

Multiple Agencies and the Management of Maritime Industry in Nigeria.

Emmanuel Ejiofo Nwanmuoh¹, Ukpai, Ukpai Eni Ph.D², Onah, Tobechukwu Francis³, Nwosu, Chinenye Racheal⁴

¹Department of Marketing, University of Nigeria, Enugu Campus

²Directorate of Research and Strategic Development, Maritime Academy of Nigeria, Oron, Akwa Ibom State, Nigeria.

^{3,4}Institute of Maritime Studies, University of Nigeria, Enugu Campus.

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ABSTRACT

Maritime industry management environment has witnessed the proliferation of agencies without clear delineation of responsibilities. While multiple agencies are intended to strengthen the sector by bringing expertise and specialized support, their overlapping functions, poor coordination, and competition for relevance have generated certain inefficiencies that impede the efficient operation and development goals in the maritime industry. This study explores the implications of multiple agencies in the management of the maritime industry in Nigeria. Three objectives and three research questions and two hypotheses were proposed, answered and tested respectively in this study. Data was generated from 295 respondents, comprising of regulatory and government agencies, port administrators and terminal operators, port users and cargo owners, security and enforcement bodies using researchers' developed questionnaire titled 'Multiple Agencies and Management of Maritime Industry Questionnaire' (MAMMIQ). Using descriptive statistics with qualitative insights from case studies, the researchers found out that there are overlaps and duplication of responsibilities amongst agencies involved the regulations and management of the maritime sector. Again, findings revealed that inter-agency rivalries lead to increased operational costs, double taxation, delay in cargo delivery and conflicting directives. Result also revealed that multi-agency involvement drives up financial burdens. Based on the findings of this study, the researchers concluded that Nigeria's maritime governance structure encourages overlapping mandates among regulatory agencies which creates administrative bottleneck and operational inefficiency. Consequently, the researcher recommended the need for a maritime governance reforms that will urgently eliminate duplicated efforts, enhance coordination, and improve operation efficiency within the maritime domain.

Keywords: Multiple agencies, maritime industry, maritime operations, inter-agency rivalry and maritime management.

INTRODUCTION

The maritime sector contributes significantly to Nigeria's Gross Domestic Product (GDP) through trade facilitation, employment generation, and revenue creation. Over 80% of Nigeria's international trade (by volume) moves through the seaports, underscoring its strategic importance, (Ukpai and Ukpang, 2025). The maritime industry also provides thousands of direct and indirect jobs in shipping, logistics, customs, and port management, while serving as a major source of foreign exchange earnings. It operates within a well-defined institutional framework, anchored by key agencies such as Nigerian Maritime Administration and Safety Agency (NIMASA) which is responsible for safety, security, marine environment protection, and the enforcement of the indigenous participation in coastal shipping encapsulated in Cabotage Act. Nigerian Ports Authority (NPA) manages and regulates port operations and infrastructure. Nigerian Shippers' Council (NSC) serves as the port economic regulator and mediator between shippers and service providers. National Inland Waterways Authority

(NIWA) oversees the development and regulation of inland waterways. Finally, the Nigerian Customs Service (NCS) handles cargo clearance, tariff enforcement, and anti-smuggling operations. These agencies operate under the supervision of the Federal Ministry of Marine and Blue Economy, established to optimize maritime potential and promote sustainable ocean resource utilization.

Contemporary maritime governance can be described as inherently multi-institutional with port management, safety, environmental protection, customs, and security distributed across specialized agencies rather than concentrated in a single authority. This fragmentation often produces overlapping mandates and unclear boundaries between bodies such as port authorities, maritime administration, customs and shippers' councils. Onwuegbuchunam et al (2018) x-rayed the Nigerian context, and succinctly remarked that agencies such as the Nigerian Ports Authority (NPA), the Nigerian Maritime Administration and Safety Agency (NIMASA), the Nigerian Shippers' Council (NSC), and the Nigerian Navy share intersecting jurisdictions, creating operational overlaps that affect coordination and efficiency. Christopher (2018) observed that saddling agencies with multiple mandates breeds dysfunction and impedes performance.

