sig.	.000

Table 4: KMO Measures for Individual Variables

Variable	KMO Measurement	Variable	KMO Measurement
Time 3	0.602	Enroll1	0.831
Time1	0.629	Enroll2	0.801
Aware2	0.807	Enroll3	0.892
Aware3	0.809	Enroll4	0.866
Aware4	0.857	Enroll5	0.776
Aware5	0.813	Enroll6	0.860
Aware7	0.905		
Reqmt1	0.757		
Reqmt2	0.882		
Reqmt3	0.628		
Reqmt5	0.794		
Reqmt6	0.836		

The Result of the PCA

A principal component analysis (PCA) was run on a 19-question questionnaire that investigated factors contributing to low enrollment of logistics companies in the CACP program. The suitability of PCA was assessed prior to analysis. Inspection of the correlation matrix showed that all 19 variables had at least one correlation coefficient greater than 0.3. The overall Kaiser-Meyer-Olkin (KMO) measure was 0.813, with individual KMO measures all greater than the minimum acceptable cut off of 0.6, according to Kaiser (1974). Bartlett's test of sphericity was statistically significant ($p < .0005$), indicating that the data was likely factorizable.

PCA revealed four components that had eigenvalues greater than one and which explained 38.811%, 23.347 %, 12.498%, and 8.056% of the total variance, respectively. Visual inspection of the scree plot indicated that four components should be retained (Cattell, 1966). In addition, a four-component solution met the interpretability criterion. (Cheaper). As such, four components were retained. The four components that were retained are Time spent in the CACP Application Process, lack of Awareness, Unfavorable Enrollment Requirements and enrollment in the CACP.

The four-component solution explained 82.711% of the total variance. A Varimax orthogonal rotation was employed to aid interpretability. The rotated solution exhibited 'simple structure' (Thurstone, 1947). The interpretation of the data was consistent with the attributes the questionnaire was designed to measure with strong loadings of time spent (1), awareness (2), requirements (3), and enrollment (4). Component loadings and communalities of the rotated solution are presented in Table 4.5 (the full outputs from SPSS are attached in the appendices).

Table 4a: Rotated Structure Matrix PCA with Varimax Rotation

Rotated Component Matrix[a]					
	Component				
	1	2	3	4	Communalities
ENROL3	**.910**	.177	.135	-.059	0.891
ENROL2	**.877**	.155	.293	.070	0.884
ENROL1	**.877**	.259	.006	-.041	0.838
ENROL5	**.851**	.048	.220	.216	0.821
ENROL6	**.775**	.417	-.062	-.076	0.784
ENROL4	**.767**	.350	-.157	-.131	0.753
AWARE5	.112	**.934**	-.164	-.043	0.914
AWARE3	.215	**.908**	.032	-.058	0.875
AWARE2	.249	**.898**	.149	-.030	0.891
AWARE4	.324	**.892**	.140	-.163	0.946
AWARE7	.407	**.722**	.000	.190	0.723
REQMT6	.215	.045	**.862**	.262	0.860
REQMT5	.113	.072	**.847**	.368	0.971
REQMT1	-.028	.072	**.841**	-.019	0.713
REQMT2	.037	.135	**.757**	.366	0.727
REQMT4	.096	-.427	**.751**	-.209	0.763
TIME3	-.141	-.003	.189	**.888**	0.844
TIME1	.117	-.126	.221	**.827**	0.763
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.					
a. Rotation converged in 6 iterations.					

Table 4b: Total Variance Explained

Total Variance Explained									
	Initial Eigenvalues			Loadings			Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.986	38.811	38.811	6.986	38.811	38.811	4.775	26.526	26.526
2	4.202	23.347	62.158	4.202	23.347	62.158	4.469	24.828	51.355
3	2.250	12.498	74.656	2.250	12.498	74.656	3.640	20.224	71.579
4	1.450	8.056	82.711	1.450	8.056	82.711	2.004	11.133	82.711
5	.884	4.909	87.621						
6	.440	2.445	90.066						
7	.368	2.042	92.108						
8	.343	1.908	94.016						
9	.273	1.517	95.533						
10	.172	.958	96.490						
11	.148	.822	97.312						
12	.123	.681	97.994						
13	.105	.581	98.575						
14	.079	.438	99.013						
15	.066	.366	99.379						
16	.056	.313	99.692						
17	.029	.162	99.854						
18	.026	.146	100.000						
Extraction Method: Principal Component Analysis.									

