

**Strategic Industrialization through Military
Infrastructure: A Focus on Kenya Shipyards Limited**

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Abstract

Military involvement in industrial development is crucial for advancing strategic industries, particularly in nations aiming for enhanced national security and economic autonomy. Kenya Shipyards Limited (KSL), established in 2020 under the Kenya Defence Forces exemplifies how military infrastructure can foster industrialization in Africa. KSL focuses on shipbuilding, repair, and maritime maintenance, reducing dependence on foreign support while contributing to national growth. KSL's initiatives, like the construction of MV Uhuru II with Damen Shipyards, highlight its potential for job creation and industrial diversification. However, KSL faces challenges in balancing military and commercial interests, navigating regulatory frameworks, and ensuring the sustainability of defense-led initiatives. Despite these obstacles, KSL is positioned to significantly impact Kenya's Blue Economy by leveraging local expertise and market opportunities. This paper examines KSL's influence on Kenya's economic landscape and emphasizes the need for collaboration between military and civilian sectors to drive growth. It concludes that KSL could serve as a model for leveraging military infrastructure to stimulate industrialization in other African countries, provided it addresses challenges like technological gaps and the lack of supportive industries. This paper is organized into, introduction, literature review, methodology, findings, conclusions, recommendations and references.

Key Words: Kenya, Development, Military, Blue Economy, Policy, National Development, Kenya

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Introduction

Military involvement in industrial development worldwide has been associated with the advancement of strategic industries, particularly in countries looking to enhance national security and economic autonomy and prosperity. By leveraging military infrastructure, several nations have continued to build industries that cater for both defense needs and stimulate economic growth. Kenya Shipyards Limited (KSL) serves as an example of how military infrastructure can be aligned with industrialization efforts in developing economies in general and Africa in particular.

The continent of Africa is emerging as a serious shipping and logistics hub, which gives Kenya potential in shipbuilding and maritime engineering industrial growth potential in the region. In the past shipbuilding in Kenya was carried out in Kisumu and Mombasa, and in recent times the KDF, through the stewardship of the KN embarked on building a slipway shipyard at its Mtongwe base in Mombasa. The KN and other concerned ministries, aim to utilize the excess capacity to generate revenue for the Government of Kenya by harnessing the available local and regional market for the construction of ships, their repairs, maintenance of sea vessels and the provision of other maritime related services. The undertaking of ship construction in Kenya is not new considering Kenya built its first vessel; the Marine Vessel (MV) Uhuru at Kisumu port over 70 years ago. The KSL functions as an anchor industry for Kenya's Blue Economy (BE), and helps in constructing civil and modular infrastructure workshops, slipways, bridges and other support for the maritime industry.

Kenya Shipyards Limited, established in 2020 under the administration of the Kenya Defence Forces (KDF) vide executive order CAB/GEN.3/1/1(60) (2020), is part of a broader strategic initiative to promote industrialization and strengthen Kenya's maritime capabilities. KSL's mandate includes shipbuilding, ship repair, and maritime maintenance, addressing the longstanding challenge of relying on foreign countries for naval support. KSL aims to build Kenya's capacity in maritime industries, contributing to both national security and economic development.

Nonetheless, military involvement in industrial sectors brings both advantages and challenges. While KSL holds promise for fostering industrial diversification and enhancing economic resilience, issues related to balancing military and commercial priorities and the long-term sustainability of defense-led industrialization remain.

The defence forces is increasingly playing a double function of protecting the state against external aggression and aid to civilian authority, that is, as a defence and security force and secondly, as a social force. While KDF has been involved in many successful nation-building activities, some have viewed it as a form of militarization of civilian functions, additionally; KSL continues to face challenges in its quest to advance development. But despite this, the state-owned company also aims to undertake ship repair and maintenance, refit and conversion, heavy engineering such as the construction of bridges, slipways, as well as jetties and offer other maritime related services.

A collaborative effort by the Kenya Defence Forces in partnership with the Dutch firm, Damen Shipyards, has led to the subsequent commissioning of MV Uhuru II which will

have the immediate impact of increasing the volume of petroleum products being transported to Uganda from Kisumu via Lake Victoria while generating more revenue for the government and creating jobs for the youth. With the successful construction of MV Uhuru II, Kenya has strengthened her position as a premier shipbuilding nation in Africa.