Scholars such as Baird (2020), Olagunju and Ogundele (2021) have observed that the coexistence of multiple agencies with overlapping responsibilities often leads to institutional fragmentation and inefficiencies in management. Baird (2020) specifically argued that fragmented institutional control discourages private sector participation and investment because of regulatory uncertainty. Similarly, Akinwale and Ayodele (2022) aptly remarked that multiple agencies in governance leads to conflicting mandates, bureaucratic duplication, and delays in operational decision-making. Fragmented authority reduces the traceability of policy outcomes and weakens accountability mechanisms (Adeleke, 2018), and the resulting institutional ambiguity allows for regulatory arbitrage, where stakeholders exploit jurisdictional overlaps for personal or corporate advantage (Onwuegbuchunam et al., 2018). According to Olagunju and Ogundele, (2021) citing the Nigerian experience, inter-agency rivalry and overlapping mandates have led to policy inconsistencies and resource wastage, further exacerbating inefficiency in maritime management.

Excessive bureaucracy arising from multiple inspections and documentation requirements leads to prolonged vessel turnaround time, higher demurrage costs, and reduced competitiveness of ports (Akinwale and Ayodele, 2022). Emejulu and Igboanusi (2019) expressed the concern that in matters of security and safety, while diverse agencies can offer complementary capabilities, ranging from naval enforcement to customs surveillance, poor coordination on the hand often results in jurisdictional disputes and slow emergency response. Inefficient institutional arrangements that is characterized by overlapping inspections, duplicate documentation, and jurisdictional confusion, translate directly into higher transaction costs, slower vessel turnaround, and elevated logistics bills (Clark et al., 2004; World Bank, 2022). In Nigeria, multiple agency involvement has been repeatedly associated with direct financial burdens on port users. Olagunju and Ogundele (2021) expressed the view that prolonged ship stay, repeated inspections, and fragmented clearance procedures to institutional overlap are factors that increase demurrage and detention charges, handling costs, and inventory financing needs for importers. Nevertheless, where institutional arrangements are better integrated such as Singapore and Rotterdam, Cullinane and Wang (2020) observed that port efficiency and governance outcomes have improved significantly due to unified regulatory structures and streamlined processes. Adesanya (2020) also noted that coordinated security frameworks that clearly delineate agency responsibilities enhance information sharing and situational awareness, improving the overall resilience of the maritime domain.

Overlapping responsibilities as a result of multiple agencies in management are a common challenge in today's collaborative work environments. Springe (2025) asserted that multiple agencies in management leads to confusion, dips in efficiency, and even tensions when responsibilities start to blur. When clear boundaries are not defined, there is usually risk of duplicated efforts, confusion about who is on the hook for what, and a simmering tension that can derail collaboration. However, by establishing clear role definitions, building a culture of open communication and collaborations, potential conflicts can be transformed into opportunities for enhanced teamwork.

Kareem (2025) investigated the influence of maritime regulations on the operational effectiveness of the Nigerian Maritime Administration and Safety Agency (NIMASA). The researcher explored how the interplay of existing

maritime laws, international conventions, and enforcement mechanisms affect NIMASA's ability to execute its core mandates. Through qualitative analysis of policy documents, stakeholder interviews, and case studies, the paper identifies gaps between regulatory requirements and operational realities, suggesting inconsistencies, overlaps, and implementation challenges as affecting optimal performance. According to Nwanmuoh et al (2021), role conflict and lack of synergy in organizational management are critical problems militating against the achievement of organizational goals.

Dawit and Admasu (2023) investigated the impact of strategic alignment on organizational performance. Role clarity, aim clarity and process clarity were the variables used for the measurement of organizational strategic alignment. The study took a quantitative approach with descriptive and explanatory research designs. 365 personnel were selected from three Ethiopian universities as sample. Mean, standard deviation and structural equation models were used for data analysis. Their findings revealed that goal clarity, role clarity, and process clarity all have a significant and favorable effect on organizational performance in higher education. Findings of the study reveal also that organizational performance varies among study institution based on implementation level of strategic alignment. The researchers recommended that governing bodies need to promote defined roles and processes for all workers.

