TRANSPUBLIKA
Precise. Resilience. Felicitous.

Policy, Law, Notary and Regulatory Issues
https://ojs.transpublika.com/index.php/POLRI
Online ISSN 2809-896X

https://doi.org/10.55047/polri.v4i3.1752

Original Article

Transformation of The TNI's Military Strategy in Facing Modern Conflicts with The Adaptive Model of Military Strategy in Navigating Technological Challenges and Geopolitical Shifts Effectively

Arip Supriyadi[1*], Budi Setyoko[2]

[1,2]Sekolah Staf dan Komando Tentara Nasional Indonesia (SESKO TNI), Bandung, Indonesia
Email: [1)] aripsupriyadi54@gmail.com, [2)] budisetyoko272@gmail.com

Received : 10 May - 2025
Accepted : 13 June - 2025
Published online : 17 June - 2025

Abstract

The transformation of military strategy in dealing with modern conflicts has become crucial amidst rapidly changing geopolitical dynamics and technological advances. This research aims to develop the Adaptive Model of Military Strategy to Overcome Technological Threats and Geopolitical Changes as the Transformation Of The TNI's Military Strategy in Facing Modern Conflicts. This research used descriptive qualitative research, with a literature review and interviews with the informants. The research locations include strategic institutions such as the Indonesian Ministry of Defense, the TNI Headquarters, and defense policy research institutes. The time of the research started from March to May 2025. This research found that the Adaptive Model of Military Strategy to Overcome Technological Threats and Geopolitical Changes can anticipate unexpected, uncertain, and ambiguous conditions in facing the modern conflict. On the other hand, this model can assist in the Design and Implementation of Defense Strategy Policies. This model has six pillars: Integration of Defense Technology and Artificial Intelligence, Adaptive Risk Management in Command and Control Systems, Multi-Domain Collaboration and Defense Diplomacy, VUCA-Responsive Based National Resilience, Assessment and Mapping of Global and Regional Geopolitical Dynamics, and identifying asymmetric Strategic Risks. Moreover, the conclusion of this research is the transformation of the TNI's military strategy in response to modern conflicts can be achieved through the implementation of the Adaptive Model of Military Strategy to Overcome Technological Threats and Geopolitical Changes.

Keywords: Military Strategy, TNI Transformation, Adaptive Defense Model, Modern Warfare, Geopolitical.

1. Introduction

The transformation of military strategy in addressing contemporary conflicts has become increasingly significant in a rapidly developing VUCA strategic environment (volatility, uncertainty, complexity, and ambiguity). Geopolitical shifts and technological advancements are accelerating these changes, fundamentally altering the nature of conflict. Modern warfare has moved beyond conventional battles, transitioning towards asymmetric warfare, cyber warfare, and other complex, unpredictable threats. This transformation necessitates a more adaptive and responsive military strategy, integrating defense technology innovations and emphasizing international collaboration, interoperability, and preparedness for geopolitical threats. Amil (2024) and Grosu (2024) have further explored these concepts.

Copyright: © 2025 by the authors.
This is an open access article distributed under the terms and conditions of the CC BY 4.0.

Global geopolitical dynamics are shaped by competition among the United States, China, and Russia, influencing regional stability, particularly in the Asia-Pacific. This shifting landscape necessitates that nations bolster their defense strategies to address various threats beyond conventional military concerns. As Hendra et al. (2021) highlighted, modern warfare is no longer confined to battlefield engagements; non-military threats deployed by major powers aim to destabilize nations through ideological, political, socio-cultural, and security sectors. In this context, advancements in technology play a pivotal role. Innovations such as artificial intelligence (AI), drones, high-precision weaponry, and Network-Centric Warfare (NCW) have redefined traditional warfare, making it more integrated and digital-based (Singer, 2009).

Countries in the Asia-Pacific region are enhancing their military capabilities and implementing strategic reforms in response to the emergence of new global powers. This shift highlights the growing significance of international alliances and cooperation in adapting to geopolitical changes, including joint military exercises, the development of compatible weapons systems, and intelligence-sharing (Vaughn, 2007). However, a critical challenge arises in the gap between conventional military capabilities and the need to counter high-tech threats. For instance, the TNI relies mainly on traditional weaponry and personnel, while modern threats demand investments in armed drones, GPS-guided missiles, and cyber defense systems. Given these evolving challenges, transforming military strategy has become an urgent priority for the Indonesian National Army (TNI) in navigating multidimensional threats. To enhance its deterrence against global and regional security risks, the TNI must focus on technology-driven operational capabilities (Singer, 2009). Additionally, escalating tensions in the South China Sea and growing cross-border cyber threats underscore the necessity for adaptive and innovative defense strategies.