The KSL is instrumental in undertaking innovative programs and ambitious projects that have resurrected the shipbuilding industry in Kenya. The KDF provides an impetus with other key stakeholders to promote industrial development within the shipping and maritime sector, in a bid to elevate the country to the next level of development. In the prevailing situation, the KSL is still seen as a leading catalyst for industrial development through its functions, of design and construction of new ships and ship components.

This paper examines the role of Kenya Shipyards Limited as a key driver of strategic industrialization through military infrastructure, analyzing its influence on Kenya's economic and industrial sectors while also assessing the challenges it faces.

Statement of the Problem

Kenya's pursuit of strategic industrialization has increasingly relied on military infrastructure, with Kenya Shipyards Limited playing a pivotal role in this initiative. Despite its potential to stimulate economic growth and industrial progress, KSL faces significant challenges that limit its overall impact. These challenges include insufficient technical capacity, inadequate funding, and a lack of cohesive policy integration between military and civilian sectors. Moreover, there are concerns about KSL's ability to effectively contribute to Kenya's broader industrialization goals while balancing its dual role in military and economic development. This study aims to explore the gap in understanding KSL's role in promoting strategic industrialization, examining both its potential and the barriers it must overcome to fulfill its objectives.

Objectives

- 1.To analyze the role of KSL in advancing strategic industrialization in Kenya by leveraging military infrastructure for economic development.
- 2.Explore the potential of military-driven industrial projects in contributing to national economic goals.

Literature Review

The subject of development has interested Africa than ever before. Ouma, (2020) argues that it means different things to different people and appears to be a large and sometimes nebulous concept. In fact, it has become a large task involving many entities from various governments, public and private sectors aiming at, preserving the freedom of the seas, facilitating and defending commerce.

O'Brien, (2018) notes that, the Zambia Defense Force (ZDF) Care and Treatment Scale-Up project supports the broader Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) response by the Government of Zambia (GoZ) and the Ministry of Health (MoH). The project helps ZDF Medical Services to provide more effective HIV and tuberculosis care, treatment, and support for adults and children living with HIV and tuberculosis (Okongo, 2021).

The idea of industrial development denotes the building and growing of industries within an economy by using new technologies which make jobs easier and better and leads to an increase in a business' output and an increase in profits. Therefore, this paper argues that development is not only a preserve of the military but also an aspect of all elements of

national power, and therefore this research aims to examine military institutions and the quest for industrial development.

The Kenya Ministry of Defence (MoD) is involved in expanding KSL facility and the yard stands to benefit from being the maintenance hub for KN and the Coast Guard. The KSL is taken as a strategic asset to the nation and some consider it as a force multiplier in the national industrial development calculus. For instance, the MV *Uhuru II* is so far the most modern and complex ship built in the region was done largely by local expertise guided by a few experts from Damen. Additionally, in as much as the country borrowed technological components such as the engineers, main engines, motors, other machinery and steel from overseas, some of the components of machinery and equipment are locally produced at the KSL where most ships are currently being constructed.

The potential spin off for the local manufacture of components and fittings is massive and can stimulate the growth of cottage industries that can expand and modernize rapidly. Already, just as established, the KSL is today expected to save the country substantial foreign exchange that goes into maintaining its ships in foreign shipyards. Based on the success, of project MV *Uhuru II*, Kenya announced plans to build three more ships, and they will also be used for fuel and other goods exports through Lake Victoria, additionally, Kenya is eyeing the lucrative shipbuilding and repair business after the completion of two modern shipyard facilities, at Mtongwe in Mombasa and Kisumu Port respectively. These two built by the KN are the largest shipyards with a slipway in East Africa (EA). Their completion opens a new frontier for the country as it seeks maritime hub status and to tap into the Blue Economy (BE) resources.

Steven, (2011) argues that, “the functional approach that Mitrany developed in order to achieve social peace and prosperity is known as functionalism.” Garland and Graziano, (2019) state that, “Africa’s inland waters, Oceans and seas are under pressure.” Pretorius and Henwood, (2019) assert that, “security concerns such as piracy, degradation, climate change, terrorism and pollution are mounting in the Africa.” Mungai, (2021) points out that, “Kenya as a country can utilize the BE to remain gainfully relevant in the region and further abroad.”