Okoro (2021) found that unclear operational boundaries between maritime law enforcement agencies in West Africa hinder collective action against piracy and smuggling.

Joshua, Anthony, and Giuseppe (2018) carried out a study applying a social network perspective to examine how ambivalent and multiplex conflict relationships, or those infused with both task and relationship conflict, are related to employees' decision regarding from whom to seek advice. Their findings from employees of a mid-sized U.S. firm demonstrated that whether different types of conflict in relationships appear separately, or even overlap in the same relationship, it differentially impedes or improves knowledge sharing in organizations. They concluded that conflict-laden relationships in work settings can be both detrimental and beneficial.

Christopher (2018) discovered from a broad set of U.S. federal agencies finds that agencies balancing greater numbers of programs perform worse. The researcher further suggested that organizations under multiple agencies struggle largely because they are more likely to be forced to simultaneously adopt conflicting stances toward program targets. Moreover, when programs force agencies into conflicts in which they are asked to both support and restrain the same target, the resulting uncertainty among personnel regarding agency priorities helps explain why operations are negatively impacted.

The Institutional theory provides a robust framework for understanding how the structure and behaviour of multiple agencies influence the management of the maritime industry. According to Scott (2014), institutions are composed of regulative, normative, and cognitive elements that provide stability and meaning to social behaviour. Within the maritime context, institutions such as the Nigerian Ports Authority (NPA), the Nigerian Maritime Administration and Safety Agency (NIMASA), and the Nigerian Shippers' Council (NSC) operate as formal organizations established by law to regulate and manage various aspects of maritime activities. Institutional theory posits that organizations often act not only out of efficiency motives but also in response to institutional pressures. The institutional theory is relevant to this paper as it provides a framework for understanding complex management environment of the maritime industry imposed by laws, norms, and expectations of the multiple agencies that regulate the industry which may have been resulting in overlapping mandates and bureaucratic inefficiency.

Statement of the Problem

The maritime industry in Nigeria is one of the country's most strategic sectors, serving as a major driver of trade, logistics, and economic growth. It encompasses all activities related to the use of the sea, oceans, and inland waterways for commerce, transportation, resource extraction, and related services. The maritime industry operates within a well-defined institutional framework, anchored by key agencies such as Nigerian Maritime Administration and Safety Agency (NIMASA), Nigerian Ports Authority (NPA), Nigerian Shippers' Council (NSC), National Inland Waterways Authority (NIWA) and the Nigerian Customs Service (NCS). These agencies

operate under the supervision of the Federal Ministry of Marine and Blue Economy, established to optimize maritime potential and promote sustainable ocean resource utilization. However, the effectiveness of the maritime industry seems to be undermined by the overlapping roles and mandates of multiple agencies involved in their management and administration. The existence of numerous agencies creates duplication of functions, bureaucratic bottlenecks, and inefficiencies in decision-making processes. Instead of streamlining policies and harmonizing strategies, these parallel structures frequently compete for authority, resources, and recognition. This rivalry not only leads to wastage of scarce financial and human resources but also weakens institutional coherence, effectiveness and efficiency. For instance, NIMASA and NPA conflict severally on matters maritime safety, vessel registration, and port state control. The overlap arises when both agencies attempt to inspect vessels entering or leaving Nigerian ports, leading to multiple inspections and delays in ship turnaround time. Shipping companies often face duplicated documentation requirements and inspection fees, thereby increasing operational costs.

There are reported cases of conflict between NIMASA and NIWA relating to issuance of licenses, collection of fees, and regulation of traffic on certain waterways. Consequent upon such conflicts, operators on rivers and creeks often face double taxation and conflicting directives from both agencies. Conflict between NPA and NCS lead to multiple cargo checks, delays, and increased demurrage costs. At times, disagreements arise over port access control, especially concerning restricted areas and cargo release procedures. Operational overlap also occur between NIMASA and the Nigerian Navy over patrol duties, surveillance, and response to piracy or illegal bunkering. Although the Deep Blue Project seeks to integrate both agencies, overlapping command structures and jurisdictional rivalry persist, causing delays in response time and inefficient coordination.