Table 4c: Anti Image Matrix

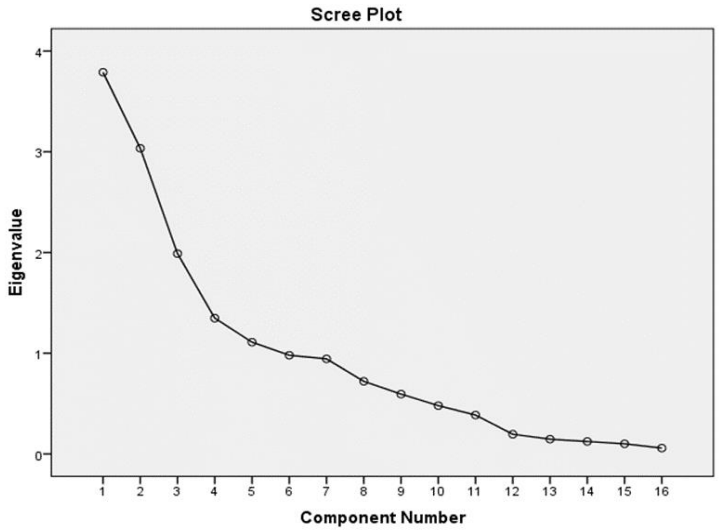

Figure 1: Scree Plot

4.4 Reliability Analysis

In this study, a structured questionnaire served as the primary tool for evaluating several distinct constructs relevant to the research objectives. The questionnaire was meticulously designed to capture key variables related to factors contributing to low enrollment of international logistics companies to the Customs Accredited Clients. This method ensured that the data collected was comprehensive and aligned with the study's aims. To ascertain the reliability of the constructs measured by the questionnaire, the researcher employed Statistical Package for Social Sciences (SPSS) version 22. This software facilitated a rigorous reliability analysis, specifically using Cronbach's alpha coefficient. Cronbach's alpha is a widely used measure to assess the internal consistency of a set of questionnaire items intended to measure a single construct. It quantifies how closely related a set of items are as a group, providing insights into the reliability and coherence of the constructs being studied. Table below in the study presents the computed Cronbach's alpha coefficients for each variable construct derived from the questionnaire. These coefficients were crucial indicators of the reliability of the measurement scales used in the study. Higher alpha values generally indicate greater internal consistency among the items measuring each construct, suggesting that the items are measuring the same underlying concept effectively. Moreover, detailed outputs from the reliability analysis procedure conducted in SPSS are documented in Table 4 of the study. These outputs include comprehensive information such as item-level statistics, scale-level statistics, and reliability coefficients for each construct. This transparency and thoroughness in reporting the reliability analysis ensured that the study's findings were based on robust and dependable measurement instruments. Table 5 below provides an illustration of the reliability analysis utilizing Cronbach's alpha coefficient.

Table 5: Cronbach's Alpha for the Two Constructs

Construct	Item	Cronbach's Alpha
Awareness	Aware2 Aware3 Aware4 Aware5 Aware7	.946
Requirements	Reqmt1 Reqmt2 Reqmt4 Reqmt5 Reqmt6	.890
Enrollment	Enrol1 Enrol2 Enrol3 Enrol4 Enrol5 Enrol6	.942
Time	Time3 Time1	.772

