GOVERNANCE PRACTICES AND EXPLOITATION OF THE BLUE ECONOMY; CASE OF KENYA MARITIME AUTHORITY IN MOMBASA COUNTY

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ABSTRACT

The blue economy, encompassing industries and activities such as fishing, shipping, tourism, and offshore energy, has become a crucial driver of sustainable development and economic growth for many coastal nations. In Kenya, with its extensive coastline and strategic maritime location, the potential for a robust blue economy is significant. However, realizing this potential requires effective governance practices to ensure sustainable and equitable exploitation of maritime resources. The Kenya Maritime Authority (KMA), as the primary regulatory body overseeing the country's maritime sector, plays a critical role in shaping governance practices that guide the exploitation of the blue economy. Despite the importance of the blue economy industry, the sector still faces challenges including, institutional weaknesses, usage of unsuitable tools and technology, lack of transparency, inadequate enforcement of regulations, and limited stakeholder engagement, which may lead to unsustainable exploitation of marine resources, environmental degradation, and inequitable benefits distribution. This study sought to examine the effects of governance practices on the exploitation of the blue economy at Kenya Maritime Authority in the County of Mombasa. The research specifically looked at how accountability and efficiency practices affected the exploitation of the blue economy. The study was based on stakeholder and agency theories. Descriptive research was employed together with purposive and stratified random sampling. A sample of 129 was selected from the target population of 190 consisting of KMA's personnel involved in policy decision-making, representatives from associations regulated by the Authority, and non-governmental organizations involved in maritime affairs in Mombasa County. The study yielded both numerical and qualitative data for assessment. Numerical data was gauged into descriptive and inferential statistics which were presented using frequencies, modes, means, graphs, standard deviation, correlations, and regression analysis. The study strictly observed ethical guidelines such as confidentiality, anonymity, and consent throughout the entire survey. The correlation coefficient (R = 0.713) suggests a strong positive relationship between the predictors; accountability practices, efficiency practices, stakeholder engagement, and equitable practices and the dependent variable, exploitation of the blue economy. The R Square value of 0.508 indicates that approximately 50.8% of the variance in the exploitation of the blue economy can be explained by these governance practices. The study conclusively demonstrated that accountability, efficiency, stakeholder engagement, and equitable practices are critical components influencing the exploitation of the blue economy at Kenya Maritime Authority. The study indicated that enhanced accountability mechanisms within KMA lead to improved management of marine resources. The national government should reinforce accountability frameworks within KMA to ensure transparency and responsibility in resource management. This could involve establishing stringent monitoring and evaluation mechanisms to track the effectiveness of governance practices in the blue economy. Additionally, the government should facilitate capacity-

building initiatives that empower KMA personnel with the necessary skills and knowledge to implement best practices in governance.

INTRODUCTION

The Blue economy concept was introduced at the United Nations Rio+20 Conference in June 2012. Blue economy refers to the prudent utilization of marine resources to maintain livelihoods, economies while preserving the ocean ecosystems (The World Bank, 2017). The sector includes deep sea mining and seabed extractive industries, underwater cabling, renewable energy, marine genetic resources, biotechnology, maritime shipping, fishing, aquaculture, and coastal tourism (UNECA, 2014; UNEP-WCMC and GRID, 2021). The execution of the blue economy idea has led to the search for effective and efficient governing techniques. Governance of the blue economy includes a variety of concerns, including stakeholder involvement, policy coordination, and institutional frameworks (Youssef 2023). According to Uppiah & Appadoo (2022), blue governance offers the guidelines and instruments required to guarantee the prudent utilization and governance of maritime resources. The fight for reducing poverty and promoting sustainable human development and growth is still centered on better governance of water resources and services, according to the UNDP Strategic Plan (2014–2017).

Globally, despite the term's widespread use in regional and international political discourse, there is still little control of the blue economy (Wuwung et al 2022). According to the United Nations (2022), progress towards reaching Sustainable Development Goal 14 has been limited. The United Nations and the European Union have both created long-term strategies to support the blue economy. These strategies aim to implement inclusive, climate-resilient, blue economy policies that lessen human impact to facilitate blue economic benefits. The legal foundation for achieving these objectives is provided by the United Nations Law of the Sea Convention (UNCLOS), which lays out the guidelines that must be followed for all operations taking place in the oceans and seas. In the Indian and Atlantic oceans, Guerreiro (2022) conducted a study on ocean governance, blue growth, and maritime policy. The study's findings indicate that most sub-Saharan African nations are now developing strategies for the blue economy and that the concept is progressively being accepted by their institutions, governments, and legal systems.

