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The Effect of Stakeholders Management on the Relationship between Organizational Characteristics and Performance of Seaports in Africa

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Abstract

The main objective of this study was to determine the effect of stakeholders' management on the relationship between organizational characteristics and performance of seaports from Anglophone Africa. This study adopted positivist research philosophy with descriptive cross-sectional census survey design. Structured questions in form of questionnaires were employed to collect primary data targeting executive managers of container handling seaport terminals in Anglophone Africa who are conversant with port operations and management. Additional published data also obtained from websites of some of the ports. The response rate was 83.6%. Reliability and validity for the indicator items were ascertained through diagnostic tests. Model fitness was confirmed by use of SRMR and NFI. Partial Least Squares Structural Equation Modelling using Smart PLS 4.0 software was used for data analysis and to test hypothesis that there is no significant moderating effect of stakeholders' management on the relationship between organizational characteristics and the performance of seaports in Anglophone Africa. The finding established positive and significant moderating effect of stakeholders' management on the relationship. The study concluded that sound and competent stakeholders' management enhances seaport container terminal performance thereby creating competitive advantage for ports in Anglophone Africa. The study adds to new knowledge, theory, policy and practice by recommending that seaports in Anglophone Africa should mitigate on possible conflicts from stakeholders while developing new ports or expanding existing ports by adopting stakeholder theory.

Keywords: Organizational Characteristics; Partial Least Squares Structural Equation Modelling; Container Handling Terminal; Measurement Model Estimation; Stakeholders Management.

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1. Introduction

Organizational characteristics can define its overall performance in many ways, and hence understanding them is necessary while considering the development of a new institution, expanding an existing one or improving its performance, market share and growth [1]. Previous studies carried out in Europe, identified organizational attributes for seaports like location, size, information communications technology, infrastructure, maritime services and hinterland connectivity as some of the organizational characteristics that contribute towards organizational performance and are more specifically associated with seaports [2]. Organizational performance and its measurement continues to compound scholars due to its complexity and in this regard the concept of performance needs to be clearly understood [3].

Performance has been proven to be influenced by their organizational characteristics [2]. The moderating role of stakeholders management in the relationship between organizational characteristics and performance needs to be explained. This is because, due to individual varying interests of the many stakeholders, if common interests are not found, performance suffers due to emerging conflicts. Accordingly, stakeholder management becomes more critical for organizational performance. Striking a balance amongst stakeholders varied concerns is critical for stakeholders' management and performance [4].

The natural resource based view (NRBV), the dynamic capabilities theory (DCT), and the stakeholder's theory offer explanations and information on the anchorage of this study. The NRBV and DCT explain the organizational characteristics and performance. The NRBV focuses on new contexts where organizations have established new capabilities, like eco-innovations, new management tools and the integration of stakeholder's demands which enable ecologically maintainable performance [5]. DCT accounts for sustenance of competitive advantage by building new resources and capabilities like use of information communications technology. This includes stakeholder integration especially in fast changing environments [6]. The stakeholder theory explains systematic managing of stakeholders' interests in order to avoid conflicts especially where they influence managers on use of resources and capabilities which leads to good performance [7].

Ports from developing countries command 72 percent of world container trade out of which African share is only one percent [8]. The main challenges facing African ports are inefficient operations, lengthy cargo clearing and dwell times, inadequate port and hinterland infrastructure; lengthy documentation processes and low levels of automation. Utilization of technology by seaports for productivity has led to a 36 percent higher profit than competitors. The recommendations by [9] included measures that if implemented would improve performance and competitiveness of African seaports which included among others, improved public investment structure, eradication of operational inefficiencies, and ambitious governance reforms to mobilize and attract public-private partnerships for financing [10]. The motivation behind this study was the need to find out solutions to challenges facing African seaports and especially the role played stakeholders management on the relationship between the port characteristics and performance of seaports in Africa.

1.1 Organizational Characteristics

Organizational characteristics refer to aspects of the organizations that can be identified particularly in relation to performance. These characteristics are present in form of internal and natural environment resources of the organization. These characteristics include size, age, ownership and diversification [11, 12]. Studies by [13, 14] also identified some determinants of performance such as organization's size, infrastructure, age, strategic location, information communications technology (ICT), efficiency level, costs, reliability and the region's economic expansion. Size of a firm can be measured in terms of its physical size, number of employees and production equipment that it has. Studies have indicated that large sized firms tend to give better performance that smaller ones [11]. They add that age of an organization and the many years of experience may result into higher possibility of better industry performance. Long period of existence enables the firm to build resources and capabilities that may lead to enhanced performance [15].

Strategic location refers to proximity to the main trade routes by sea, air, rail and road with highly efficient infrastructure. Close proximity of an organization to these resources is a catalyst for higher performance [16]. Organizations that lack the advantage of strategic location can leverage on efficiency and technology to enhance performance [17]. Infrastructure refers to the size and quality of an organization's internal capability. In a seaport environment it refers to the quality of physical structures like berths, draught, yards, quays, equipment and road and rail infrastructure for entry and evacuation of cargo [18]. Costs of production and transport, contribute towards an organization's charges and are known characteristics of performance because costs of goods and services is a matter which users will reflect when choosing goods and services which are similar. Reliability of services, efficiency and good reputation are other factors that give rise to better performance. Some customers would be willing to pay slightly more for efficiency [19].

1.2 Stakeholder Management

A stakeholder is any individual or group that can impact or be impacted by the activities or purpose of a company or an organization [7]. Stakeholders come from varied categories including shareholders, environmentalists, suppliers, freight companies, transporters, employees, local community and government agencies which leads to complex decision-making process with differing and conflicting interests. Stakeholders' management is the method by which stakeholders' relationships are organized, improved and monitored. The process encompasses systematically identifying key stakeholders; evaluating their needs and expectations; and scheduling and executing various tasks as a way of engaging with them. The first efforts made on stakeholder based approach to port management studies can be traced back to studies by [20, 21]. The conclusion of both researchers was that the intentions of a port managing organization clearly differ from those of conventional commercial firms thus the necessity for a case by case approach which depends on the type of organization and its mission and objectives as well as related factors such as level of rival competition, and the location of the country where it resides and other factors.