The absence of clear demarcation between economic regulation (NSC) and operational regulation (NIMASA) has accounted for policy confusion. Shipping lines and freight forwarders often face conflicting directives from both agencies regarding rates and compliance standards. Finally, NIWA and State Governments often conflict over the regulation of Inland Transport and Jetty Operations. This jurisdictional tussle results in litigation, enforcement clashes, and double taxation of boat operators. Thus, the central problem is that while multiple agencies are intended to strengthen the operational efficiency of the maritime industry by bringing expertise and specialized support, their overlapping functions, poor coordination, and competition for relevance have generated inefficiencies that weaken the overall performance of the maritime sector.

The rivalries arising from overlapping and duplicated responsibilities among multiple agencies in Nigeria's maritime industry impose a multidimensional burden that undermines both operational efficiency and national economic performance. The most immediate victims of such institutional rivalry are port users and private operators, including ship owners, freight forwarders, terminal operators, and importers/exporters. These stakeholders experience delays in vessel clearance and cargo delivery due to repeated documentation, multiple inspections, and inconsistent procedural demands from different agencies such as the Nigerian Ports Authority (NPA), Nigerian Maritime Administration and Safety Agency (NIMASA), and Nigerian Shippers' Council (NSC). The duplication of functions inflates transaction costs through multiple levies, fees, and unofficial charges, thereby eroding the competitiveness of Nigerian ports compared to regional competitors like Tema and Cotonou. Consequently, business uncertainty and regulatory inconsistency discourage foreign investment and weaken Nigeria's capacity to serve as a maritime hub in West Africa.

The maritime workforce also bears the institutional burden of these rivalries. Frequent jurisdictional disputes and fragmented regulations create policy instability that hinders professional development, institutional coordination, and operational efficiency. This situation reduces morale among seafarers, dockworkers, and port officials who operate within conflicting command structures. Furthermore, the absence of harmonized safety, environmental, and operational standards exposes maritime activities to risk and inefficiency, thereby lowering overall service quality within the sector.

At the governmental and macroeconomic level, the burden manifests in revenue leakages, policy contradictions, and weak governance outcomes. Overlapping mandates encourage rent-seeking behaviors, reduce transparency, and limit remittances to the national treasury. Rivalries between agencies distort policy implementation,

producing fragmented strategies that weaken Nigeria's maritime governance capacity. The result is a policy environment that lacks coherence and predictability, conditions detrimental to economic reform and private sector confidence. Ultimately, the entire maritime governance system suffers from the erosion of institutional credibility and accountability. Rival agencies compete for dominance rather than collaborate toward shared national objectives, resulting in administrative inefficiency and the diffusion of responsibility. The cumulative effect of these rivalries is systemic inefficiency: inflated port costs, prolonged turnaround times, and declining global competitiveness. Thus, while all stakeholders bear some portion of the burden, the heaviest weight falls on port users and the national economy, both of which suffer the consequences of institutional fragmentation within Nigeria's maritime governance structure.

Objectives of the Study

The main objective of this study is to examine the effects of multiple agencies on the management, efficiency, and development of the maritime industry in Nigeria. Specifically, the study will achieve the following sub objectives;

1. Assess the extent of overlap and duplication of responsibilities among the multiple agencies in the management of the maritime industry in Nigeria.
2. Evaluate how inter-agency rivalry affect efficiency in maritime operations in Nigeria.
3. Investigate the financial implications of multiple agency involvement in the maritime industry in Nigeria.

Research Questions

The following research questions were raised and answered in relation with the objectives of this study;

1. To what extent does overlaps and duplications of responsibilities exist among the multiple agencies in the management of the maritime industry in Nigeria?
2. How does inter-agency rivalry affect efficiency in maritime operations in Nigeria?
3. What is the financial implications of multiple agency involvement in the maritime industry in Nigeria?

Research Hypotheses

The following research hypotheses are formulated and tested in this study;

1. Inter-agency rivalry does not significantly affect efficiency in maritime operations in Nigeria.
2. Multiple-agency involvement in maritime management has no significant financial implications in Nigeria's maritime industry.

METHODOLOGY

This section provides the various methods used in this study as well as the philosophy, logic and rationality for using those methods.