In Africa, the blue economy's vast potential remains untapped (Anami, 2023). The African Union's Agenda 2063, the 2014 Africa's Integrated Maritime Strategy (2050 AIMS), the 2014 Policy Framework and Reforms Strategy for Fisheries and Aquaculture in Africa (PFRS), the 2015 UN Agenda 2030 (Sustainable Development Goals, SDGs), and the 2016 African Charter on Maritime Security and Safety and Development in Africa (Lome Charter) are just a few

African and international policies and initiatives that advocate for the blue economy according to Africa Blue Economy Strategy (2019). Despite these efforts, the Strategy notes that significant institutional and governance challenges persist, hindering Member States' ability to formulate and implement blue economy policies.

In East Africa the blue economy concept has also been embraced with support from the United Nations Nairobi Convention and the Conference of Parties 8 resolution, which calls for improved ocean governance to boost the sector's activities within the region. According to a study by Thoya, Horigue, Möllmann, Maina, and Kerstin (2022), policy challenges in Kenya and Tanzania's blue economy have restricted fishermen's involvement in decision-making, resulting in disparities in the implementation of the blue economy.

In Kenya, the blue economy is now considered the eighth key sector in the Economic Pillar of the Vision 2030. The Strategic Plan for the State Department for the Blue Economy and Fisheries (2023–2027) outlines various objectives aimed at enhancing the sector. These objectives emphasize securing additional funding, developing skills, boosting the quality and efficiency of services, strengthening overall sector capabilities, and promoting effective governance.

In Kenya, challenges highlighted by the Council of Governors (2024), Muigua (2023), and Kiswaa (2020) include insufficient funding, an ineffective benefit-sharing system, limited citizen involvement, fragmented coastal zone management, a shortage of skills and technical expertise, and a drop in biodiversity. UNDP (2023) states that overcoming these issues requires robust policy frameworks and governance that take into account social, economic, and environmental factors.

The Constitution of Kenya (Article 10) outlines key governance principles, including the protection of vulnerable groups, democracy, public participation, equity, inclusivity, human rights, non-discrimination, transparency, accountability, and sustainable development. These principles are also endorsed by various international bodies (Coetzee, 2017). In the context of the blue economy, they promote responsible and sustainable management of maritime resources, ensuring fairness and environmental protection. Additionally, Article 69 assigns the state responsibility for the eco-friendly and equitable distribution of maritime resources.

Kenya Maritime Authority (KMA), a statutory body established under (Kenya Maritime Act of 2006), is responsible for regulating, coordinating, and overseeing maritime matters, as detailed in Section 5(1) of the Act. Its responsibilities include enforcing maritime laws, international conventions, treaties, and agreements; developing and maintaining maritime infrastructure such as ports and harbors; ensuring the safety and security of maritime operations; conducting and coordinating research related to the blue economy; participating in capacity-building programs to enhance stakeholders' skills and knowledge; and fostering local and international partnerships to exchange best practices. This contributes to global efforts for the sustainable use of the blue economy. When making and implementing public policy, the authority adheres to the governance principles set out in the Kenyan Constitution.

Objectives of the Study

In view of the foregoing, the objectives of this study were to investigate the extent to which accountability and efficiency practices affect the exploitation of the blue economy in Mombasa County, Kenya

Statement of the Problem

The exploitation of the blue economy continues to face several challenges, including limited citizen involvement, inadequate funding, institutional weaknesses, sector-specific planning, bureaucracy, conflicting institutional interests, misaligned priorities, insufficient legislation and enforcement, inadequately trained staff, and inappropriate technology (Muigua, 2018; Muigua, 2023). Weak governance structures are noted as a significant barrier to achieving national goals and adhering to governance principles outlined in the Kenyan Constitution (Article 10). Compliance with these principles is below average, with a 46% compliance index across public agencies (PSC Report, 2023). The link between governance practices and the blue economy's exploitation has not been thoroughly investigated, highlighting a knowledge gap that needs addressing. For example, Njiru, Mutungi, and Ochieng (2020) investigated the impact of marine security on the utilization of the blue economy in Mombasa County. Their study revealed that while there are ongoing efforts to develop and implement a robust legal and regulatory framework, pollution and piracy remain significant obstacles to the effective use of maritime resources.