The initial effort to identify and classify stakeholders came from the original works of [22] who identified four categories of stakeholders as those who take leading role in the planning process of seaports, those who think

along, those who take part in making decisions, and those who always strive to be informed. The first broad effort to outline stakeholders' management on sea port environment was made by [23] when they acknowledged three diverse classifications as internal stakeholders and three categories of external stakeholders namely economic/contractual external stakeholders, public policy stakeholders, and community stakeholders. They further classified stakeholders on the basis of their participation in the process of seaport planning and their impact on the process. Stakeholder theory and stakeholders management will become increasingly more important in order to achieve sustainable port development given the rising complexity of port environment as applied to the strategic port planning process [24, 25]. Furthermore, assessment of strategy for ports and shipping would need to consider environmental concerns, technological advances, market share, economic objectives and level of service [20].

Seaport stakeholders institute clusters and personalities concerned with the activities and outcomes of a port as an organization upon which the port relies on for attaining its objectives. Employees and suppliers are examples of stakeholders who have an economic interest in the seaport; others are clienteles of the many players in the port intricate value chain who comprise another group of stakeholders [26]. He adds that focused attention on seaport stakeholders' management research is still very limited in academic research as port activities and new port development and expansions increasingly experience opposition from stakeholders and specifically the local community due to the negative impact of port activities involving environmental pollution. When shareholders, market players and managers who are usually driven by profit, differ on their priorities and compromise social wellbeing and the environment then these may lead to conflicts [27, 28]. The need for continued research in this area influenced the need to carry out a new research especially for the seaports in Africa.

1.3 Organizational Performance

Organizational performance is about efficiencies and effectiveness in the use of organizations possessions and the attainment of its targets [29, 3]. Good performance indicates institutional effectiveness and competence in utilizing its capital and a contributor to the economy of a nation [30]. Organizational performance involves the real output or outcome of an organization when compared against the anticipated outputs. The performance for organizations concerns various experts in fields of strategic planning, finance, legal, operations and in corporate development Reference [31]. Organizational performance incorporates three precise zones of organizational outcomes namely product market performance (sales, market share, etc.); financial performance (incomes, return on capital, return on shares, etc.) and operational performance [32].

Performance appraisal is requisite for the growth of any economic activity and performance should be measured through a yardstick since companies performances have to be equated with each other for comparative purposes Reference [33] and most performance measurements can be classified as either efficiency, effectiveness, timeliness, quality and productivity [34]. Some of the most common tools for measuring performance include key performance indicators and metrics, performance appraisals, 360 degree feedback and balance score cards. Performance measurement estimates the parameters under which programs, investments, and acquisitions achieve targets [31]. In the context of seaport terminals, [35] identified performance measures as berth cargo throughput, operational efficiency level, cranes moves per hour, truck turnaround time, vessel turnaround time, terminal

charges, and vessel and truck turnaround which are crucial factors of performance for terminal operators. This study will adopt all the including the natural environmental factors integrating stakeholder concern factors that could give rise to sustained operational performance.

1.4 Seaports in Africa

African seaports fall under the umbrella of the Pan-African Association for Port Co-operation (PAPC) which was founded in 1999 to enable regional port management associations, Port Management Association of Eastern and Southern Africa (PMAESA), the Port Management Association for West and Central Africa (PMAWCA) and Union of Port Administration of North Africa (UAPNA)] to exchange port operational and management experience at continental level. Ports from developing countries command 72 percent of world container trade out of which African share is only one percent [8]. The main challenges facing African ports are inefficient cargo operations, lengthy cargo clearing and dwell times, inadequate port and hinterland infrastructure; lengthy documentation processes and low levels of automation. A meeting of [9] resolved to focus on improved public investment structure eradication of operational inefficiencies, and ambitious governance reforms to mobilize and attract public-private partnerships for financing of seaports in order to improve performance. This study leveraged on the report by [8, 9] and from other existing literature to conceptualize on the role played by stakeholders management on the relationship between seaport characteristics and performance of sea ports in Anglophone Africa.

2. Literature Review

2.1 Organizational Characteristics and Performance

From previous literature, there exists empirical evidence and academic explanation that supports positive and significant effect of organizational characteristics on organizational performance. From researches already done, it is common knowledge among researchers, practitioners and managers that full exploitation of an organizational characteristics improve performance and what tends to vary is the combination of the factors which tend not to be always similar. For example some studies found positive relationships between organizational size and age as great factors for financial performance [36]. Some researchers found infrastructure and ICT as catalyzers for enhanced performance [13] while others found strategic location and size as the causes of high performance [37, 14, 38] while others researchers did not find any clear relationship between these variables [39,40] when they concluded that performance improvement arose from improved efficiency arising from increased use of ICT in operations and in supply chain networks. Other studies showed that size of an organization increased productivity due to economics of scale [2, 41, 42,] while some more studies found a learning effect in large sized organizations which improved performance [43, 44, 45]. Other scholars [46,47] contradicted these findings indicating that smaller sized organizations were more competitive with higher performance than the larger ones due to improved efficiency hence raising a raging debate.

Previous studies also identified infrastructure as another factor of performance [2,14,41] but other researchers contradicted these findings when they found that equal levels of investment in infrastructure did not always yield

same levels of improvement in performance indicating that further studies were required on the role of other factors like location, intermodalism and others [48,49]. Studies by [50, 51] identified costs as another factor of organizational performance while [41, 52] went further to state that customers did not mind paying higher charges if an organization portrayed a higher level of efficiency and exhibited effectiveness in performance. The role of organizational characteristics on performance continues to raise a debate hence the need for further empirical validation specifically in the context of seaports in Africa.