George and Mallery (2019) offer a guideline for interpreting Cronbach's alpha. Cronbach's alpha is a measure of internal consistency reliability, used to assess how well a set of items in a questionnaire or scale measures a single construct. The coefficients can range from 0 to 1, where higher values indicate greater internal consistency among the items. Coefficients less than 0.5 are classified as "Unacceptable." This range suggests that the items in the questionnaire or scale are not measuring the construct reliably. Internal consistency is considered inadequate, indicating that the items may not be sufficiently related to each other to provide a consistent measurement. Coefficients greater than 0.5 but less than 0.7 are categorized as "Poor." While these coefficients indicate some degree of internal consistency, it is still considered less than desirable. The items may be measuring the construct, but with a moderate level of reliability. In this study, all the constructs demonstrated strong to excellent Cronbach's alpha values. That is: values less than 0.5 are categorized as "Unacceptable," indicating poor internal consistency reliability; values greater than 0.5 but less than or equal to 0.6 are classified as "Poor," suggesting weak internal consistency; values greater than 0.6 but less than or equal to 0.7 are labeled as "Questionable," indicating moderate internal consistency; values greater than 0.7 but less than or equal to 0.8 are considered "Acceptable," signifying reasonably good internal consistency; values greater than 0.8 but less than or equal to 0.9 are termed "Good," indicating strong internal consistency; values greater than 0.9 but not exceeding 0.95 fall into the category of "Excellent," suggesting very strong internal consistency. These classifications helped assess the reliability of scales or constructs measured by Cronbach's alpha, providing insights into the consistency of responses within a questionnaire or survey.

4.5 Component-Based Scores

A component-based score refers to a composite score derived by averaging the scores of all items that exhibit strong loadings on a specific component identified through factor analysis (Fincham, 2008). For instance, items such as Aware2,

Aware3, Aware4, Aware5, and Aware7 all loaded strongly on Component 1. The scores of these individual items were averaged to generate a composite component-based score reflecting the factors contributing to low enrollment. These component-based scores, now treated as variables, were subsequently utilized in hierarchical multiple regression analysis (Tabachnick & Fidell, 2014). This method allows for examining the relationship between these composite scores (variables) and other control variables, as well as the dependent variable, which in this context is the supply chain management metrics.

Table 6: Correlation Matrix

Correlations

	Mean	Std. Deviation	Enrollment	Time	Awareness	Requirement	Gender	Qualification	Experience
Enrollment	3.017	0.853	1						
Time	3.082	0.665	-.031	1					
Awareness	3.462	0.828	.527**	-.071	1				
Requirement	3.096	0.554	.175	.389**	.041	1			
Gender	1.345	0.478	-.693**	.156	-.834**	.227*	1		
Qualification	2.891	0.734	.003	.018	-.212*	.026	.108	1	
Experience	2.745	1.222	-.569**	-.098	-.939**	-.072	.812**	.173	1

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

*. Correlation is significant at the 0.05 level (2-tailed).

From table 6 above, it was observed that none of the control variables (gender, qualification and experience) was significantly related to the dependent variable enrollment at the .05 level of significance. Time was not significantly related to enrollment, awareness was significantly related to enrollment, and requirements was insignificantly related to enrollment. The correlation matrix in Table 6 above helps us to determine if multicollinearity would be a problem if we conduct OLS multiple regression. All the correlations for the continuous independent variables are less than 0.7 hence multicollinearity is not an issue.

4.6 Hierarchical Multiple Regression Analysis

Hierarchical multiple regression analysis is a statistical technique used to explore the relationship between multiple predictor variables and a single outcome variable. It builds upon the basic principles of multiple regression by introducing a systematic approach to entering predictor variables into the regression equation (Tabachnick & Fidell, 2014). To begin hierarchical multiple regression analysis, there is need to evaluate several assumptions to ensure the validity and reliability of the findings.

These assumptions typically include assessing the linearity of relationships between variables, verifying that residuals are normally distributed, confirming that there is no multicollinearity among predictor variables, and ensuring that residuals exhibit homoscedasticity (equal variance). Once these assumptions are met, the hierarchical multiple regression analysis proceeds. This method involves systematically entering predictor variables into the regression equation in stages or blocks. The order of entry is predetermined based on theoretical or practical considerations. Thus, in order to conduct a hierarchical multiple regression analysis, the following assumptions (eight key) were evaluated thereafter the procedure was run to obtain the results.

Assumption #1: You have one dependent variable that is measured at a continuous level (i.e., the interval or ratio level). In this study, the dependent variable, enrollment, was considered a continuous variable after the component-based scores were computed.