Using the Kenya Maritime Authority in Mombasa County as a case study, it is clear from earlier research that not much has been done on how governance practices affect the exploitation of the blue economy. To close the information gap, this study will look at how governance practices affect the exploitation of the blue economy. Specifically, accountability, efficiency, equitable practices, and stakeholder engagement are highlighted as crucial governance practices that are embedded in the current institutional and regulatory frameworks.

LITERATURE REVIEW

Exploitation of the Blue Economy

In Indonesia, (Wenhai et al., 2019) acknowledged that maritime transportation, development of marine fisheries, tourism, material production industries, and energy that have blue economy connotations highlight progressive development around the concept. The nation has also carefully strengthened its trade and infrastructural ties, developed demonstration zones, encouraged technical advancement, and enhanced both its land and maritime industries through national programs.

In the Atlantic and Indian Oceans, Guerreiro (2022) carried out research on ocean governance, blue growth, and maritime policy. Most sub-Saharan African countries, according to the study's findings, are drafting blue economy initiatives, and their governments, institutions, and legal frameworks are gradually embracing the idea. The study however noted deeper political impacts as the setback to this initiative specifically among the Small Islands Developing States such as Tomé and Príncipe, Madagascar, Cape Verde, Mauritius, and Seychelles. The study

above focused on maritime policy, governance, and blue growth whereas the current study will focus on how governance practices affect the exploitation of the blue economy in Mombasa County, Kenya.

In the Gulf of Guinea, Popoola and Olajuyigbe (2023) evaluated the status of the blue economy and offered ideas for effective implementation. The efforts aimed at marine conservation, regional cooperation, management techniques, and strategic frameworks of each member state were investigated through a qualitative research methodology. Research indicates that the Gulf of Guinea is already seeing activity related to the blue economy; however, problems like rapid increase in population, rural-urban migration, piracy, unsustainable human activities, weak institutional frameworks, and climate change hinder this transformation.

In Kenya Matuga, Simba & Mdawe (2019) evaluated the determinants of the blue economy performance. The study's particular objectives were to ascertain how human capital development affects Kenya's blue economy performance and how maritime transport infrastructure affects it. The research utilized a cross-sectional survey research strategy aiming at collecting a huge number of qualitative and quantitative data to address the formulated hypotheses. The study found that the growth of Kenya's port infrastructure, shipbuilding industry, and cargo storage promotes the country's blue economy.

In Mombasa County Kenya, Kibuthu (2020), examined opinions about how Mombasa County's growth is affected by the blue economy sectors including fishing, tourism, and maritime transportation using a descriptive and mixed-method research approach. The study found that Mombasa County benefited from the rise of the fishing industry, maritime transportation, and tourism. However, small-scale fisheries received little assistance from the national government. Ferries were rare in maritime transportation, and social responsibility was lacking in the tourism industry. The study suggests that small-scale fishing be encouraged and ferry capacity raised by the public and commercial sectors.

Accountability Practices and Exploitation of the Blue Economy

In Australia, Davies and Hanich (2022), carried out a study on transparency in managing and conserving fisheries. They looked at the process of managing and conserving fisheries within the larger context of international law and policy for the regulation of marine resources. Their study took into account transparency issues at critical points in the process of conservation and management measures, such as the collection and exchange of data that serves as the basis for measures, the introduction and discussion of new measures in meetings of Regional Fisheries Management Organizations, and the monitoring and enforcement of Conservation and Management Measures (CMM) to guarantee their execution The study also explored how transparency measures could improve the effectiveness of fisheries conservation and management measures (CMM) in achieving their conservation and management goals. The study found that transparency is crucial for letting people take part in decision-making and making sure they can get the information they need. The above study focused on fisheries conservation and management while the proposed study will focus on the blue economy sector as a whole.