2.2 Organizational Characteristics, Stakeholders Management and Performance

Empirical evidence exists to confirm that organizational characteristics influences organizational performance. It is the role of stakeholders management in the relationship that has compounded researchers in the past. Stakeholder theory's popularity in port management studies in the recent past has been very insightful

References [26, 53, 54, 55] These studies include a wide variety of internal stakeholders, e.g., those who are directly part of the port administration, shareholders, managers, employees, unions, and external stakeholders who include economic players investing in the port area like transporters, concessionaires, port service providers and freight forwarders to organizations positioned in the hinterland or foreland like multimodal transport operators and shippers, local community, common groups of interest, public policy stakeholders and watchdogs. Focused attention needs to be paid to local communities and how they are represented towards the port management body given the growing impact of local communities on strategic decision-making and subsequent project implementation [26]. Other researchers identified stakeholders management concerns as environmental protection, corporate social responsibility, greening initiatives, conflict resolution and disclosures as a source of competitive advantage, that leads to sustained performance (26. 56] This study focused on the sub-variables of environmental issues, corporate social responsibility and conflict resolution to measure stakeholders' management concerns.

The natural environment which is championed by the NRBT, new greenfield infrastructure developments, corporate social responsibility, disclosures and conflict resolution are major concerns for port stakeholders [53, 57. In seaports, the natural environment is seen as a matter of stakeholder concern imposing issues like recyclability, the avoidance of harmful substances and conservation to the forefront of sustainable operational performance [58]. Environmental concerns to port stakeholders and more so to the local community arising from port activities include water, air and noise pollution, odor, and emissions emanating from both equipment and ships calling at the port [26].

With regard to conflict resolution, stakeholders management becomes key in resolving major conflicts observed around large scale greenfield port development projects [26]. Further discussion on conflict resolution were done by [59.60] building on the original efforts of [23]. An example of sound conflict resolution took place was during greenfield port expansion at the port of Tema in Ghana. Even though the port authority conducted an environmental impact assessment, involving local stakeholders as part of the consultative planning process, serious conflicts that even involved court action arose out of the loss of local communities traditional interests including shrines. Stakeholder participation in resolving conflicts is therefore a source of performance

enhancement if applied successfully [61]. With regard to stakeholders relations management, port authorities in many countries, have emphasized the importance of transparency and disclosure as tools in conflict resolution and reputation building in seaport management performance [62]. The levels and standards of transparency has been extensively analyzed in the governance of seaports by [63]. Even though there is renewed academic effort in disclosure and transparency, the decisions made by ports always face vetting and scrutiny by customary regulatory bodies who apart from promoting and safeguarding port interests, may have personal or corporate interests [27]. It therefore implies that undiscerning disclosure of sensitive information to the public and to other undeserving stakeholders might end up being counterproductive to the future survival of the port. This scenario needs to be understood in the developing economies in Africa, where political interests may be stronger and more subtle [26].

Research has shown that organizational characteristics positively influences organizational performance and this performance is further influenced positively by good stakeholders management and negatively if it is poor and disastrously if no stakeholders' management takes place at all [26]. Clear evidence that sound stakeholders' management improves organizational performance came from studies done in European seaports by

References [26, 27, 60, 64]. The studies found that performance improved tremendously with sound stakeholders' management. However other scholars [65, 66, 67, 68] found mixed results where some organizations portrayed a reasonable level of success without strict stakeholders' management while for others lack of stakeholders' management led to conflicts, arguments and poor performance. Stakeholders are generally considered by port managers salient to the organizations if they are powerful and legitimate and they may become powerful if they have critical resources needed by the organization or if they can influence results by way of coercive, political any other method [27, 53]. This study built on this literature review from the previous studies to conceptualize on the moderating impact of stakeholders management on the correlation between organizational characteristics and organization performance with regard to seaports in Africa. In the conceptual framework, organizational characteristics had location, size, information communications technology, infrastructure, maritime services and hinterland connectivity. Stakeholders' management was measured using environmental issues, corporate social responsibility and conflict resolution. The indicators for organizational performance were operational performance, financial performance and market share performance.

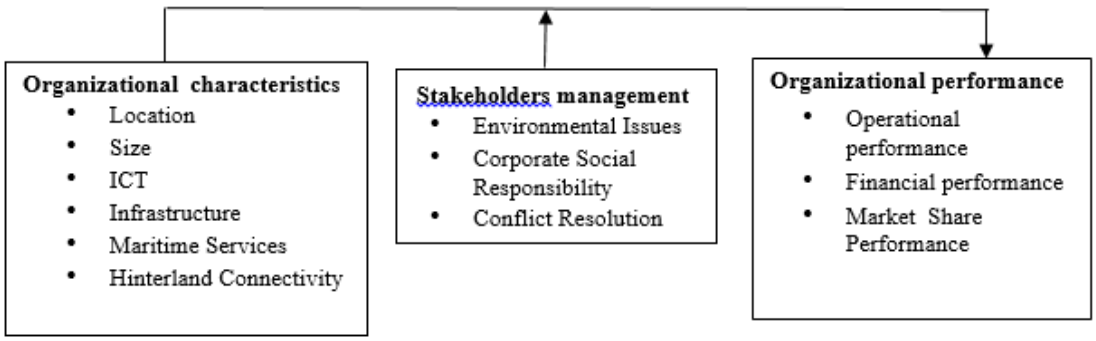

Figure 1: Conceptual framework

The hypothesis for the study stated as follows:

H_1: Stakeholders management has no significant moderating effect on the relationship between organizational characteristics and performance of sea ports in Africa.

3. Methodology

Positivist philosophy was adopted in testing of the resultant model. Similarly, descriptive cross-sectional census survey research design was preferred to accommodate a low population of only 54 seaports in Anglophone Africa. The design chosen was considered suitable where the aim is to reveal the relationships between variables at a specific point in time [69]. Data was collected across targeted seaport terminals essentially at the same point in time. Previous studies had successfully adopted this research design using PLS SEM for analysis [70,71] The study targeted all container handling seaports in Africa where English is the language of management. Data was collected by use of structured questionnaire which were sent by email to executives of the targeted seaports, and secretariats of regional port management associations and also from the websites of the seaports. This research applied Partial Least Squares Structural Equation Modelling (PLS SEM) in analyzing the data. It is a soft modelling technique which does not make assumptions on the distribution of the data and is the best alternative to CB-SEM when handling small samples [72].

