Fortifying Naval Futures: A Comparative Review of Water-Based Defence Capabilities in Malaysia and South Korea

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ABSTRACT

This comparative review examines the naval defense capabilities of Malaysia and South Korea, highlighting strategic priorities, technological advancements, and maritime security challenges unique to each nation. By analyzing fleet composition, modernization efforts, and regional geopolitical contexts, the study identifies strengths and gaps in both countries' water-based defense strategies. Special attention is given to force projection, interoperability with allies, and the integration of emerging technologies such as unmanned systems. The findings underscore the importance of tailored naval development to address evolving security threats and promote stability in their respective maritime domains. This review provides critical insights for policymakers and defense planners seeking to enhance naval readiness and cooperation in the Indo-Pacific region.

Keywords: Naval defense, Malaysia, South Korea, maritime security, naval modernization, Indo-Pacific, force projection, naval technology, regional security, defense strategy.

INTRODUCTION

The maritime domain has emerged as a critical arena for national security and economic prosperity in the 21st century. For nations like Malaysia and South Korea, with extensive coastlines and strategic geopolitical locations, the development of robust water-based defence capabilities is paramount. This systematic literature review aims to explore and compare the strategies, challenges, and advancements in national naval shipbuilding industries between Malaysia and South Korea. By examining existing literature, this article seeks to highlight key factors influencing the empowerment of these industries and their contributions to national defence. The focus on naval shipbuilding is particularly relevant given its role in projecting power, safeguarding maritime interests, and fostering technological self-reliance [19].

The geopolitical landscape of Southeast Asia, in particular, has seen increasing complexities and maritime disputes, necessitating a strong naval presence [3, 11, 20]. Malaysia, situated at the crossroads of vital shipping lanes, faces evolving threats that underscore the urgency of enhancing its naval capabilities [16, 21]. Similarly, South Korea, with its unique geopolitical challenges and advanced industrial base, has invested significantly in its naval forces. This review will delve into the nuances of their respective approaches to naval shipbuilding, drawing insights from their successes and areas for improvement.

METHODOLOGY

This systematic literature review was conducted by synthesizing information from a range of academic papers, reports, and credible news sources. The search criteria focused on keywords related to naval shipbuilding, defence capabilities, Malaysia, and South Korea. The selection process prioritized recent publications to ensure the relevance of the information to contemporary trends and challenges. The collected literature was then analysed to identify recurring themes, comparative aspects, and significant findings concerning the empowerment of national naval shipbuilding industries. Each referenced source has been critically evaluated to ensure its contribution to the overall understanding of the subject matter.

RESULTS AND DISCUSSION

Malaysia's Journey Towards Naval Self-Reliance

Malaysia's pursuit of a self-reliant defence industry, particularly in naval shipbuilding, has been a long-standing objective, albeit one fraught with challenges [6, 23]. Historically, Malaysia has relied heavily on foreign procurement for its naval assets [6]. However, the strategic imperative to reduce dependence on external suppliers and foster local industrial growth has driven efforts towards indigenous shipbuilding capabilities [6, 24].

One of the flagship projects in Malaysia's naval modernization efforts has been the Littoral Combat Ship (LCS) program. Intended to bolster the Royal Malaysian Navy's (RMN) fleet, the LCS project has, however, faced

significant delays and cost overruns, raising questions about project management and contractor performance [4, 9]. Despite these setbacks, the underlying goal of developing local expertise and capabilities remains a priority. The acquisition of Littoral Mission Ships (LMS) from China represents another aspect of Malaysia's naval expansion, with the first vessel received in 2019 and the final one in 2021 [8, 17]. While these acquisitions enhance immediate capabilities, the long-term vision involves greater domestic involvement in the design, construction, and maintenance of naval vessels [6, 15].

Challenges in Malaysia's defence industrialisation extend beyond specific projects. Issues such as the need for robust supply chain management and the development of a skilled workforce have been identified as critical for sustained growth [10, 12]. Furthermore, defence industrialisation in Malaysia needs to consider its impact on societal welfare and the quality of life for employees [18]. Despite these hurdles, there is a clear recognition within Malaysia of the importance of an empowered naval shipbuilding industry for its long-term security and economic stability [6].