In Nigeria, Alkali and Imam (2016), conducted a study on accountability and environmental sustainability in the maritime sector using descriptive research design. Some of the problems facing the industry were the ports' inadequate internal ethics framework, their undeveloped systems, and lax enforcement procedures when it came to looking into complaints about bribe demands, and the ease with which payments could be made. The study discovered that whistleblower complaint procedures and insider channels are not well-served by accountability measures in the marine industry. Furthermore, it was discovered that the industry's existing improvements are only partially being strengthened by decisions and policy compliance levels. Finally, the study discovered that there is no set training program for enhancing competence and ethics and that there is a wider discretionary power with little responsibility

In Kenya, Etiegnia, Kooya, and Irvine (2019), investigated the validity of co-management hypotheses on the recipients of the decentralization of decision-making authority by analyzing of political equity among fisherfolk organizations affiliated with Lake Victoria Beach Management Units (BMUs). Focused group discussions and unstructured interviews were used in the study. They determined how, where, and for whom more accountability may be effective in addressing the existing political inertia of fishermen, who make up the bulk of BMU membership, based on their analysis of the distribution of political power. They also determined the connections among the BMU officials' responsibility, the allocation of political power influencing co-management decision-making, and the empowerment of fishermen. They concluded by determining how additional social accountability mechanisms outside of elections might enhance resource users' elected leaders' accountability for better co-management results. The study discovered that, although being recommended as a means of guaranteeing representation and downward accountability, the election of organization leaders does not ensure political equity. The study was conducted in Lake Victoria region a different geographical location from the current study.

Efficiency Practices and Exploitation of the Blue Economy

Globally, the Food and Agriculture Organization of the United Nations Report (2022), highlighted the world view of the fisheries industry and the necessary practices to enhance the efficiency in the blue sector and its transformation to realize the 2030 goal of sustainable development. The report adopted an international policy perspective to highlight the necessary efficiency practices to implement in the global fisheries sector to fasten its efforts in supporting the Sustainable Development Goals (SDGs). The report implemented a qualitative research methodology through content analysis of a range of verified data and statistics that were collected globally. The report indicated that the 60 million tons of aquatic products valued at USD 151 billion produced in 2020 represented a fall of 8.4% in value and 10.5% in volume from the record highest production recorded in 2018. The report recommends that for the blue economy to achieve its optimal production within the fisheries sector, there should be enhanced monitoring at regional and national levels to minimize land-based pollution, inadequate monitoring control of fisheries, and over-exploitation of living marine resources. The report adopts a global outlook on the fisheries sector without addressing individual nations and their efficiency practices to ensure optimal exploitation of the blue economy, which makes the report less reliable on a national scale to Kenya's situation.

In Greece, Gavalas, Syriopoulos, and Roumpis (2022), investigated the ways that the efficiency of shipping companies is influenced by the adoption of various digital technologies. They evaluated the impact of digital adoption on efficiency within the maritime industry by analyzing cross-national firm-level data. According to the study, using digital technology is associated with significantly higher firm-level efficiency. The water transport segment appears to have a clearer relationship between digital adoption and production techniques, suggesting that the latter might be used as a kind of substitute for regular worker input. The correlation between digital technology adoption and efficiency seems more evident for shipping companies that are already quite productive and can benefit from more technical and administrative expertise.

In Morocco, Hanine, Dinar, and Meftah (2023), investigated the role of innovation in the blue economy and the associated challenges. The study concluded that innovation is a strong lever for the growth of the blue economy sector. The research was based on primary sources of information specialized in the field of innovation in the maritime environment. The research brought out clusters of innovations such as Renewable Marine Energies, blue tech, and blue biotechnologies that were considered priority and promising to the blue economy in Morocco. The research was conducted in Morocco whereas the current study will be conducted in Kenya.

Theoretical Framework

Stakeholders Theory

Freeman (1984) sought to describe how the business interacted with its external environment and how it behaved in it. The theory, according to Donaldson and Preston (1995), describes how stakeholders attempt to have an impact on organizational decision-making processes to be in line with their needs and goals. According to Kristen (2015), four main groups of stakeholder's influence company decisions and commercial partnerships: customers, regulatory agencies, business partners, and external influencers. Customers are a group that affects and determines choices regarding products and services. Organizations must do so to try to understand and balance the interests of the many participants. Encouraging stakeholders to participate in business decision-making reduces conflict and improves organizational effectiveness. The provision of suitable disclosures and transparent, high-quality reporting to stakeholders is a necessary condition for their involvement in the process of making decisions. The applicability of the theory in this study suggests a management model that considers the diverse demands and interests of pertinent stakeholders to facilitate equitable, knowledgeable, and long-lasting decision-making when utilizing the blue economy. This asserts the commitment to a strategic partnership between government agencies, fishing industries, local communities, international bodies, and the civil society involved in the exploitation of the blue economy.