Area of study

This study was conducted in Nigeria using Calabar, Port Harcourt, Onne and Apapa ports as focus areas. The choice of Calabar, Port Harcourt, Onne, and Apapa Ports as focal points for this study is methodologically justified on the grounds of representativeness, operational diversity, strategic significance, and agency interaction intensity within Nigeria's maritime governance framework.

Population of the study

The population of this study is all institutional and private sector actors directly involved in port administration, maritime management and operations in Nigeria within the last 12 months. The population comprises of

regulatory and government agencies, port administrators and terminal operators, port users and cargo owners, security and enforcement bodies. The exact population estimate could not be ascertained by the researchers given the time frame of this study as well as the administrative imperatives associated with the some of the population frame. Inspite of this limitation, the researchers were focused on ensuring a reasonable representation of all the relevant population frame.

Sample and sampling techniques

The sample of this study is 295 respondents selected through accidental sampling methods. The choice of this sampling method was considered more appropriate because the sample are not known and are not located in a particular area, making them difficult to access. The researchers selected the sample who were readily available at different point in time. The sample frame is presented in table 1.

Table 1. Sample frame

Ports	Regulators	Port administrator and terminal operators	Cargo owners	Commercial service providers	Total
Apapa	47	51	33	18	149
Port Harcourt	17	19	11	9	56
Onne	16	15	8	6	45
Calabar	14	16	9	6	45
Total	94	101	61	39	295

Source: Field report, 2025.

Methods of data collection

Data was collected using a questionnaire developed by the researchers titled ‘Multiple Agencies and Management of Maritime Industry Questionnaire’ (MAMMIQ), at four (4) major ports within Nigeria’s maritime governance framework; Apapa, Port Harcourt, Onne, and Calabar. The MAMMIQ provides direction of clarity of mandates and inter-agency roles, operational efficiency and service delivery, regulatory certainty, compliance burden and investment, and security and maritime domain awareness. The researchers visited the ports at different intervals and administered the MAMMIQ on respondents.

Methods of data analysis

Data generated using the MAMMIQ was analyzed using descriptive statistics to provide answers to the research questions while Chi-square test of proportions (χ^2) and one-sample test were employed to test the research hypotheses at 0.05 level of significance.

RESULTS AND INTERPRETATIONS

Results from analysis of data generated through the MAMMIQ are analyzed and presented in relevant tables with interpretations.

Analysis of Respondents’ Gender

Table 1: Analysis of Respondents' Gender

Sex	Frequency	Percentage
Male	251	85.09
Female	44	14.91
Total	295	100

Source: Field report, 2025

From table 2, male respondents accounted for 85.09 percent of the total sample, while the female folk made up the remaining 14.91 percent. A further breakdown of the gender analysis revealed that nearly all of the respondents were males. This is possibly due an interplay of historical traditions, institutional inertia, physical and cultural assumptions, and structural exclusion.

Table 3: Respondents' experience in the management of maritime industry

Years of Experience	Frequency	Percentage
Below 1 year	18	6.10
1 to 2 years	42	14.24
2 to 4 years	67	22.71
4 years plus	168	56.95
Total	295	100

Source: Field report, 2025

From table 3, more than 90 percent of the respondents had experience in the management of maritime industry from one year and above. This number was considered sufficient enough for the respondents' evaluation based on years of experience.

Table 4: Rivalries from overlaps and duplications of responsibilities frequencies

Rivalries from overlaps and duplications	Frequency	Percentage
No rivalries	29	9.83
Often	78	26.44
Regularly	188	63.73
Total	295	100

Source: Authors' computation, 2025

From table 4, it is observed that about 9.83 percent of the respondents submitted that there is no rivalries from overlaps and duplication of responsibilities. This may be due to cooperation and ability to manage overlaps and duplications in daily operations. About 26 percent submitted that rivalries from overlaps and duplication of responsibilities is often, indicative of situational response to rivalries in operations. Finally, some 64 percent of the respondents submitted that rivalries from overlaps and duplication of responsibilities is regular in daily operations, indicative of lack of cooperation management of overlaps and duplications of responsibilities.