Assumption #2: You have one or more independent variables that are measured on either a continuous or nominal scale. In this study, the following independent variables were continuous variables after the component-based scores were computed: time, awareness, and requirements. The control variables used were sex (nominal), Experience (ordinal), and Education (ordinal).

Assumption #3: There should be independence of errors (residuals)

The Durbin-Watson was 1.518, which is between 1.5 and 2.5, and therefore, the data is not auto-correlated. There was the independence of residuals as assessed by a Durbin –Watson statistic of 1.518.

Assumption#4: There should be a linear relationship between the predictor variables and the dependent variable.

To establish if a linear relationship exists between the dependent and independent variables collectively, a scatter plot of the standardized residuals against the unstandardized predicted values was plotted using the chat builder in SPSS (see appendix 4) The residuals form a horizontal band as shown in the scatter plot in Appendix 4. Therefore, the relationship between the dependent variable and independent variables is linear.

To establish if a linear relationship exists between the dependent variable and each of the independent partial regression plots from SPSS were used.

Time: A partial regression plot in appendix 4 shows a linear relationship between time and enrollment in the CACP.

Awareness: A partial regression plot in appendix 4 shows a linear relationship between awareness and enrollment in the CACP

Requirements: A partial regression plot in appendix 4 shows a linear relationship between requirements and enrollment.

Assumption #5: There should be homoscedasticity of residuals (equal error variances)
The assumption of homoscedasticity was checked using the plot for standardized residuals against the unstandardized predicted values (see appendix 4). The residuals appear randomly scattered. On this basis, it appears that the assumption of homoscedasticity has been made.
Assumption#6: There should be no multicollinearity. To check for multicollinearity, correlation coefficient and tolerance/ VIF values were inspected. None of the independent variables in Table 4.8 had correlations greater than 0.7. In the coefficient output in appendix 4 none of the variance VIF is greater than 5, so multicollinearity should not be a problem with this data set.
Assumption#7: There should be no significant outliers, high-leverage points, or highly influential points. To check for outliers, standardized residuals, and standardized deleted residuals were inspected from the SPSS output residual statistics. Values greater than ±3 are an indication of the presence of an outlier. From the residual statistics table, none of the standardized residuals and standardized deleted residuals were outside the ±3 cutoff criteria for outliers therefore, there was no evidence of outliers in the data set.
To check whether any cases exhibit high leverage, one general rule of thumb is to consider leverage values less than 0.2 as safe, 0.2 to less than 0.5 as risky, and values of 0.5 and above as dangerous (Huber, 1981). From the residual statistics table in Appendix 4 the maximum leverage point is 32.879 and the minimum leverage point is -.85932. In this data, there are no leverage values above the safe value of .2. Therefore, there is no residual with a high leverage point.
To check for influential points cook's Distance values for each case were inspected. As a rule of thumb, if there are Cook's Distance values above 1, they should be investigated. From the residual statistics in appendix 4, the maximum Cook's value is.081 and the minimum value is .000. There were no Cook's distance values above 1, therefore no evidence of an influential case (Cook and Weisberg, 1982).
Assumption #8: Errors (residuals) should be approximately normally distributed.
Two methods were used to check for the assumptions of normality of the residuals: A histogram with a superimposed normal curve and a P- P Plot produced by SPSS. From the histogram in appendix 4, the standardized residuals appear to be approximately normally distributed. To confirm this finding, the P-P Plot was examined. From the P-P Plot in appendix 4 although the points are not aligned perfectly along the diagonal line, there are close enough to indicate that residuals are close enough to normal for the analysis to proceed.
There was linearity as assessed by partial regression plots and a plot of studentized residuals against the predicted values. There was the independence of residuals, as assessed by a Durbin-Watson statistic of 1.518. There was homoscedasticity, as assessed by visual inspection of a plot of studentized residuals versus unstandardized predicted values. There was no evidence of multicollinearity, as assessed by correlations and VIFs. There were no studentized deleted residuals greater than ±3 standard deviations, no leverage values greater than 0.2, and values for Cook's distance above 1. The assumption of normality was met, as assessed by the histogram of residuals and the P-P Plot.