Waruhiu, (2019) affirms that, “the Blue Economy (BE) has great possibilities as illustrated by the sentiments expressed in Executive Order No. 1 of (2016), praising the potential of Kenya’s economy.” This in essence has been able to bring greater public attention addressing the matters of the youth capacity and national development through the exploration of the BE resources at the County Government levels. By the building of MV *Uhuru II*, the shipbuilding sector required to formulate a clear and dedicated strategy that outlines the KSL vision, steps, and milestones to become excellent in shipbuilding. This is because KSL faced additional challenges in marketing of the MV *Uhuru II* vessel. Ideally, the KSL marketing strategy should pre-empt market demands, infrastructure development, regulatory framework, legal frameworks, skills training, and technical skills.

According to Okongo, (2021) the complex and the open-ended challenges in shipbuilding in the country can pose setbacks owing to the lack of appropriate regulatory framework and policies, technology, incentives, ancillary industries, lack of maritime clusters and the lack of available local ship building material packages. Shipbuilding is by nature a complex and challenging business, this section found that in hindsight the construction of the MV *Uhuru II* vessel in the Lake Victoria faced numerous missteps and issues.

Ouma, (2020) states that there was limited time for the final delivery of MV *Uhuru II*, and this required some employees to work for long hours to deliver the vessel in good time. Hence appreciating these concerns, it is crucial for any future vessel construction projects,

and overcoming some of these obstacles will lead to realizing the full benefits of improved transportation, which will speed up the industrial development process.

Theoretical Framework

The paper is underpinned by the Functionalism theoretical framework. Functionalism as a theory is attributed to David Mitrany (1975) in which he observes that the twentieth century was a time of growing technical, political and social economic solutions that were aimed at resolving challenges through mutual efforts and cooperative actions across state boundaries. Hence, functionalists believe that all aspects of a society, that is, institutions, norms and roles, serve a purpose that is usually indispensable for the long-term survival of the whole society. Accordingly, the subject of development is taken as a process of change, requiring adjustments in the societies of the developing and developed states, and therefore this calls for profound changes in diplomatic discourse, economic exchange and defence structure in the relations among different states of the world. The essence of development could be to influence the behavior of a target state across multiple issue areas. The functionalism theory paints a positive picture of work and the economy by pointing to their many direct benefits.

Methodology

This study chose to employ the exploratory study design. The exploratory study design is often conducted in the event that there are few or very limited studies to refer to as a guideline. This is because the main focus of the study is gaining major insights and familiarity, requiring further research when the research problem is in a preliminary stage of investigation. The study site was Kenya, with a particular focus on the Kenyan perspective, in selected counties that include Mombasa County, Nairobi, Lamu, Kilifi, Kisumu, and Tana River County, based on their active role in the Kenyan BE.

The study only utilized secondary data, which was harvested from various sources, such as; the Kenya Defence Forces, the Ministry of Defence, Ministry of Interior, the Coast Guard, Ministry of Foreign and Diaspora Affairs (MFDA), Kenya Port Authority (KPA), Kenya Maritime Authority (KMA), the Ministry of Trade, Fisheries Department, and other Government agencies. The secondary data sources were harvested from academic journals, books, and scholarly periodicals using a desktop review method. This work deliberately aimed to be sure of the research reliability and validity; and this study ensured increased improvement in the research instrument (research checklist) through repetition to enhance the tool's internal consistency and thus reliability.

The results output was then presented in the form of narratives. This study followed the guidance of the institution, ethical concerns and the research advisor. Additionally, respondents were also informed of their rights while on the survey. This study had a time scope of 2014-2024, to cover the period over which there is a notable increase in the participation of the KDF in development and industrialization.

The study initially faced a challenge when it came to sourcing secondary data; however, this was resolved through the preparation of a research tool that was used to verify some of the available data. In addition, the study faced a challenge with the technical nature of the subject being difficult; this was overcome by taking the time to consult subject matter experts where necessary, relying on the latest and up to date research materials on the subject.

Findings of the Study

The Kenya Navy, as is true for all Navies, requires a safe, fast, dependable and whenever possible organic capacity to carry out its repairs. The operating environment for the navy is

on ships and other associated machinery that requires regular maintenance and periodic replacement of seagoing platforms. Moreover, the need for maintenance of other military equipment including vehicles, aircraft and weapon systems among others means that the potential for naval or military industrial integration into the mainstream national industrial landscape presents opportunities that extend beyond the naval sector. As concerns the Navy for instance, moving ships to dockyards with capacity to undertake needed repairs and building of new platforms as forecasted by KSL becomes necessary.