Diagnostics tests of normality, multicollinearity, autocorrelation and heteroscadasticity were carried out on all the models of the study to determine whether the data collected met the threshold for further analysis. In the test of normality, Shapiro-Wilk test showed a arrange between 0.983 ($p = 0.931$) for stakeholders' management and 0.983 ($p = 0.968$) for organizational performance. All the p-values from Shapiro-Wilk's test displayed insignificant outputs on all the latent variables and therefore confirmed the normal distribution of the data [73]. Test for multicollinearity was carried out using variance inflation factor (VIF) for checking the correlation and the correlation weight between exogenous variables in a model of regression. The VIF values varied between 1.001 for organizational characteristics and 1.126 for stakeholders' management as proof that there was no correlation between the exogenous variables in the models [74]. The tolerance values were all above 0.2 implying lack of multi-collinearity [75].

The Durbin-Watson test was done to check autocorrelation and the findings confirmed that there was no autocorrelation between successive observations in the collected data for all the three latent variables. The Koenker test was used for carrying out the heteroscedasticity tests for the models. In this test the p value had to be greater than 0.5 to ascertain that heteroscedasticity was not present. The results showed that p values for LM tests for the three models ranged from 0.626 to 0.996 a confirmation of the statistical insignificance of the models since the values were larger than 0.05 thus confirming lack of occurrence of heteroscedasticity [76].

In summary all the diagnostics tests of normality, collinearity, autocorrelation and heteroscedasticity determined that the data that was collected for all the variables met the threshold required for further analysis. It was at this juncture necessary to carry out Kaiser-Meyer-Olkin (KMO) and Bartlett's analysis so as to examine the ability to carry out exploratory factor analysis (EFA) of all items of the latent constructs. The KMO checks revealed that

all items were highly significant and equal to or above the threshold of 0.6 (Kaiser, 1974. Bartlett's Test findings showed that chi-square values for all the latent constructs were significant as value of p was 0.001 [77]. The findings of the examinations in Table 1 imply that it was appropriate to render all the items signifying the latent variables for EFA.

Table 1: KMO and Bartlett test results

Indicator	KMO	Chi-Square	Df	Sig
Strategic location	0.731	97.904	3	.001
Size	0.628	48.869	3	.001
Information communications technology	0.741	89.916	3	.001
Infrastructure	0.668	89.674	3	.001
Maritime services	0.764	104.667	3	.001
Hinterland connectivity	0.694	43.887	3	.001
Environmental issues	0.635	38.1657	3	.001
Corporate social responsibility	0.598	21.263	3	.001
Conflict resolution	0.603	34.654	3	.001
Operational Performance	0.651	27.883	3	.001
Financial performance	0.783	112.482	3	.001
Market share performance	0.649	60.225	3	.001

4. Results

The objective of the study was to determine if stakeholders' management had any moderating effect on the relationship between organizational characteristics and performance of seaports in Anglophone Africa. Questionnaires were sent out to 54 seaport terminals out of which only 46 eventually responded, thus a response rate of 83.63%. The collected data was cleaned, edited, coded and then entered into SPSS for descriptive and inferential statistics tests including exploratory factor analysis to assess their factorability. The latent variable organizational characteristics comprised of six sub-constructs each with three items per indicator. These were strategic location, size, information communications technology, infrastructure, maritime services and hinterland connectivity. Stakeholders management comprised of three sub constructs namely environmental issues, corporate social responsibility and conflict resolution. The dependent variable organizational performance had three sub-constructs operational performance, financial performance, and market share performance which had three indicators save for financial performance which had six indicators.

The statistical analysis was approached through the outer model estimation to determine the link between the observable variables and the hypothetical constructs denoted by them and also by specifying the structural model and evaluating the proposed relationships and testing the hypothesis [78]. All the correlations between the observed variables and their respective indicators were postulated in the measurement model that outlines how each group of indicators are aligned to their corresponding latent constructs. The observed variables were highly interchangeable and correlated, and were therefore reflective and therefore underwent analysis for reliability and

validity [79, 80, 81]. All the three constructs had a total of 12 indicators which were subjected to confirmatory factor analysis as part of PLS SEM outer model assessment.

4.1 Reliability and Validity Tests

The variables were checked meticulously for reliability, validity and unidimensionality by conducting confirmatory factor analysis (CFA) through PLS SEM using Smart PLS4.0 software. Confirmatory factor analysis was carried out through PLS-SEM data analysis using Smart PLS 4.0 software to assess the relationship between the latent variables in order to determine the predictive potential of the conceptual model for the seaports in Anglophone Africa. PLS SEM is a statistical software that assesses the psychometric properties of the measurement models and parameter estimates of the structural model and it was used to estimate the objective for being most suited for research where the sample size is below 100 [79]. Table 2 illustrates the descriptive statistics for all the latent constructs in the outer model with results showing that data for all the variables are fairly normal as values for kurtosis and skewness fall within the range of -1 and +1, except for kurtosis of size. All variables were therefore seen as composite.

Table 2: Descriptive statistics for measurement scale

Indicator	Mean	SD	Skewness	Kurtosis
Strategic location	3.01	0.707	-0.499	-0.932
Size	3.12	0.452	0.473	1.155
Information communications technology	3.49	0.906	-0.338	-0.534
Infrastructure	3.79	1.120	-0/720	-0.352
Maritime services	2.92	0.869	.0.337	-0.746
Hinterland connectivity	3.24	0.663	0.559	-0.303
Environmental issues	3.41	0.467	-0.414	0.712
Corporate social responsibility	3.24	0.647	-0.425	-0.288
Conflict resolution	3.28	0.457	-0.187	-0.231
Operational Performance	3.24	0.862	-0.068	-0.277
Financial performance	2.89	0.454	0.671	0.284
Market share performance	2.62	0.749	0.657	0.577

Regarding outer model reliability, Table 3 shows that all of the indicators of the latent constructs in this model had individual indicator reliability values that greater 0.5 threshold, with majority above 0.7 (Hair and his colleagues, 2014). Bootstrapping results showed that all factor loadings are significant as p-values are less than 0.05 and their t-statistics greater than 1.96. Therefore all the outer model loadings were highly significant.