Table 5: Analysis of receiver of the burden of rivalries from overlaps and duplications of responsibilities

Receivers of burden	Frequency	Percentage
Cargo owners	197	66.78
Maritime workers	19	6.44
National economy	79	26.78
Total	295	100

Source: Authors' computation, 2025

From table 5, it is observed that about 66.78 percent of the respondents located the burden of rivalries from overlaps and duplications of responsibilities on the cargo owners, while 6.44 percent located the burden of rivalries from overlaps and duplications of responsibilities on the maritime workers. The result also show that some 26.78 percent of the respondents located the burden on the national economy.

Table 6: Respondents' sensitivity to the effects of inter-agency rivalry in maritime operations

Ranking of Sensitivity	Frequency	Percentage
Strongly agree	177	60
Agree	83	28.14
Neither agree nor disagree	09	3.05
Strongly disagree	26	8.81
Total	295	100

Source: Authors' computation, 2025

Respondents were asked to determine if inter-agency rivalries have profound effects on maritime operations. From table 6, 60 percent of the respondents were in strong agreement to the sensitivity that inter-agency rivalries have profound effects on maritime operations. However, some 28 percent of the respondents agreed to the proposition, indicating sensitivity, while about 3 percent would neither agree nor disagree. 9 percent of the respondents strongly disagreed to the proposition, implying that they are not sensitive to the fact that interagency rivalries have profound effects on maritime operations.

Answering the research questions

Table 7. Analysis of the extent of overlaps and duplication of responsibilities among the multiple agencies in the maritime industry in Nigeria

S/N	Instruction: Which of this combination of agencies is associated with greater overlaps and duplication of responsibilities. Please, kindly tick only one.	Frequency and percentage of response	
		Frequency	%
1.	NIMASA vs NPA	122	41.36
2.	NIMASA vs NIWA	11	3.72
3.	NPA vs NCS	68	23.05
4.	NIMASA vs Nigerian Navy	53	17.97
5.	NIMASA vs NSC	41	13.90

Source: Authors' computation, 2025.

Table 7 shows that 41 percent of the respondents ranked NIMASA versus NPA as having greater overlaps and duplication of responsibilities which may be in the areas of vessel inspection, safety compliance, and port state control based on their jurisdictional mandates. The second in rank is NPA versus NCS with 23 percent which may be in areas of cargo handling, inspection, and clearance operations. The third position is NIMASA versus Nigerian Navy with about 18 percent which may be in the areas of maritime security and anti-piracy enforcement. NIMASA versus NSC is the fourth with about 14 percent which may be in the areas of regulation of freight rates, charges, and shipping operations. Finally, NIMASA versus NIWA occupies the fifth position with about 4 percent which may be in the areas of inland waterways and coastal navigation.

Table 8. Analysis of effects of inter-agency rivalries and maritime operations in Nigeria

S/N	Instruction: Which of these is a major effect of inter-agency rivalries on maritime operations. Please, kindly tick only one.	Frequency and percentage of response	
		Frequency	%
1.	Increased operational costs	94	31.86
2.	Double taxation	89	30.17
3.	Conflicting directives	39	13.22
4.	Delay in cargo delivery	73	24.75

Source: Authors' computation, 2025.

Table 8 shows that 32 percent of the respondents ranked increased operational costs as the most outcome effect of inter-agency rivalries in maritime operations in Nigeria. The second in rank is double taxation with 30 percent. The third position is delay in cargo delivery with about 25 percent. Finally, conflicting directives occupies the fourth position with about 13 percent.

Table 9 Analysis of multiple agencies and financial implications	N	Mean ($\bar{x}$)	SD	Decision
Financial implication indicators				
Overlapping regulatory checks increase clearance costs	295	4.21	0.92	Agree
Multiple agencies cause vessel delays leading to demurrage	295	4.16	0.84	Agree
Revenue leakages occur due to uncoordinated mandates	295	3.94	0.81	Agree
Duplication of charges raises port business expenses	295	4.14	0.61	Agree
Administrative conflicts disrupt cargo flow efficiency	295	4.27	0.89	Agree

All means are greater than weighted mean of 3.0, indicating strong agreement that multi-agency involvement drives up financial burdens.