Furthermore, U.S. involvement in regional conflicts, particularly through increased troop presence, could escalate security tensions in Southeast Asia. The South China Sea disputes extend beyond bilateral issues between China and ASEAN nations, affecting regional stability. Excessive U.S. intervention may heighten conflict escalation, highlighting the need for a more strategic diplomatic approach to ensure stability. The military's role in modern conflicts is becoming increasingly vital, necessitating a defense strategy that is adaptive and responsive to geopolitical shifts. Indonesia must maintain sovereignty while navigating the complex Indo-Pacific context.

Indonesia's BRICS membership, effective January 6, 2025, is strategically significant for national defense and security, particularly amid global geopolitical transformations. While BRICS offers economic advantages, it also presents defense challenges, including strategic partner diversification, geopolitical influence, and resilience against external pressures. China's economic dominance within BRICS introduces new dynamics to Indonesia's defense cooperation, impacting military technology procurement and strategic positioning in the Indo-Pacific region. Additionally, potential geopolitical instability stemming from BRICS-Western tensions could influence Indonesia's defense policy, necessitating a balanced approach between national interests and international relations.

The evolution of military strategy in addressing modern conflicts has become increasingly significant amid rapid geopolitical shifts and advancing technology. Warfare has moved beyond traditional battles, now encompassing multidimensional threats such as cyber warfare, terrorism, and asymmetric conflicts. Historically, following Indonesia's independence in 1945, the country's military strategy proved highly effective in countering attempts by allied forces and the Dutch East Indies Colonial government to reclaim control. General Sudirman, a revered Indonesian commander, pioneered guerrilla warfare tactics,

including the renowned *"supit urang"* strategy, successfully disrupting colonial military movements. The effectiveness of this strategy not only bolstered national resilience but also played a crucial role in solidifying Indonesia's sovereignty on the global stage (Suspurwanto, 2020). Overall, military strategy remains a fundamental pillar in safeguarding a nation's sovereignty against various security threats.

The evolution of military strategy demands a shift beyond traditional physical strength, prioritizing technological adaptability. One key advancement is the Multi-Domain Operation (MDO) approach, which integrates land, sea, air, space, and cyber domains to achieve strategic superiority (Freedman, 2017). The war in Ukraine highlights significant transformations in military concepts, operational methods, and technological applications, demonstrating how warfare continues to evolve (Suzen, 2024). This conflict marks a new era in which military dominance is increasingly determined by the effective use of advanced technology rather than sheer troop numbers or conventional defense assets. A concrete example of this shift is Iran's attack on Israel in October 2024, showcasing how high-speed drones and cyber warfare can effectively disrupt and neutralize modern defense systems (Aamir, 2021).

Existing research provides valuable insights into specific aspects of modern military strategy, yet significant gaps remain in developing a more holistic perspective. Most prior studies have concentrated on military tactics within particular conflicts, often overlooking key non-military elements such as diplomacy, propaganda, and information warfare, which play a crucial role in the effectiveness of military strategies. This study seeks to bridge that gap by incorporating various non-military dimensions into the analysis of modern warfare strategies. While numerous theories have explored conventional and asymmetric warfare, no comprehensive theoretical model currently integrates diplomacy, technology, and international cooperation into a strategic framework capable of adapting to the complexities of modern conflicts.

The urgency of this research is to provide recommendations to the TNI on transforming military strategy in response to modern conflicts. So, this research aims to formulate the Adaptive Model of Military Strategy to tackle technological threats and geopolitical shifts effectively, providing a strategic foundation for the TNI's military transformation in responding to modern conflicts. The adaptive model is the model that can follow the dynamics of the global threats and opportunities in military challenges, and the modern conflict is the new conflict that does not only consist of air, land, and sea, but also hybrid conflict and proxy war. The study's outcomes can enhance the development of a more flexible defence doctrine and aid in crafting robust military policies, ensuring preparedness for future global security challenges. Moreover, the research question is what is the new concept of the transformation of military strategy in addressing contemporary conflicts in the modern era?

2. Literature Review

2.1. Theory of the Transformation of Military Strategy

The transformation of military strategy is also greatly influenced by the development of disruptive technologies that change how countries project power and maintain sovereignty. Technologies such as unmanned autonomous systems (drones), artificial intelligence (AI), and offensive and defensive cyber capabilities have expanded the spectrum of conflict from physical battlefields to non-kinetic domains like cyberspace. This forces military institutions to adapt technically, doctrinally, and organizationally. According to Freedman (2017), militaries that cannot respond to technological changes with strategic reform will fall behind

and be vulnerable to more agile and adaptive adversaries. Therefore, transforming military strategy becomes necessary in facing power contests in the digital era.