Table 3: Reflective outer model reliability

Latent Variable indicator	Loadings	Indicator reliability	T Statistics	P Values
Strategic Location	.815	.949	5.437	.001
Size	.801	.846	3.791	.001
Information communications technology	.893	.825	1.998	.001
Infrastructure	.895	.821	5.176	.001
Maritime services	.871	.816	5.658	.001
Hinterland connectivity	.729	.842	2.593	.001
Environmental issues	.933	.850	9.513	.001
Corporate social responsibility	.685	.856	4.716	.001
Conflict resolution	.911	.856	4.716	.001
Operational performance	.893	.830	4.183	.001
Financial performance	.692	.854	5.718	.001
Market share performance	.723	.839	5.213	.001

Internal consistency reliability was ensured through composite reliability scores which were obtained from PLS SEM output. From Table 4, it is observed that the values of composite reliability scores range from 0.809 for stakeholders' management to 0.929 for organizational characteristics and thus for the three latent constructs were greater than the threshold of 0.6 [81]. In addition, Cronbach's Alpha values range from 0.696 to 0.913 against the threshold of 0.7 confirming internal reliability [82]. The results therefore confirm that there was a high level of internal consistency reliability for the constructs [83].

Table 4: Composite **r**eliability, cronbach alpha and AVE of latent constructs

Latent Variable	Composite Reliability	Cronbach's Alpha	AVE	√AVE
Organizational Characteristics	.929	.913	.699	.836
Stakeholders' management	.809	.809	.600	.775
Organizational performance	.888	.696	.723	.850

Information from Table 4 reveal that the average variance extracted (AVE) values for the latent constructs range between 0.600 for stakeholders management and 0.723 for organizational performance. These values are all greater than the threshold of 0.5 [84]. Also from the CFA output obtained from PLS SEM, in Table 5, all the indicators load more heavily onto the corresponding variables as a further confirmation of convergent validity.

Table 5: Confirmatory factor analysis

Indicator	Organizational Characteristics	Stakeholders' Management	Organizational Performance
Strategic Location	**.815**	.320	.488
Size	**.801**	.309	.393
Information Communication Technology	**.893**	.472	.519
Infrastructure	**.895**	.455	.417
Maritime Services	**.871**	.601	.534
Hinterland Connectivity	**.729**	.298	.314
Environmental Issues	.523	**.933**	.520
Corporate Social Responsibility	.559	**.685**	.301
Conflict Resolution	.300	**.911**	.591
Operational Performance	.577	.600	**.893**
Financial Performance	.147	.313	**.692**
Market share performance	.394	.338	**.723**

In order to confirm discriminant validity, the square root of AVE must be greater than the correlation value in the column of the latent variable under it [85]. From Table 6, the square root of AVE of organizational characteristics (0.699) is 0.835. This number is greater than the correlation value in the column of organizational characteristics (0.749, 0.460). The square root of AVE for stakeholders management (0.600) is 0.775 which is greater than the correlation value under it of 0.343 while that of organizational performance (0.723) is 0.850 which is greater than the correlation value in the row (0.460, 0.343). This confirms that the discriminant validity is well established as recommended by [8]4. Table 6 shows the results of Fornell Larcker Criterion results.

Table 6: Fornell-Larcker criterion analysis

Latent Variable	Organizational characteristics	Stakeholders management	Organizational performance
Organizational characteristics	**.835**		
Stakeholders Management	.749	**.775**	
Organizational performance	.460	.343	**.850**

Table 7 displays the HTMT values that were generated from PLS SEM analysis output. The scores indicate that all the pairs of constructs fall below the maximum threshold value of 0.9 [86,87]. This is a further confirmation of establishment of discriminant validity in this model.

Table 7: Heterotrait-Monotrait (HTMT) ratios and their significance

Hypothesized path relationships	HTMT Ratio
Stakeholders management -> organizational characteristics	.590
Organizational performance -> stakeholders management	.619
Organizational performance -> organizational characteristics	.684

Collinearity was evaluated for both the inner and the outer model by using Variance Inflation Factor (VIF) ratios and their tolerances. The results indicated that VIF values for the indicators of the latent variables obtained from PLS SEM analysis output ranged between 1.255 and 3.962 which were all below 5 while all the tolerances ranged between 0.226 and 0.472 values which were all above 0.2 [75]. This was a confirmation that multicollinearity was not a problem in both the inner and outer models.

4.2 Predictive Relevance

The predictive relevance measure, Q^2 [89, 90] which was obtained from PLS SEM output was 0.220. A Q^2 score of 0.02 displayed a small relevance, 0.15 medium relevance, while 0.35 demonstrates a large predictive relevance of an exogenous construct (79). Therefore the predictive relevance of this model falls midway between medium and large predictive relevance. For the overall model fit, SRMR value from PLS SEM was 0.103. This was marginally higher than 0.1 while the NFI value was 0.767 against maximum 0.9 for the best fit. These small variations were due to small sample size [88]. The combined SRMR and NFI results indicated that the model was well constructed [92, 93]. Bootstrapping procedure with 500 resamples was carried out to establish the model's statistical significance which was confirmed as all p value was below 0.05.

4.3 Overall Model Fit

The value of SRMR suggested by [94] should be 0.10 or less than 0.08, while [92] suggested a value of SRMR of 0.1. The SRMR for this model obtained from PLS SEM analysis was 0.103, which is marginally higher than 0.1 due to small sample size [88]. Bootstrapping with 500 resamples confirmed significance of SRMR at 0.001 level which is indicated in Table 8. The NFI threshold for an excellent fit is 0.9 [92] while the value obtained from PLS -SEM was 0.758. This value was marginally smaller than the threshold of 0.9 because of small sample size [88]. The results SRMR and NFI results confirm that the model fits well [89.90].