4.7 Interpretation of the Findings

A hierarchical multiple regression was run to determine if time, awareness and requirements contributed to low enrollment of international logistic companies in the CACP program over and above the control variables of Sex, Experience and Education. For comprehensive insights into the results of the regression model, including coefficients, significance levels, and model fit statistics, please consult Table 8. This table provides a comprehensive overview of how each variable contributes to low enrollment of international logistic companies in the CACP program

Table 8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.539[a]	.291	.244	2.02811	.291	6.281	3	45	.000	.756

a. Predictors: (Constant), Experience, Qualification, Industry_4.0_Technologies, Department
b. Dependent Variable: Supply_Chain_Metrics

The full model of Gender, Qualification, Time, Requirements, and Awareness to predict low enrollment (Model 2) was statistically significant, R2 =.487, F (50.779), p < .05; adjusted R2 = .477. The addition of the control variables of Gender and Qualification, to the prediction of low enrolment (Model 1) did not lead to a statistically significant increase in R2 of .487, F (50.779) = .50.779, p >. 05.

Hypothesis Testing

Table 9: Hypothesis Testing Results

Hypotheses	t value	p value	Comment
H_1: Lengthy CACP approval time contribute to low enrollment of international logistics companies to the Customs Accredited Clients.	-1.180	0.241	Not Supported

H_2: Lack of awareness contribute to low enrollment of international logistics companies to the Customs Accredited Clients Programme (CACP Programme) in Zambia.	-4.538	0.000	Supported
H_3: Unfavorable enrollment requirements contribute to low enrollment of international logistics companies to the Customs Accredited Clients Programme (CACP Programme) Zambia.	7.348	0.000	Supported

Table 9 above reveals the following:
H1–There was no significant positive relationship between the approval time and enrollment of international logistics companies to the Customs Accredited Clients (t=-1.180, p>0.05). Hence, this hypothesis was not supported.
H2–There was a significant negative relationship between the variable lack of awareness and enrollment of international logistics companies to the Customs Accredited Clients (t=-4.538, p < 0.05). Hence, the hypothesis lack of awareness contribute to low enrollment of international trade operators to the Customs Accredited Clients Programme (CACP Programme) in Zambia was supported in the negative sense, contrary to expectations.
H3–There was significant positive relationship between the variable unfavorable requirement and enrollment of international logistics companies to the Customs Accredited Clients (t=7.348, p< 0.05). Hence, this hypothesis was supported.

4.8 Discussion the Results

The discussion of the results is done in response to the objectives one, two and three respectively. To achieve the objectives, nineteen (19) variables were identified from literature (see Appendix1). Factor analysis yielded a Four (4) factor model (see Appendix 2) in which the nineteen (19) variables were categorized into four (4) factors namely: 1. Time (Time 1 & Time3), 2. Awareness (Aware 1 & Aware 7), 3. Enrollment (Enrol 1 & Enrol 6) and 4. Requirement (Reqmt, Reqmt 6). A five-point Likert scale was used to measure the variables: 1. Strongly Disagree, 2. Disagree, 3. Neutral, 4. Agree, 5. Strongly Agree.

Research Objective One: To ascertain the effect of lengthy CACP approval time on enrollment of selected international logistics companies in the customs accredited clients programme (CACP) in Zambia.

The study found that majority of the respondents who participated in the study disagreed that time taken to conduct internal compliance audit, approve CACP application upon submission and issuance of the CACP certificate after approval affect enrollment of selected international trade operators in the customs accredited clients programme (CACP) in Zambia. The study also revealed that the hypothesis "Lengthy CACP approval time contribute to low enrolment of international logistics companies to the Customs Accredited Clients" was not supported. This implied that approval time did not contribute to low enrollment of international logistics companies in the CACP. This result was inconsistent with the findings of the study by Erceg (2014) which reported that first applications for AEO started in autumn of 2013 and 25 companies applied for AEO certificate. Until now no certificate has been approved since the process of approving is lasting at least 6 months. The results are also inconsistent with the Pickle Jar Theory which argues that time is limited because it is like a Pickle Jar. Our life is the jar and what is in it, the volume or space is limited. Every day, everyone fills out time with important, less important and unimportant activities. In addition, the theory argues that time set priorities for daily life and plan tasks in such a way, that you have time to spare instead of too few hours in the day.