Looking beyond the Navy, Increasingly, statistics from the United Nations Conference on Trade and Development, (2022) states that, “the global market for ship construction was estimated at \$126 billion in 2020, and it was dominated by South Korea (40%), China (25%) and Japan (15%).” Additionally, indicating that the global shipbuilding market is on an upward trajectory and is expected to grow at a steady rate in the coming years.

Wignaraja, Vickers & Ali, (2021) postulate that, “global maritime trade value is approximated to be worth \$14 trillion of which 40% worth (\$5.6 trillion) passes through the East Coast of Africa.” Thus, “as a result policymaker must be proactive to make sure that Kenya will have the chance of accessing a portion of these opportunities stretching from Southern Somalia to the shores of South Africa (SA), by ensuring ships passing through the route have access to proper infrastructure to undertake repairs, maintenance and overhauls.”

This paper observes that the present-day policymakers and military advisors also need to position themselves and to be equipped to operate in a complex environment with a wider range of constituencies beyond government, moving towards a more open, inclusive style of policymaking and implementation. It is instructive to note that it is possible to build this capacity since ship construction is not new in Kenya; the country built its first vessel Marine Vessel (*MV Uhuru*) at Kisumu over 70 years ago.

The demands of national development are just enormous, and Kenya’s economy is not usually strong enough to support lengthy national development initiatives. This suggests that nations today prioritize issues involving the military, national security, and diplomacy (high politics) less than issues concerning the economy, infrastructure development, labour markets, healthcare, and education. It is prudent therefore, to align all capabilities to grow the economy hence involving the military in industrialization.

Notably, Africa is the second largest continent and the largest island in the World, which is approximately one-fifth of the total surface of the earth. The continent has many coastal states. In addition, and as is true everywhere else in the world, trade has been very crucial for African states, which depend highly on both imports and exports mainly through the sea. Yet with all these resources and potential, Africa has not fully focused on leveraging these resources for its development and betterment of the livelihoods of its youthful population that is now approximately one billion people.

The Countries within the East African Region that surround the Indian Ocean Rim (IOR) should immediately recognize the value and importance of emerging BE framework such as the BE Action Plan at every county level, which have advanced BE policies and institutional framework aimed at enhancing the BE strategies. Maria and Garcia, (2021) cites that, “sustainable tourism, regulated fisheries and aquaculture projects can create valuable economic opportunities for local communities and young people, and inspire them to pursue careers in the BE sub-sectors.” This research findings aligned with Waruhiu, (2019) who avers that, “realizing the full potential of the BE will require including youth, indigenous people and other marginalized groups in coastal regions decision making and support their skills development through training and mentorship to create suitable employment opportunities for the present and future generations.”

The essence of BE is to promote the development of among others, marine and ship industry which ecologically, economically and socially benefitting from the marine ecosystem and are supposed to ensure that the ecosystem-based management model should be the core in decision-making process of industrial and community development. Like most countries with maritime borders, Kenya is endowed with BE resources that should boost her economy.

The Kenyan government must make concerted efforts to increase funding for all projects related to KSL and to the BE. Sectors such as deep-ocean mining and oil and gas exploration are underutilized because of lack of sufficient funding towards marine research and innovation programs. Through increased funding, Kenya can develop complex research institutions aimed at discovering how untapped areas such as deep-sea mining and oceanic pharmaceuticals can be tapped and managed to help boost the Kenyan economy. Some of the resources that the youths can harness in the context of the BE include fish, oceanic pharmaceuticals, oil and gas, oceanic minerals, and coral reefs among others. The youths are crucial to Kenya's economy, while government comes up with legal bindings, policy guidelines and rules and regulations, it is young people that are meant to execute day-to-day economic activities.

The realization of the full potential of the Blue Economy (BE) requires the effective inclusion of all societal groups, especially women, youth, local communities, and marginalized or underrepresented groups. In relation to economic development, these groups often face limited access to opportunities and public services, inadequate legal standing, poor opportunities to contribute to value addition, low benefits, and a lack of recognition of the unique and valuable role they could play in society. The KSL provides opportunities to harness the BE that are conditioned by complex national and international interests, which can either favour partnership building and collaborative engagement or create tensions between interested parties.

This paper notes that since the military, as an institution is designed to protect the polity, and must also be strong enough to threaten the society it serves. It is thus crucial to appreciate from the onset that cooperation and coordination between the military and civilians is critical to achieving national interests. Military forces from developing countries have become increasingly important as facilitators of their government's foreign policy, taking part in peacekeeping operations, military exercises, and humanitarian relief missions.