Table 8: SRMR composite model statistics

Original Sample	Sample Mean	Standard error	T Statistics	P value
0.103	0.103	0.0715	3.253	0.018

4.4 Model Path Diagram

Stakeholders management was hypothesized to moderate the linkage between organizational characteristics and organizational performance. In PLS SEM analysis, organizational characteristics was denoted by **OC** which had location (B1), size (B2), information communications technology (B3), infrastructure (B4), maritime services (B5) and hinterland connectivity (B6). Stakeholders management was displayed as **SM** which was represented by environmental issues (D1), corporate social responsibility (D2) and conflict resolution (D3). Organizational performance was displayed as **OP**, and was represented by operational performance (E1), financial performance (E2) and market share performance (E3). From the PLS SEM analysis results, the factor loadings for the sub-constructs ranged from minimum 0.685 for D2 to a maximum of 0.933 for D1. These values were all above the minimum threshold of 0.4 [82]. This was a confirmation that the model me the threshold for high reliability for the variables.

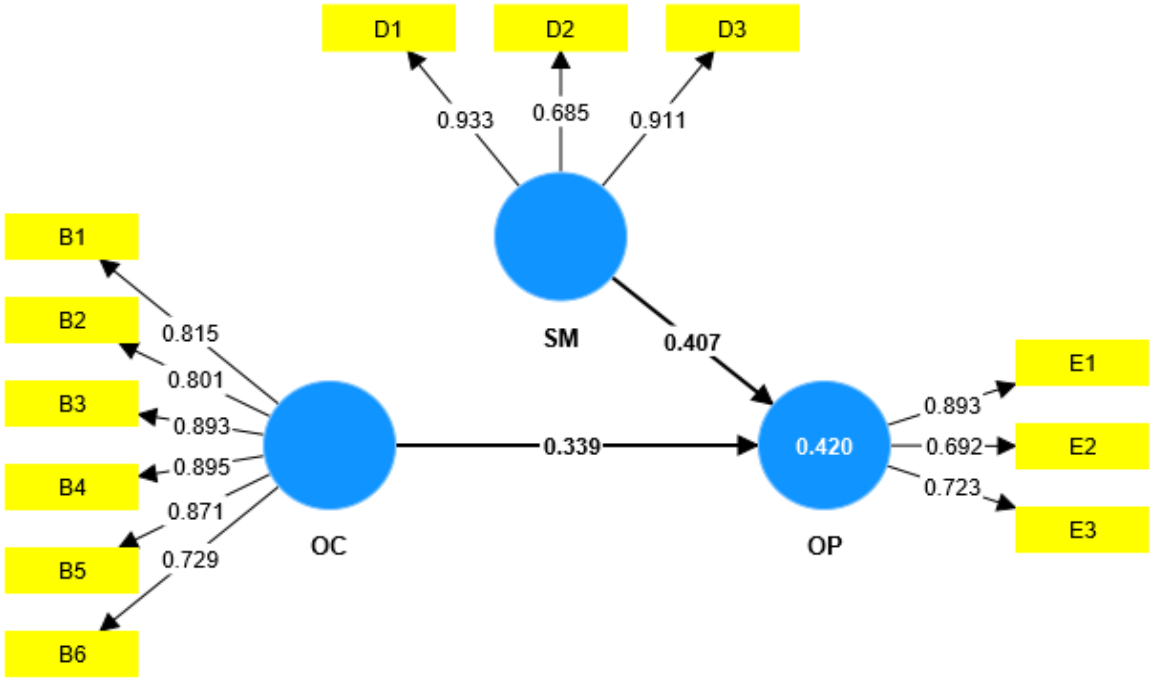

Figure 2: Structural equation modelling path diagram for the effect of stakeholders' management on the relationship between organizational characteristics and performance

4.5 Variance of Endogenous Variable and Path Coefficient Significance

From Figure 2, it is noted that the coefficient of determination, R^2, attributed to organizational performance was 0.420. This implies that organizational characteristics and stakeholders management, explain 42% of the change in organizational performance. It is concluded that the variance that organizational characteristics and governance reforms accounts for in organizational performance, was close to moderate [72]. Values of R^2 of 67 percent, 33 percent and 19 percent represent large, medium and low variance in that order [93]. It is thus concluded that the variance that organizational characteristics and stakeholders management accounts for in organizational performance, was above medium. The inner model suggests that the hypothesized path relationships between

organizational characteristics and organizational performance (β=0.339, t=2.551, p-value 0.012) is statistically significant as p-value is less than 0.05. Likewise the hypothesized path relationship between stakeholders management and organizational performance (β=0.407, t=2.731, p-value 0.013) is statistically significant. The model path diagram for the relationships of the three variables is shown Figure 2.

4.6 Effect Size

The effect size, f^2 value for the exogenous variables were evaluated. The effect size should be 0.005, 0.01 and 0.025 to denote low, moderate and substantial effect sizes in that order [94]. From PLS SEM analysis, f^2 for organizational characteristics was 0.011, stakeholders management was 0.006, both fall in the category of moderate and low effect respectively [94]. The effect sizes are displayed in Figure 3.