The selection of an asymmetric advantage strategy becomes essential, namely a strategy that emphasizes efficiency and superiority in specific domains without following major countries' defense spending patterns. As explained by Bitzinger (2021), military transformation in Southeast Asia tends to be selective and gradual, focusing on strengthening maritime capabilities, air defense, and enhancing regional interoperability within the framework of multilateral cooperation such as the ASEAN Defence Ministers' Meeting (ADMM). This transformation is also closely related to developing an indigenous industrial-based defense system to reduce dependence on foreign technology.

2.2. The Implementation of Transformation of Military Strategy in Many Countries

The transformation of military strategy in response to changes in the security environment and technological advancements has been adopted by various countries with diverse approaches according to their respective contexts. The United States has become a leading pioneer in implementing the Revolution in Military Affairs (RMA) concept, especially after the Gulf War of 1991. Using precision weapon systems, real-time communication networks, and satellite-based intelligence, the US military underwent a massive transformation, manifested in initiatives such as Force XXI and Future Combat Systems. This approach enables US forces to achieve speed, flexibility, and cross-domain coordination superiority (Metz, 2022).

Singapore, as a small country with geographical vulnerabilities, adapts RMA through an approach known as Integrated Knowledge-based Command and Control (IKC2). This strategy leverages information and communication technology to integrate command, control, communication, computer, and intelligence (C4I) systems and develop unmanned and precision combat capabilities. This transformation is focused on addressing asymmetric threats and potential cyberattacks that could disrupt national stability. Singapore is also actively experimenting and developing doctrines through the Centre for Military Experimentation, manifesting its long-term commitment to strategic innovation (Storey, 2013).

Spain provides an example of how military transformation can occur in two phases: the transformation phase (2004–2018) and the adaptation phase (post-2019). This process directs the country's defense capabilities towards readiness to face future challenges. The reforms include the renewal of command structures, modernization of defense equipment, and adjustments to doctrines that align with the security policies of the European Union and NATO. Spain has also adopted an approach based on interoperability and high mobility within its force structure to meet the demands of multinational joint operations (Scianna, 2019).

2.3. Previous Research

There are many previous research as the basic of this research. Krpec and Kříž (2025) stated that the influence of Soviet-era structures is still very dominant in defense procurement processes, strategic planning, and military modernization in post-socialist Central European countries. The Czech defense industry faces challenges in adapting to current defense demands due to its deeply rooted industrial patterns and tendency to maintain traditional land-based systems. This study highlights the barriers to accelerating modernization and integrating cutting-edge military technology by analyzing defense policies, procurement contracts, and interviews with key actors. The findings of this research emphasize the need for a strategic shift toward technological innovation and closer collaboration with NATO

initiatives to enhance the Czech Republic's defense capabilities in the face of increasingly complex security threats.

Supriyadi et al. (2024) found that the geopolitical dynamics in the Indo-Pacific region compel the military to adapt to evolving threats continuously. Several factors contributing to the creation of a VUCA (Volatility, Uncertainty, Complexity, and Ambiguity) strategic environment include limitations in cognitive aspects, resources, the international system, strategic interactions, intelligence and deception, and technological developments. Therefore, military planners need to understand the root causes of the VUCA conditions to effectively respond to changes in the strategic environment within the context of Indonesia's maritime defense.

Grosu (2024) explained that Military doctrine changes in facing asymmetric conflicts, as an effort to maintain relevance and enhance effectiveness in responding to modern threats. This transformation demands a comprehensive approach that involves technological innovation, international cooperation, and integrated operational capabilities, while considering the complexities of global security dynamics. Asymmetric conflicts involve various actors operating outside the framework of conventional warfare. Thus, military doctrine must be based on in-depth threat analysis to enable rapid and adaptive responses. The participation of various actors in the planning and executing military strategies plays a crucial role in post-conflict stabilization and strengthening the country's resilience against asymmetric threats.

3. Methods

3.1. Research Type

The research problem under investigation involves a complex issue regarding the advancement of modern defense planning amid global geopolitical shifts. To thoroughly examine this matter, the researcher employs a qualitative research approach, allowing for in-depth exploration, data collection, analysis, and interpretation to address the problem effectively. As Busetto et al. (2020) state, qualitative research is a valuable method for analyzing issues across various sectors, including government organizations, socio-cultural dynamics, and other domains. The insights gained from such research can be utilized as a foundation for policymaking, ultimately contributing to the general welfare of society.