Objective Two: To establish the effect of lack of awareness on enrollment of selected international logistics companies in the customs accredited clients programme (CACP) in Zambia.

The study found that majority of the respondents who participated in the study agreed that lack of awareness on the Customs Accredited Clients Programme (CACP), benefits of being a CACP member, set requirements to be an eligible member of CACP, exact duration of registration process, total cost required to operate under the CACP programme, and failure to fully understand the CACP Program affects enrollment of international logistic companies in the CACP Program.
The results also revealed that, the hypothesis 'lack of awareness contribute to low enrollment of international logistics companies to the Customs Accredited Clients Programme (CACP Programme) in Zambia' was supported. The result was significant but negative contrary to the report by the Federation of East African Freight Forwarders Associations (2023) which reported the need for more awareness to spur demand for the AEO program to meaningfully impact regional trade. This is also contrary to the theory of constraints.

Research Objective Three: To ascertain the effect of unfavorable enrollment requirements on enrollment of selected international logistics companies in the customs accredited clients programme (CACP) in Zambia.

The study found that majority of the respondents who participated in the study agreed that unfavorable requirements for completing the application form for Customs Accredited Clients Programme (CACP), requirements on self- assessment checklist, period required for the assessment, requirement of a dedicated employee/s to manage the Customs Accredited Clients Programme (CACP) activities in the organization, standard set for being eligible in the Customs Accredited Clients

Programme (CACP) program affect enrollment of selected international logistics companies in the customs accredited clients programme (CACP) in Zambia. The results also revealed that, the hypothesis 'unfavorable enrollment contribute to low enrollment of international logistics companies to the Customs Accredited Clients Programme (CACP Programme) in Zambia' is supported. This implies that unfavorable enrolment requirements lead to low enrollment of selected international logistics companies in the customs accredited clients programme (CACP) in Zambia. This is consistent with a study by Okoboi and Kyanzi (2018) which revealed that accounts from firms that have received AEO accreditation in Uganda suggested that the accreditation process in Uganda is cumbersome, laden with indirect costs that adversely affect small and medium scale businesses and involves submission of a written expression of interest to URA Commissioner of Customs, preliminary consultation with Customs AEO team, filling-in forms with supporting documents (on sound management of commercial records, good financial standing and good compliance history with Customs and other government regulatory bodies), vetting of eligibility of the applicant, on-site inspection of applicant premises to confirm information provided in the application, and authorization/approval of the entity as AEO by Commissioner of Customs (URA, 2015).

5 Conclusion

The main purpose of this study was to investigate the factors contributing to low enrollment of international logistics companies in the CACP program in Zambia. The study concludes that lengthy time to approve the application do not affect enrollment of selected international logistics companies in the customs accredited clients programme (CACP) in Zambia. The study also concludes that lack of awareness affect enrollment of international logistics companies to the Customs Accredited Clients Programme (CACP Programme) in Zambia. Further, the study concludes that unfavorable enrolment requirements lead to low enrollment of selected international logistics companies in the customs accredited clients programme (CACP) in Zambia. Hence, this study achieved all the three objectives set out to address.

Declaration of Competing Interests

The authors declare that they are not aware of any competing financial interests or personal relationships that may have influenced the work described in this document.

Funding

This research did not receive specific grants from any public, commercial, or non-profit sector funding bodies.

Acknowledgements

The authors thank s Dr. for providing guidance in formulating the statement of the problem, the objectives, proofreading, and editing the article and continuous guidance throughout the students research.

References

Adepetun Caxton-Martins Agbor & Segun, (2023) Nigeria Customs Service launches the Authorized Economic Operators Program. Available at: https://www.dentonsacaslaw.com/en/insights/articles/2023/september/7/nigeria-customs-service-launches-the-authorized-economic-operators-program (Accessed on 26th November, 2023).