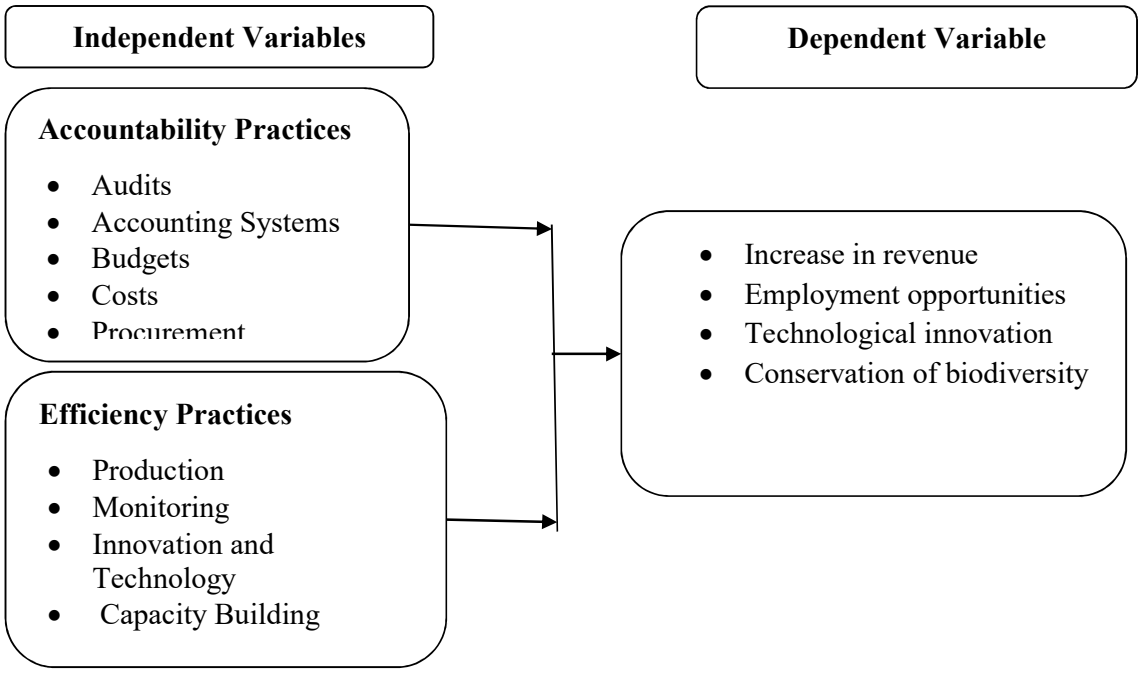
Agency Theory

Jensen and Meckling (1976) describe an agency framework as examining how principals and agents interact, especially to resolve conflicts that come from differing goals and risk preferences. The theory emphasizes the difficulties in making sure agents act in the principals' best interests and suggests using suitable governance structures to address these conflicts (Jensen & Meckling, 1976). When investigating the agency theory, the idea of accountability is revealed about principals and agents. Agents are supposed to operate on behalf of principals by delegating authority to them (Akpanuko & Asogwa, 2013). The principle compels agents to provide all relevant information and holds them responsible for their decisions.

This research employs agency theory to comprehend the principal-agent relationship between government agencies, local communities, and civil society organizations concerning information sharing related to the exploitation of the blue economy. The theory explains whether agency problems impact the efficiency and effectiveness of blue economy resource management. For example, analyze if conflicts of interest lead to suboptimal management practices or exploitation of resources. By applying agency theory, you can gain insights into how governance practices influence and are influenced by the relationships between principals and agents. This perspective helps in understanding the root causes of inefficiencies, misalignments, and conflicts in governance and resource management, and provides a basis for recommending improvements to ensure better alignment with sustainability goals.