South Korea's Advanced Naval Shipbuilding Prowess

In stark contrast, South Korea has emerged as a global leader in shipbuilding, including a highly advanced naval shipbuilding industry. South Korea's success can be attributed to several factors, including strong government support, significant investment in research and development, and a highly skilled workforce [10]. South Korean shipyards possess cutting-edge technology and a robust industrial ecosystem that allows them to produce a wide range of sophisticated naval vessels, from submarines to destroyers [10].

The competitive landscape of the global shipbuilding industry sees South Korea as a key player, often compared with nations like China and Japan in terms of competitiveness [10, 14]. Their emphasis on technological innovation and efficiency has allowed them to secure numerous international contracts and establish a reputation for high-quality naval platforms. The development of advanced submarine capabilities, for instance, showcases South Korea's commitment to building a formidable blue-water navy [1, 2].

South Korea's defence strategy has consistently prioritized the development of a strong domestic defence industry to ensure self-sufficiency and reduce reliance on foreign suppliers [19]. This approach has not only contributed to national security but also generated significant economic benefits through exports and job creation. The ability to design, build, and maintain complex naval assets indigenously provides South Korea with a significant strategic advantage in a volatile regional environment [19].

Comparative Analysis and Lessons Learned

The comparison between Malaysia and South Korea's naval shipbuilding industries reveals distinct stages of development and strategic priorities. While Malaysia is actively striving for greater self-reliance, it faces challenges related to project execution, technological transfer, and industrial capacity. South Korea, on the other hand, exemplifies a nation that has successfully transitioned into a global naval shipbuilding powerhouse, driven by a long-term strategic vision and sustained investment.

One key lesson from South Korea's experience is the importance of a holistic approach that integrates government policy, industrial capabilities, and technological innovation. Their success underscores the notion that defence industrialisation is not merely about acquiring hardware but about building a sustainable ecosystem of expertise, infrastructure, and research [19]. For Malaysia, this implies a need for consistent policy support, enhanced transparency in procurement, and targeted investments in skills development and technological transfer [6, 24].

The "fog of strategy" often impacts long-term strategic planning in defence, where complex and evolving environments make consistent implementation challenging [5]. Both nations, in their own ways, navigate these complexities. Malaysia's challenges in the LCS project highlight the need for clearer strategic foresight and robust oversight to mitigate risks [4, 9]. South Korea's consistent progress, conversely, demonstrates the benefits of a well-defined and consistently executed strategic vision for defence industrial empowerment [19].

Ultimately, the empowerment of national naval shipbuilding industries is crucial for water-based defence capabilities [25]. For Malaysia, the journey involves overcoming current obstacles and learning from successful models like South Korea, while tailoring strategies to its unique national context. For South Korea, the challenge lies in maintaining its competitive edge in a rapidly evolving global defence market. Both nations contribute valuable insights into the complexities and potential of building strong naval futures.

CONCLUSION

The empowerment of national naval shipbuilding industries is a multifaceted endeavor, essential for safeguarding maritime interests and projecting national power. This systematic literature review has highlighted the contrasting yet insightful journeys of Malaysia and South Korea in developing their water-based defence capabilities. While

Malaysia is in the nascent stages of building substantial indigenous capacity, facing challenges such as project delays and the need for greater local content, its commitment to self-reliance remains evident. South Korea, conversely, stands as a testament to successful defence industrialisation, having cultivated a globally competitive naval shipbuilding sector through sustained investment, technological innovation, and strategic foresight.

The lessons learned from South Korea's trajectory can serve as a valuable blueprint for Malaysia, emphasizing the importance of integrated policy, robust industrial ecosystems, and a skilled workforce. As maritime security threats continue to evolve in the Indo-Pacific region, the ability of nations like Malaysia and South Korea to independently design, build, and maintain their naval fleets will be paramount for their national security and stability. Future research could delve deeper into specific policy interventions and technological advancements required to accelerate Malaysia's naval shipbuilding capabilities and explore the potential for greater collaboration and technology transfer between nations in the region.

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