Arrow, K., Resnik, P., Michel, H., Kitchen, C., Mo, C., Chen, S., Espy-Wilson, C., Coppersmith, G., Frazier, C., & Kelly, D. L. (2023). Evaluating the Use of Online Self-Report Questionnaires as Clinically Valid Mental Health Monitoring Tools in the Clinical Whitespace. The Psychiatric Quarterly, 94(2), 221–231. https://doi.org/10.1007/s11126-023-10022-1

Barker, G., (2011) 'A Survey of Australian Industry Attitudes to Authorized Economic Operator Schemes' (Australian National University).

Barroga, E., & Matanguihan, G. J. (2022). A Practical Guide to Writing Quantitative and Qualitative Research Questions and Hypotheses in Scholarly Articles. Journal of Korean Medical Science, 37(16), e121. https://doi.org/10.3346/jkms.2022.37.e121

Bosker, M., Buringh, E (2020) Ice(berg) Transport Costs, The Economic Journal, Volume 130, Issue 629, Pages 1262–1287, https://doi.org/10.1093/ej/ueaa023.

Bujang, A.M., Hon K.Y., Lee, K., Yee, K., (2022). A Step-by-step Guide to Questionnaire Validation Research. Institute for Clinical Research.

Business Research Methods, (2023) Positivism Research Philosophy. Available from: https://research-methodology.net/research-philosophy/positivism/#:~:text=Search-,Positivism%20Research%20Philosophy,-It%20has%20to (Accessed 5th, December,2023).

Cattell, R. B. (1966) The Scree Test For The Number Of Factors, Multivariate Behavioral Research, 1:2, 245-276, DOI: 10.1207/s15327906mbr0102_10.

COMCEC Coordination Office, (2018). Authorized Economic Operator Programs in the Islamic Countries: Enhancing Customs-Traders Partnership. COMCEC Coordination Office.

Connor D, S., & Reimers, S. (2019). Comparing the use of open and closed questions for Web-based measures of the continued-influence effect. Behavior Research Methods, 51(3), 1426–1440. https://doi.org/10.3758/s13428-018-1066-z.

Cook, R. D. and Weisberg, S. (1982). Residuals and influence in regression. Monographs on Statistics and Applied Probability. – Chapman and Hall.

Curtis, E. A., Comiskey, C., & Dempsey, O. (2016). Importance and use of correlational research. Nurse Researcher, 23(6), 20–25. https://doi.org/10.7748/nr.2016.e1382

Customs & Tariff Bureau, (2023). AEO program (Authorized Economic Operator). Japan, Customs & Tariff Bureau, Ministry of Finance. Available at: https://www.customs.go.jp/english/aeo/pamphlet.pdf (Accessed on 26th November, 2023).

DeJonckheere, M., & Vaughn, L. M. (2019). Semi-structured interviewing in primary care research: a balance of relationship and rigour. Family medicine and Community Health, 7(2), e000057. https://doi.org/10.1136/fmch-2018-000057

Erceg, A., (2014) Influence of Authorized Economic Operators on Supply Chain Security. Business Logistics in Modern Management.

Federation of East African Freight Forwarders Associations (2023) Research on factors affecting uptake of Authorized Economic Operator scheme by businesses in the East African Community (EAC). Available at: https://feaffa.com/program/research-on-factors-affecting-uptake-of-authorized-economic-operator-scheme-by-businesses-in-the-east-african-community-eac/ (Accessed on 26th November, 2023).

George, D., & Mallery, M. (2010). SPSS for Windows Step by Step: A Simple Guide and Reference, 17.0 update (10a ed.) Boston: Pearson.

Goldratt, E.M., Cox, J. (1984). The Goal. Croton -on-Hudson, the North River Press, NY.

Huber, P.J. (1981), Robust Statistics, Wiley, New York.

Ireland, B. (200). The WCO SAFE Framework of Standards: Avoiding Excess in Global Supply Chain Security Policy. Global Trade and Customs Journal.

Javed, A., (2023). Advantages and Disadvantages of Descriptive Research. Available at: https://englopedia.com/advantages-and-disadvantages-of-descriptive-research/

Kaiser, H. F. (1974). A computational starting point for Rao's canonical factor analysis: Implications for computerized procedures. Educational and Psychological Measurement, 34(3), 691–692. https://doi.org/10.1177/001316447403400322.

Lamessa, D., (2017) Authorized Economic Operators' Regulation in Ethiopian Customs. MSc. Thesis. Jimma University College of Law and Governance School of Law.