Conceptual Framework

The conceptual framework shows the link between independent variable and dependent variable as shown below;



Source; Researcher, 2024

RESEARCH METHODOLOGY

The research embraced a descriptive research approach to investigate how governance practices affect the exploitation of the blue economy. The descriptive research approach measures variables exactly as they occur in nature (Graveter and Forzan (2011). Mombasa County's strategic location along the Indian Ocean and its hosting of the port, which is home to the economic sectors that power Kenya's Blue economy, make it a good choice for the study. The County hosts most of the maritime institutions, KMA being one of them. Specifically, the study concentrated on the Kenya Maritime Authority. The Authority headquarters is at KMA Towers, Mbaraki Road in Mombasa County and its mandate is to manage, coordinate, and oversee maritime activities in the Republic of Kenya.

The target population comprised 190 KMA's personnel involved in policy decision-making, representatives from associations regulated by the Authority, and non-governmental organizations involved in maritime affairs in Mombasa County. A representative sample of 129 was selected through Slovin's formula. Utilized interviews and questionnaires, primary data were gathered. Both closed-ended and open-ended questions were included in the questionnaires. Whereas the interviews solely collected qualitative data, the questionnaire captured both quantitative and qualitative data. The qualitative data was subjected to content analysis and packaged into thematic, narrative, and discourse analysis alongside the study variables. Quantitative data was analyzed using tables, charts, bar graphs, means, and standard deviations. Inferential statistics were presented using correlation statistics and regression statistics.

RESULTS AND FINDINGS

The researcher distributed a total of 129 questionnaires to the chosen participants. Of these, 112 questionnaires were completed and returned, resulting in a response rate of 86.8%, which is considered adequate for the study. Data collected on gender indicates that 61.6% were male, while 38.4% were female. This distribution raises pertinent questions regarding the representation of women in decision-making roles, particularly in the context of the Kenyan Constitution's gender rule, which mandates that no more than two-thirds of any elected or appointed body should be of the same gender (Kenya Constitution, 2010). Data on age distribution indicated that majority of respondents (34.8%) are within the 35-44 years age category, followed by 45-54 years (23.2%) and those above 54 years (21.4%). This indicates that a significant portion of the workforce involved in governance practices related to the blue economy in Kenya Maritime Authority (KMA), Mombasa County are middle aged and likely to possess substantial experience. Data on level of education indicates that majority of respondents (48.2%) hold a Bachelor's degree, followed by 27.7% with a Master's degree, 16.1% with a Diploma, and 8% with a PhD. This indicates a highly educated workforce within the Kenya Maritime Authority (KMA), which is beneficial for effective governance practices related to the exploitation of the blue economy. Data on working experience indicate that the majority (36.6%) have 7–9 years of experience, while 30.4% have been in service for 4–6 years. This suggests that a substantial proportion of employees at the Kenya Maritime Authority

(KMA) have moderate to extensive experience, which is critical for effective governance practices in managing the blue economy. Employees with 7–9 years of experience are likely to have developed a deeper understanding of maritime governance, resource management, and policy implementation, which are essential for sustainable exploitation of marine resources (Okumu & Kibet, 2021).

Accountability Practices Effect on Exploitation of the Blue Economy

The first objective of the study was to investigate the effect of accountability practices on the exploitation of the blue economy. Respondents were asked to rate their level of agreement with each statement related to accountability practices and how it affects the exploitation of the blue economy in Kenya Maritime Authority on a scale of 1 to 5, with 1 (strongly disagree), 2 (disagree), 3 (moderate agree), 4 (agree), and 5 (strongly agree). The results were presented in Table 1.

Table 1 Descriptive Statistics on Accountability Practices

Statements	n	Mean	Std. Dev
Audits are frequently conducted within KMA to ensure transparency and integrity in its operations related to the blue economy.	112	3.82	0.798
KMA's accounting systems are robust in accurately recording financial transactions related to the blue economy.	112	3.76	0.784
Budgets are closely monitored and adhered to within KMA's operations in the blue economy.	112	3.91	0.812
KMA is effective in controlling costs associated with its operations in the blue economy.	112	3.73	0.774
Procurement processes within KMA are transparent and fair, and contracts are awarded based on merit and in compliance with regulations.	112	3.69	0.749
Average scores		**3.78**	**0.783**

Source: Field Data (2024)

The findings presented in Table 1 reveal important insights into the accountability practices at the Kenya Maritime Authority (KMA) and their impact on the exploitation of the blue economy. The statement "Audits are frequently conducted within KMA to ensure transparency and integrity in its operations related to the blue economy" received a mean score of 3.82 and a standard deviation of 0.798, indicating that respondents largely agree on the importance of regular audits. This finding aligns with the assertion by Mwangi and Mutuku (2021) that frequent audits are crucial for enhancing transparency and ensuring that resources allocated for the development of the blue economy are used efficiently. Regular audits help in identifying financial discrepancies and reinforcing accountability, which are essential for sustainable economic exploitation of marine resources.