The local population views the military's contribution to development through the lens of the accessibility of high-quality public services, some of which include educational, health, social, cultural, environmental, industrial, and employment opportunities, where there is a need for and utilization of a workforce with a variety of qualifications. This study found that among the prospective challenges for a shipbuilder such as KSL, it is crucial for stakeholders to find a way to seek-out adequate infrastructure that will attract stable investors that will enable efficient shipbuilding operations. The KSL faces challenges of high research experts and hence it is critical for stakeholders to encourage deeper Research and Development (R&D) initiatives to enhance shipbuilding technology, materials, expertise, and processes. This study found that Kenya could manage and secure its own ships, ports and other factors, which will positively shape the future of Kenya's maritime industry in the region. In spite of the promises, the sector and KSL is impeded by challenges, such as, the shortage of strong supporting sub-sectors including steel mills, railroads, and lack of appropriate shipbuilding master plans, ship technological challenges and engineer manufacturers shortage.

Conclusion

This section concludes that, rich as the BE resource in the Horn of Africa (HoA), it has not been fully exploited in the Kenyan perspective, as the majority of it remains unharnessed (unexplored). This is due to lack of the necessary technological capacity, scarce specialized skills, disjointed legal framework and the shortage of machinery within the sector. This study further concludes that all this has led to the wealth contained in the Blue economy resource being exploited by other states instead, leading to slow growth and even unexploited economic opportunity, limited industrialization and increased unemployment especially for the communities that neighbour the BE resources.

The paper concludes that, “While the area of the maritime EEZ in Kenya is equivalent to about thirty-three Counties, which is a huge potential for development.” The “under-exploitation of ship building resource has led to slow economic growth, lack of industrialization and unemployment that remain major challenges in the country and the maritime resources could serve as a good source for economic development of Kenya, especially among the youths who can positively utilize these resources.” This work further concludes that. “The BE youth capacity building strategies can best be advanced by means of a comprehensive multi-layered approach that involves political, military and societal measures, and strengthens regional security capabilities, improves intelligence gathering and sharing, brings about more effective law enforcement, and enhances multinational cooperation on land and at sea.”

This paper also notes that over the course of history, examples abound of many discoveries and improvements to discoveries have their roots or were catalyzed by military research, such as the internet, Global Positioning System (GPS), navigation, use of Radio, Radar, Sonar and advances in jet engines that were rapidly accelerated by necessity during the Second World War. Other areas to benefit from the military and war include medicine, especially trauma and burns treatment. As such, it would be fair to argue that the military plays a pivotal role in any country’s development journey, and Africa is starting to recognize this. Nations appreciate that armed forces have capabilities, which if adequately harnessed, could contribute to industrialization. But despite the inherent ability to foster industrial development, military institutions remain underutilized in Africa, particularly in Kenya.

Recommendations

The paper’s recommendations are that:

First, there is need to have a better understanding of how the military can help in building peace through evaluation of specific scenarios where the military must directly step in to ensure there is development that will ultimately foster peace.

Second, there should be enhancement of the technical capacity of KDF so as to boost KSL. This is because the KDF plays a key support role in industry and developmental engineering is prominent. The defence forces have a record of service to rail industry and general engineering and has promoted further diversifications of its general engineering activities.

Third, the Kenya Shipyards Limited (KSL) should lead and catalyze the introduction of the new shipbuilding industry in Eastern Africa with a focus on meeting the local demand from Kenya Navy, Ministries with maritime assets, and other public and private domestic and regional clients.

Fourth, the Kenya Defence Forces should engage in a variety of nation-building initiatives outside of its core responsibilities, such as limited public utility infrastructure construction, relief supply services, peacekeeping, search and rescue, the restoration of water

supply systems, the rehabilitation of water dams for irrigation, the sinking of community use boreholes, and other civil-related activities. They should be carefully examined to determine whether they should be incorporated into the KDF primary responsibilities.

Fifth, the KDF should design incentives to influence policymaking more overtly in order to enable the military through KSL to play a role in industrial development. This should be by way of building the capacity of various institutions. This is because military priorities can channel a significant proportion of societies' resources to research and development. For examples in, ship construction, building infrastructure, the national grid, civil aviation, space satellites, and computers.

Finally, the paper recommends that a deliberate pattern of Civil-Military Relations that yields a better security structure that enhances the country's industrial security aspirations needs to be encouraged.

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