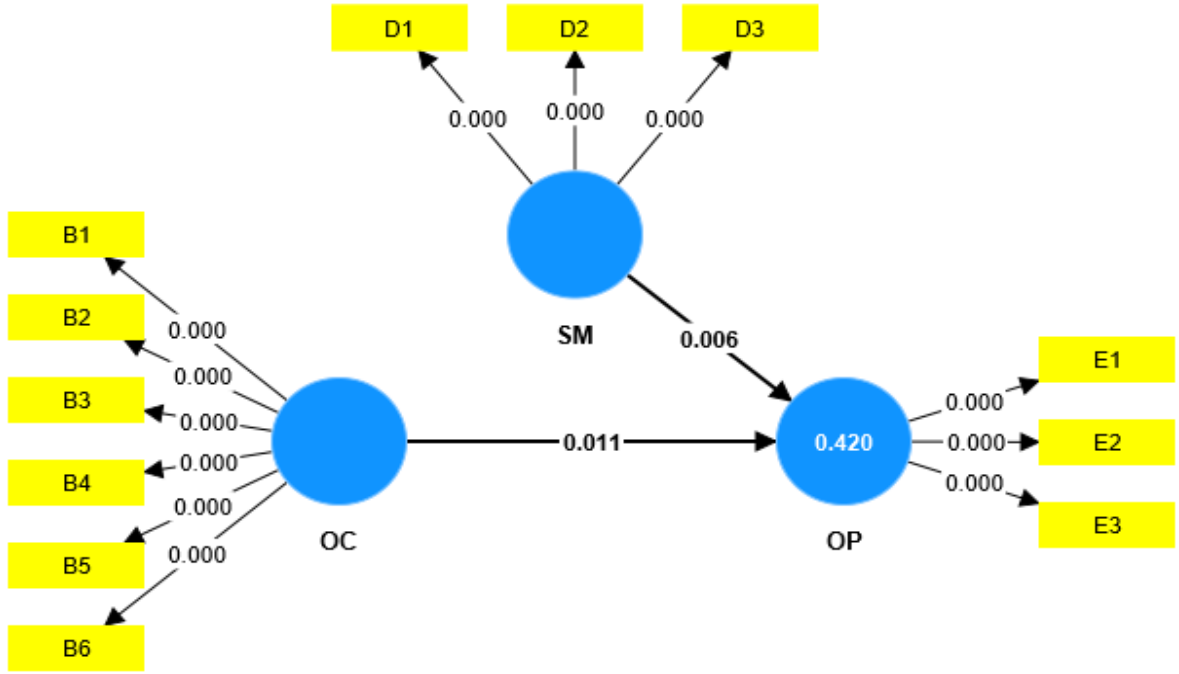

Figure 3: Structural equation modelling path diagram showing the effect sizes and statistical significance

4.7 The Moderation Effect

The moderation effect was done through a two-stage approach is displayed in Figure 4.

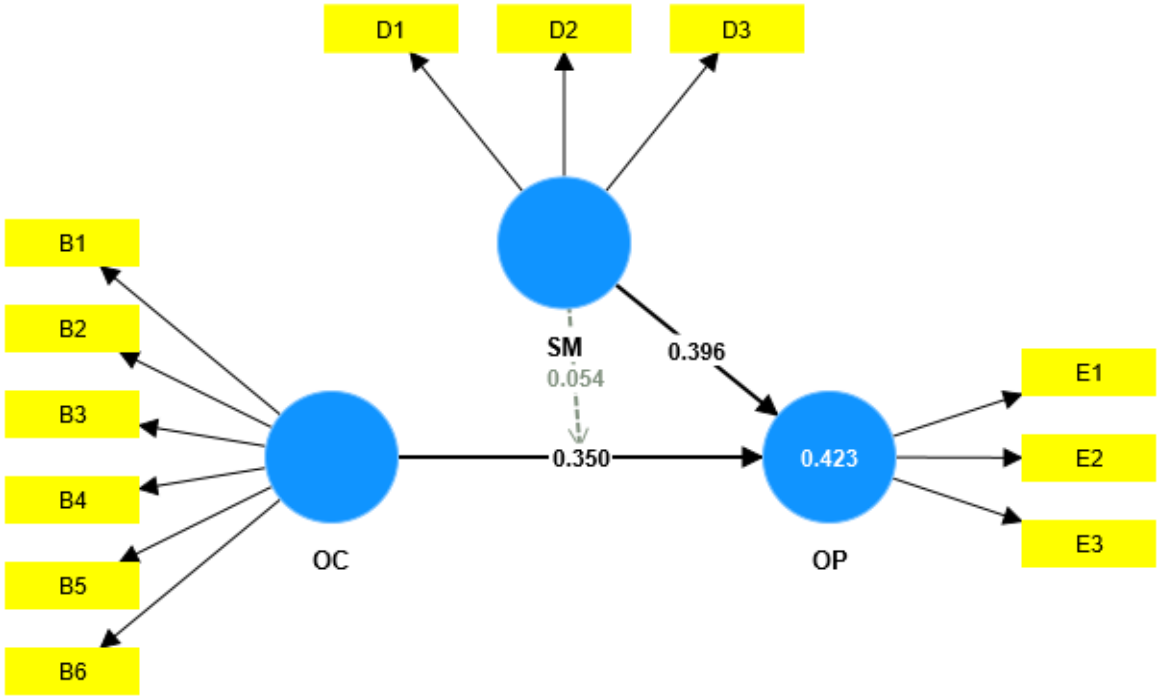

Figure 4: Structural equation modelling path diagram showing the moderating effect

Table 4 shows the moderating effect of stakeholders management that was developed using a two stage technique which is preferable where the main objective is to measure the significance of the effect of moderation because it yields into higher level of statistical power compared to the other methods [95]. The moderating effect of stakeholders management on the link between organizational characteristics and organizational performance was 0.054 while the simple effect of organizational characteristics on organizational performance was 0.350. This implies that if stakeholders' management is increased by one standard deviation the link between organizational characteristics to organizational performance will increase by the interaction effect [thus 0.350 + (0.054) = 0.404]. On the other hand, if stakeholders' management is reduced by one standard deviation the link between organizational characteristics and organizational performance will reduce by effect of interaction [i.e., 0.350 – (0.054) = 0.304].

4.8 Total Effect Analysis

The findings also show that stakeholders' management has the strongest effect on organizational performance (β = 0.396, t = 2.731, p-value = 0.012), followed organizational characteristics (β= 0.350, t = 2.551, p-value = 0.013). The moderating effect of stakeholders' management on operational performance total effect (β = 0.054, t = 2.916, p-value = 0.024). It was concluded that in this model stakeholders' management is the strongest predictor of organizational performance followed by organizational characteristics as shown in Table 9.