Similarly, the robustness of KMA's accounting systems in accurately recording financial transactions related to the blue economy was rated with a mean score of 3.76 and a standard deviation of 0.784. This suggests that respondents perceive the accounting systems as relatively effective. Strong accounting practices are vital for tracking financial flows, maintaining

transparency, and supporting decision-making processes. Gikonyo and Kimani (2020) concurred that robust accounting systems are necessary to ensure that financial transactions are recorded accurately, thus enabling efficient use of funds within the blue economy sector.
The monitoring and adherence to budgets within KMA's blue economy operations was the highest-rated practice, with a mean score of 3.91 and a standard deviation of 0.812. This indicates that respondents strongly agree that KMA closely monitors budgets to ensure that expenditures align with planned allocations. Close monitoring of budgets is essential in preventing overspending and ensuring that projects within the blue economy are adequately funded, as supported by Oketch et al. (2021), who emphasized that budgetary controls play a critical role in the successful management of economic projects by preventing wastage and misuse of funds.

Furthermore, the effectiveness of KMA in controlling costs associated with its blue economy operations received a mean score of 3.73, with a standard deviation of 0.774. This suggests a positive perception of cost-control measures at KMA, although there is still room for improvement. Effective cost control is essential for maintaining the financial sustainability of blue economy projects, ensuring that they remain profitable while promoting economic development. This finding is consistent with the research by Njoroge and Waithaka (2022), who noted that effective cost management is a key aspect of governance practices that influence the success of maritime operations.

Lastly, the transparency and fairness of procurement processes at KMA were perceived positively, with a mean score of 3.69 and a standard deviation of 0.749. Respondents agreed that contracts are awarded based on merit, and the processes comply with regulations, promoting fair competition. Transparent procurement practices are essential for building trust among stakeholders and ensuring that resources are utilized effectively. As Wambua and Kamau (2020) indicated, fair and transparent procurement systems enhance the credibility of governance institutions, which is vital for sustainable exploitation of the blue econom

Efficiency Practices Effect on Exploitation of the Blue Economy
The objective two was to assess how efficiency practices, affect the exploitation of the blue economy in Kenya Maritime Authority. Respondents were asked to rate their level of agreement with each statement about the efficiency practices and how it affects the exploitation of the blue economy in Kenya Maritime Authority on a scale of 1 to 5 where 1 (strongly disagree), 2 (disagree), 3 (moderate agree), 4 (agree), 5 (strongly agree). The means and standard deviations were developed. The results were presented in Table 2.

Table 2 Descriptive Statistics for Efficiency Practices

Statements	n	Mean	Std. Dev
There are specific targets or benchmarks set by KMA to improve production or output efficiency in the blue economy.	112	3.95	0.863
KMA monitors and evaluates its activities and initiatives in the blue economy to ensure efficiency and effectiveness.	112	3.76	0.765
KMA leverages technology and innovation to enhance efficiency and effectiveness in its operations related to the blue economy.	112	3.83	0.841
KMA invests in capacity-building initiatives to enhance skills and knowledge related to the blue economy among its staff and stakeholders.	112	3.72	0.743
Capacity-building initiatives in improving the efficiency of KMA's operations in the blue economy are effective.	112	3.81	0.832
Average scores		**3.81**	**0.809**

Source: Field Data (2024)

The findings presented in Table 2 highlight key aspects of efficiency practices within the Kenya Maritime Authority (KMA) concerning the exploitation of the blue economy. The first statement, "There are specific targets or benchmarks set by KMA to improve production or output efficiency in the blue economy," received the highest mean score of 3.95, with a standard deviation of 0.863. This suggests that respondents strongly agree that KMA has established clear performance targets to enhance efficiency. Setting benchmarks is critical for measuring progress and ensuring that resources are utilized effectively. This finding aligns with the research by Kinyua and Wamuyu (2021), who emphasized the importance of strategic targets in driving efficiency within maritime operations. The presence of specific targets helps in optimizing production processes and ensuring that KMA's efforts in the blue economy are goal-oriented and measurable.