Laszuk and Ryciuk (2016) The Importance of Authorized Economic Operator Institution for the Security of Supply Chain in the International Goods Turnover of Polish Enterprises. Eurasian Journal of Business and Management 4(1):32-41.

Mohamad, A.M., Khee, H.Y., & Yee, L.K., (2022). A Step-by-step Guide to Questionnaire Validation Research. Institute for Clinical Research.

Mwangelwa, S., (2023). The Impact of Authorized Operators Programme: A Case Study of Trade Facilitation in Zambia. MSC. Thesis. Trapca.

Okoboi, G., & Kyanzi, M. (2018). The Impact of Authorised Economic Operator on Trade Facilitation: The Case of Uganda.

Pallant, J. (2016). SPSS Survival Manual: A Step By Step Guide to Data Analysis Using SPSS Program (6th ed.). London, UK: McGraw-Hill Education.

Ryan G. (2018). Introduction to positivism, interpretivism and critical theory. Nurse Researcher, 25(4), 14–20. https://doi.org/10.7748/nr.2018.e1466

Softonic International, (2023) Download SPSS - latest version. Available from: https://spss.en.softonic.com/download

(Accessed 4th December, 2023).

Tabachnick, B. and Fidell, L.S. (2014). Using Multivariate Statistics.6th edition. Pearson New International Edition.

Tegneman, O & Tryggvason, S., (2015) Authorised Economic Operator: Looking into the current perception and the future of AEO Program in Sweden. University of Gothenburg.

Thakur, H.K., (2021). Research Design. Research Methodology in Social Sciences.

Statistics.laerd.com. (2015). Cronbach's Alpha in SPSS - Procedure, Output and Interpretation of the Output Using A Relevant Example. [online] Available at: https://statistics.laerd.com/spss-tutorials/cronbachs-alpha-using-spss-statistics.php [Accessed 9th January 2023].

Uganda Revenue Authority (2016). Customs Business Systems Enhancement Project Closure Report. Kampala, Uganda: Uganda Revenue Authority.

URA (Uganda Revenue Authority). (2015). Evaluation of the Managing Compliance Programme (2011/12-2014/15). Final Report. Kampala, Uganda:

Wang, X., & Cheng, Z. (2020). Cross-Sectional Studies: Strengths, Weaknesses, and Recommendations. Chest, 158(1S), S65–S71. https://doi.org/10.1016/j.chest.2020.03.012

Widdowson, D., Blegen, B., Kashubsky, M. & Grainger, A., 2014. Review of accredited operator schemes: an Australian study. World Customs Journal, 8(1), pp. 17-34.

Wasti, S. P., Simkhada, P., Teijlingen, E. R., Sathian, B., & Banerjee, I. (2022). The Growing Importance of Mixed-Methods Research in Health. Nepal journal of Epidemiology, 12(1), 1175–1178. https://doi.org/10.3126/nje.v12i1.43633

World Customs Organization (2012) SAFE Framework of Standards: Presentation by the General Review Sub-Group Facilitator, 10th Meeting of the SAFE Working Group, WCO Doc LF0077E1a, Brussels.

World Customs Organisation (WCO) (2005). WCO SAFE Package / AEO Template (2005), available at http://www.wcoomd.org/en/topics/facilitation/instrument-and-tools/tools/%7E/media/C5BFD21DF7FF4E18992EA359DD3E4EDB.ashx (accessed 15 November, 2023).

World Customs Organisation. (2014). World Customs Organisation. Retrieved July 28, 2023, from https://www.icao.int/Meetings/AirCargoDevelopmentForum-Togo/Documents/AEO-Compendium_ed_2014.pdf

World Customs Organisation (2015). Customs-Business Partnership Guidance. Available at http://www.wcoomd.org/en/media/newsroom/2015/july/~/media/E2B8A58843F44C55AD21BBE9BA2672B3.ashx (accessed 28 November, 2023).

Zambia Revenue Authority (2019) Trade Facilitation Tools. Available at: https://www.zra.org.zm/trade-facilitation-tools/ (Accessed on 26th November, 2023).