Table 10: Significance of path coefficients in the model

Hypothesized Path Relationship	β	T Statistics	P Values
Moderating effect Stakeholders management -> Organizational performance	.054	2.916	0.024
Organizational performance -> Organizational characteristics	.350	2.551	0.013
Organizational performance -> Stakeholders management	.396	2.381	0.012

5. Discussion

The main objective of the study sought to verify whether stakeholders' management had a significant moderating effect on the direct relationship between organizational characteristics and performance of seaports in Anglophone Africa. To achieve this objective, a structural model and a hypothesis were first developed. The model comprised of latent exogenous variable, organizational characteristics, a latent proposed moderator stakeholders' management and an endogenous latent construct, organizational performance. The hypothesis predicted no significant moderating effect of stakeholders management on the relationship between organizational characteristics and performance of seaports in Anglophone Africa. PLS-SEM analysis using Smart PLS4.0 software was conducted to test the hypothesis. The process involved first confirming reliability and validity of the outer and inner models. The findings illustrated that all the outer model loadings were significant, the reliability of all the indicators being greater that the minimum threshold of 0.4 [82]. Model fit indices were used to confirm the model fitness were SRMR, NFI, and Q^2 in accordance with the guidelines issued by [90].

The findings showed that the path between organizational characteristics and organizational performance was positive and significant, the path between Stakeholders' management and organizational performance was also positive and significant. The interpretation is that a positive and significant relationship exists between organizational characteristics and organizational performance. Likewise a positive and significant relationship is also confirmed to exist between stakeholders' management and organizational performance. The relationship between organizational characteristics and organizational performance with stakeholders' management acting as a moderating variable is also positive and significant. The verdict form empirical evidence is that stakeholders' management is a positive and significant moderator in the relationship between organizational characteristics and organizational performance of sea ports in Anglophone Africa.

The study adds to knowledge by providing the evidence on conceptualization and measurement of stakeholders' management as a moderating variable as stipulated by [26, 27, 53, 54, 55, 60]. This study measured stakeholders management using three sub variables of environmental issues, corporate social responsibility and conflict resolution as matters of concern to seaport stakeholders as prescribed in existing literature. Confirmatory factor analysis on stakeholders' management was premised only on these three sub variables which are both internal and external stakeholders' issues. Environmental issues of concern to stakeholders include mitigating the effects of air noise and water pollution to both internal and external stakeholders. Existing literature finds that Port

Authorities are increasing adopting eco-friendly approaches in ports which include on shore power, eco-technologies in equipment to contain air, noise and oil pollution, and effluent discharge management [96]. Stakeholder coalitions often form around such particular issues because stakeholder interests tend to be interconnected which may make them join forces against the organization [53].

Conflict resolution included identification and profiling of stakeholders and disclosures to the stakeholders. Identification includes establishing and profiling both external and internal stakeholders and separating their individual concerns [26]. The question of what to disclose and what not to disclose to stakeholders is a raging debate on transparency in disclosures [63]. The balance of what to disclose and what not to disclose is a test of the level of transparency for seaports as they thrive not to divulge delicate information to other stakeholders, or the public, on matters such as cost breakdowns, which no business entity would ever disclose even to its shareholders, as such might be counterproductive to the long-term well-being of the port [61, 63]. A most recent case of conflict resolution took center stage in testing stakeholder theory during the recent expansion of Tema port in Ghana [53]. Green field port development caused serious conflict with local stakeholders including local community who could not allow destruction of traditional shrines and natural sites along the sea frontage among many other issues to pave way for port development. The application of stakeholder's theory with highly consultative stakeholders' management resolved the disputes to allow the port development to prevail [61]. A similar application of stakeholder theory was in Kenya during the construction of a new deep water container handling terminal at the Lamu archipelago where the location chosen for the port was a highly protected virgin green field area with mangrove forests, fishing grounds for local community and the fields ashore were also feeding grounds for wild animals like buffalos and elephants. Careful application of Stakeholder theory resolved the serious conflicts to allow the port development to prevail [97].

On corporate social responsibility (CSR), while some previous studies saw it as an act of philanthropy or Port Authorities determination to balance the desires of stakeholders with the requirement to make profit [98] or as a treasured managing tool for improving corporate reputation and not organizational performance [99]. The findings of this study agree with the contrasting views of [26, 100, 101, 102] who found that serving an organization's stakeholders CSR interests has positive effect on financial performance of that organization. This study recommends that application of stakeholders' theory on port studies be enhanced especially in managing changes arising out port governance reforms involving concessioning of operations and subsequent new port infrastructural developments arising from the reforms in order to mitigate on disagreements and possible conflicts especially with local community stakeholders arising thereof. This study therefore adds to new knowledge by contextualizing on African seaports and the understanding of how the application of stakeholder theory and stakeholders' management is taken root in African seaports.

This study was anchored on the natural resource based view, (NRBT) whose proposition is that sustainable competitive advantage is attained once an organization's resources which are rare, valuable, inimitable and non-substitutable are linked with natural environment to define strategic capabilities, like pollution prevention, product stewardship and sustainable development [58]. Managers of seaports are expected to execute all these activities with sound stakeholders' management as advocated by the NRBT to create an opportunity for sustained competitive advantage and improved performance [103]. On contribution to practice and policy the study will

enable seaport managers, shareholders, government and regulators to benefit from enhanced knowledge on how to improve seaport operational and financial performance through recognition and improvement of natural port characteristics and management of stakeholders concerns in order to mitigate on possible conflicts as a means to creating and sustaining competitive advantage.

The limitations of this study were that the questionnaire was directed only to port executive managers as opposed to major stakeholders like shareholders, shipping lines, clearing and forwarding agents, government agencies, regional governments, port regulators and employees from the respective seaports in Africa. The second limitation was the focus of this study only on African seaports where English is the language of business. The study therefore ignored African seaports where other languages like French are the languages of business thereby reducing the target population and reducing realizable external validity.

6.Suggestions for Future Research

The business environment is dynamic, with continuous technological advancement and automation of port operational systems, introduction of more efficient and productive port equipment. Given that dynamic nature of the latent variables the current findings have the potential of changing over time. In this regard, future studies need to consider adoption of longitudinal research to assess the alterations in the organizational characteristics and its relationship with organizational performance and improvements arising from reforms in governance structures and the requisite stakeholders management techniques necessary to manage or mitigate possible conflicts arising thereof in the course of time. Future studies could consider adopting across culture indicators questions in stakeholders management questionnaires to unearth if cultural practices across differing contexts have an impact on stakeholders' management and how they impact on seaport performance. Finally future studies should consider interviewing seaport stakeholders themselves instead of relying on port executives whose views could be subjective.

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