The statement that "KMA monitors and evaluates its activities and initiatives in the blue economy to ensure efficiency and effectiveness" received a mean score of 3.76 and a standard deviation of 0.765, indicating a positive perception of KMA's monitoring and evaluation (M&E) practices. Effective M&E is essential for identifying gaps and areas for improvement, which can lead to more streamlined operations. This finding concurs with the study by Mutua and Gikandi (2020), which highlighted that continuous evaluation of projects and activities is a fundamental governance practice that enhances operational efficiency and transparency, especially in sectors dealing with vast and diverse resources such as the blue economy.

In addition, KMA's efforts to "leverage technology and innovation to enhance efficiency and effectiveness in its operations related to the blue economy" were also viewed positively, with a mean score of 3.83 and a standard deviation of 0.841. The integration of modern technology is crucial in enhancing the efficiency of maritime operations, from logistics management to environmental monitoring. Kithinji and Muraya (2019) support this finding, stating that adopting new technologies, such as digital platforms for tracking and monitoring maritime

activities, significantly contributes to the sustainability and growth of the blue economy. Innovation in processes not only reduces costs but also improves the accuracy and speed of operations.

Regarding capacity-building initiatives, the statement "KMA invests in capacity-building initiatives to enhance skills and knowledge related to the blue economy among its staff and stakeholders" was rated with a mean of 3.72 and a standard deviation of 0.743. This indicates that respondents perceive KMA's commitment to training and skill enhancement as positive but with some variability in views. Capacity building is essential for equipping personnel with the necessary skills to navigate the complexities of the blue economy. According to Owino and Omondi (2021), investing in human capital through training and development is a key driver of organizational efficiency, as it enables staff to perform tasks more effectively and adopt new technologies seamlessly.

Lastly, the statement on the effectiveness of these capacity-building initiatives in "improving the efficiency of KMA's operations in the blue economy" received a mean score of 3.81 and a standard deviation of 0.832. This finding suggests that while KMA's training programs are seen as beneficial, there may be opportunities for further improvement. This perspective is consistent with the findings of Wanjiru and Mureithi (2022), who argued that capacity-building programs must be continuously updated and aligned with emerging trends in the blue economy to maximize their impact.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The study conclusively demonstrates that accountability and efficiency practices are critical components influencing the exploitation of the blue economy at Kenya Maritime Authority. The study indicated that enhanced accountability mechanisms within KMA lead to improved management of marine resources. Regular audits and robust accounting systems demonstrate KMA's commitment to transparency and integrity in its operations. The consistent monitoring of budgets and effective cost control further reinforces the notion that accountability is vital for responsible resource management.

The assessment of efficiency practices demonstrated a significant correlation with the exploitation of the blue economy. Improved operational efficiency at KMA was found to enhance performance in resource management. The operational efficiency Kenya Maritime Authority leads to cost savings and resource maximization, enabling the authority to allocate more funds toward sustainable initiatives. The streamlining processes and implementation of efficient governance mechanisms maximized the output and promote sustainable practices in the marine sector.

Recommendations

The following recommendations were made based on study findings:

i. The study recommended that Kenya Maritime Authority should invest in capacity-building programs aimed at improving the skills of its staff in best practices for financial

management and reporting. Through adopting transparent protocols and making audit results publicly accessible, KMA should reinforce its commitment to accountability, thereby promoting sustainable practices in the management of marine resources.

ii. The national government should reinforce accountability frameworks within KMA to ensure transparency and responsibility in resource management. This could involve establishing stringent monitoring and evaluation mechanisms to track the effectiveness of governance practices in the blue economy. Additionally, the government should facilitate capacity-building initiatives that empower KMA personnel with the necessary skills and knowledge to implement best practices in governance.

iii. The county government of Mombasa should actively engage in collaborative efforts with KMA and other stakeholders to develop and implement efficient governance practices. This includes promoting policies that streamline processes within KMA, ensuring timely decision-making and resource allocation. The county government also play a pivotal role in fostering stakeholder engagement by organizing regular forums and workshops that encourage dialogue among local communities, business owners, and governmental bodies. This collaborative approach will strengthen local governance and enhance the sustainable exploitation of the blue economy.

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