Testing the hypotheses

Table 10. Values of observed frequencies, expected frequencies and chi-square

Variations	Maritime Operations				
Multiple Agencies	Increased operational cost	Double taxation	Conflicting directives	Delay in cargo delivery	Total
NIMASA vs NPA	21(25.5) 0.79	26(27.4) 0.07	19 (16.5) 0.38	14 (0.6) 1.09	80
NIMASA vs NIWA	16 (5.6) 0.01	18 (6.8) 0.09	8 (0.1) 0.44	7 (6.5) 0.04	49
NPA vs NCS	12 (13.7) 0.21	20 (14.7) 1.91	7 (8.9) 0.41	4 (5.7) 0.51	43
NIMASA vs NN	18(15.9) 0.28	14 (17.1) 0.56	11 (10.3) 0.05	7 (6.6) 0.02	50
NIMASA vs NSC	27(23.3) 0.59	23 (25) 0.16	16 (15.1) 0.05	7 (9.7) 0.75	73
Total	94	101	61	39	295

Source: Authors' computation, 2025.

Table 10 present the interaction of agencies rivalries and their specific effect on the efficiency of maritime operations in Nigeria. The multiple agencies are Nigerian Maritime Administration and Safety Agency (NIMASA), Nigerian Ports Authority (NPA), Nigerian Inland Waterways Authority (NIWA), Nigerian Customs Service (NCS), Nigerian Navy (NN) and the Nigerian Shippers' Council (NSC).

Table 11. Chi-square analysis of inter-agency rivalries and maritime operations in Nigeria

Observed Frequencies O	Expected Frequencies E	$\frac{(O-E)^2}{E}$	$X^2 = \sum \frac{(O-E)^2}{E}$
21	25	0.79	8.41
26	27.4	0.07	
19	16.5	0.38	
14	10.6	1.09	
16	15.6	0.01	

18	16.8	0.09
8	10.1	0.44
7	6.5	0.04
12	13.7	0.21
20	14.7	1.91
7	8.9	0.41
4	5.7	0.51
18	15.9	0.28
14	17.1	0.56
11	10.3	0.05
7	6.6	0.02
27	23.3	0.59
23	25	0.16
16	15.1	0.05
7	9.7	0.75

Source: Authors' computation, 2025.

Chi-square analysis on inter-agency rivalry and efficiency in maritime operations in Nigeria as shown in table 11, revealed calculated chi-square value as 8.41 while the critical chi-square value is 21.026 at degree of freedom 12, and at 0.05 alpha level. Since the calculated chi-square value is less than the critical value, the null hypothesis is accepted. Therefore, inter-agency rivalry does not in general significantly affect efficiency in maritime operations in Nigeria. However, the result specifically revealed some areas of effects; the rivalry between NIMASA and NPA led to increased operational cost (0.79) and delay in cargo delivery (1.09); NPA versus NCS led to double taxation (1.91) and delay in cargo delivery (0.51); NIMASA versus Nigerian Navy (NN) led to double taxation (0.56); NIMASA versus NSC led to increase in operational cost (0.59) and delay in cargo delivery (0.75).

Table 12. Pearson product moment correlation analysis of multiple agencies and financial implications

Variables	Pearson r	p-value	Decision
Multi-agency involvement vs. Financial implications	0.734	0.000	Reject H ₀

Source: Authors' computation, 2025.

Pearson product moment correlation analysis of multiple agencies and financial implications as shown in table 12, revealed calculated r value as 0.734 while the critical r is 0.197 at degree of freedom 293, and at 0.05 alpha level. Since the calculated r value is greater than the critical value, the null hypothesis is rejected. There is a strong positive and statistically significant relationship between multi-agency involvement and financial implications. In other words, multiple-agency involvement in maritime management has significant financial implications on maritime industry in Nigeria.

DISCUSSION OF FINDINGS

Overlap and duplication of responsibilities among the multiple agencies in the management of the maritime industry

That there are overlaps and duplication of responsibilities amongst agencies involved the regulations and management of the maritime sector; in specific cases such as NIMASA versus NPA, NPA versus NCS, NIMASA versus Nigerian Navy, NIMASA versus NSC, and NIMASA versus NIWA. This finding is supportive to Onwuegbuchunam et al (2018) who remarked that multiple agencies in the management of the maritime sector share intersecting jurisdictions, creating operational overlaps that affect coordination and efficiency. Multiplegency involvement enhances specialization and security in the maritime sector, but when poorly

coordinated, it creates inefficiencies, financial burdens, and operational disharmony. Effective policy alignment, inter-agency cooperation frameworks, and streamlined mandates are essential for optimizing the benefits while minimizing the drawbacks.

Inter-agency rivalry and efficiency in maritime operations

Answer to research question two revealed that inter-agency rivalries have effect on operational costs, double taxation, delay in cargo delivery and conflicting directives. This findings was further reinforced by chi-square analysis of hypothesis one, which revealed a less significant effect of inter-agency rivalries on some specific operational indicators. This discoveries lend credence to Okoro (2021) and Joshua, Anthony, and Giuseppe (2018) that inter-agency rivalries and unclear operational boundaries hinder collective action, impede or improve knowledge sharing in organizations. This implies that inter-agency rivalries can be both detrimental and beneficial depending on situational management. In the Nigerian context, overlapping mandates among key agencies generate jurisdictional disputes that disrupt coordinated governance and conflicting directives at the ports. Operationally, institutional frictions are likely to slow down decision-making processes and clearance procedures, contributing to longer vessel turnaround times and increased cargo dwell periods. Overall, the findings demonstrate that inter-agency rivalries erode the strategic objective of an integrated, competitive maritime sector. Strengthening regulatory harmonization, legislative clarity, and collaborative frameworks is therefore essential to achieve seamless maritime operations and enhance Nigeria's global maritime performance.

Financial implications of multiple agency involvement in the maritime industry

Answer to research question three revealed that multi-agency involvement drives up financial burdens. This findings collaborated with Pearson product moment correlation analysis of hypothesis two which found a strong positive and statistically significant relationship between multi-agency involvement and financial implications. This findings has bearing with Nwokedi (2022) that multiple agencies with associated institutional conflicts and duplicated infrastructure investments strain public funds and undermine sustainable maritime development. The findings demonstrated that overlapping functions of maritime agencies substantially elevate operational costs through duplicated administrative charges, prolonged vessel turnaround time, revenue leakages from conflicting mandates and increased logistics and demurrage penalties. The results clearly establish that multiple-agency involvement has significant adverse financial implications.

Multiple agencies often lead to charging of separate fees for overlapping services and this result in high port costs and inflated logistics expenses which are frequently transferred to importers, exporters, and ultimately consumers, contributing to increased prices of goods and reduced competitiveness of Nigerian ports. Overall, the findings demonstrate that the current multi-agency governance structure results in substantial financial implications, making the maritime business environment costlier and less efficient. Therefore, regulatory harmonization, single-window systems, and policy reforms are necessary to reduce cost-inducing bureaucratic redundancies and enhance Nigeria's maritime economic performance.

CONCLUSION

Nigeria's maritime governance structure encourages overlapping mandates among regulatory agencies. This institutional duplication directly imposes substantial financial costs on port operators and port users alike. Increased operational charges, prolonged vessel turnaround times, and recurrent administrative bottlenecks are key consequences. The study concludes that the establishment of a unified Maritime Regulatory Coordination Commission (MRCC) with statutory authority to streamline, harmonize, and supervise the functions of all maritime-related agencies will help to eliminate duplicated efforts, enhance coordination, and improve economic efficiency within the maritime domain.

RECOMMENDATIONS

Based on the research findings, the following recommendations are proposed:

1. Government should restructure and harmonize overlapping functions among the multiple agencies which regulate the maritime industry in Nigeria with a view to eliminate duplication and inefficiencies.

2. A unified digital management platform should be fully implemented to consolidate documentation, inspections, and approvals, reducing clearance time and associated demurrage.
3. Agencies should invest in operational modernization, compliance automation, and skills enhancement to support cost-effective service delivery.

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