Based on its conceptual foundation, the qualitative research method is the most appropriate approach as it offers a comprehensive understanding of research phenomena, particularly in modern protection planning shaped by global geopolitical dynamics (Bazen et al., 2021). This method enables researchers to examine the perspectives of various stakeholders, assess factors affecting strategic decision-making (Akter et al., 2019), and gain insights into the implementation of defense policies (Sarjito, 2024). Additionally, it facilitates data collection through in-depth interviews, document analysis, and observations, ensuring a more holistic and contextually relevant analysis aligned with real-world conditions (Khoa et al., 2023).

3.2. Research Design

According to Asenahabi (2019), Sileyew (2019), and Tisdell et al. (2025), research design serves as a structured process for collecting, processing, analyzing, and presenting data objectively to address issues while simultaneously developing general theoretical principles. This study employs a qualitative descriptive-analytical research design, which aims to provide a detailed depiction of the status, characteristics, or conditions of a particular group, object, thought, or event at a given time. The data gathered consists of words, images, and narratives, as qualitative methods prioritize the interpretation of meaning over numerical or statistical representations. Through this approach, the study will generate a comprehensive and

contextual analysis of the phenomenon under investigation, incorporating data quotations to enrich the depth of the research report.

3.3. Research Time and Location

This study was conducted at the Indonesian National Army Marine Corps, Navy, located in Jakarta City. The research site was strategically selected to facilitate data collection through interviews, documentation, and observations. Key research locations include strategic institutions such as the Indonesian Ministry of Defense, TNI Headquarters, and defense policy research institutes. The study was conducted from March to May 2025. The preparation and observation were made in March 2025. The interview, written materials, and data collection and analysis were conducted in April 2025, and the report of this research was conducted in May 2025.

3.4. Research Subject

This research applies the purposive sampling technique, a non-random selection method where subjects are chosen based on specific characteristics that align with the study's objectives. This approach ensures that the selected participants contribute valuable insights relevant to the research problem. Klar and Leeper (2019) explain that specific criteria, including population characteristics or pre-established identities, determine purposive sampling. In qualitative research, participants are typically called informants, as they provide critical data directly related to the study's focus (Swain & King, 2022). According to Shaheen et al. (2019), sample selection in qualitative research is based on defined factors essential for obtaining relevant information. The key informants in this study include Commander of the TNI Squadron (Dansatsiber TNI), Asminlog Satsiber TNI, Dansatkal Satsiber TNI, and a Defense Observer, who has previously served as Governor of Lemhanas.

3.5. Research Object

The research object is an entity with distinct characteristics and relevant data, chosen by researchers for examination, analysis, and as a basis for forming conclusions and providing recommendations (Pahlawati et al., 2022). In alignment with this definition, this study centers on strategy, tactics, and defense planning in confronting modern conflicts

3.6. Data Collection

Qualitative data is presented in descriptive form, either oral or written, to illustrate observable human behavior. According to Schreier (2018) and Mezmir (2020), qualitative data is classified into three categories:

a. Observational data describes situations, events, interactions, and behaviors observed in the field.
b. Interview data consists of direct quotes from individuals that capture their experiences, attitudes, beliefs, and thoughts during in-depth discussions.
c. Written materials, including documents, correspondence, recordings, and historical records.
d. The data collection methods in this study involve literature reviews and interviews to ensure a comprehensive analysis.

3.7. Data Validity

Validity check based on four key criteria: credibility, transferability, dependability, and confirmability (Ahmed, 2024). Credibility refers to the reliability and authenticity of the research findings. To strengthen credibility, Dado et al. (2023) and Schafer and Phillippi (2025) recommend implementing the following four procedures:

a. Prolonged engagement – This study achieved engagement through three in-depth interviews with participants.
b. Triangulation—Multiple sources, including interviews, researcher notes, and participant-generated maps, were used to enhance data reliability.
c. Member checking – Participants validated the data and interpretations by reviewing their interview transcripts and individual profiles.
d. Peer debriefing – To ensure accuracy and minimize bias, a peer provided feedback at the beginning of the study, reviewing the researcher's interview practices, data collection, and analysis procedures.

3.8. Data Analysis

In qualitative research, data analysis is an ongoing process that begins at the start of data collection and continues intensively throughout the study. It occurs during both formal and informal interviews with informants. According to Miles & Huberman, qualitative data analysis is an interactive and iterative process that is repeated until the study reaches completion. Consequently, analysis continues until the data achieves sufficient saturation. This study follows a four-stage data analysis framework, based on the insights of Amini (2023) and Rahayu et al. (2024):

a. Data Condensation

Data condensation involves simplifying, selecting, and focusing research data to make it more structured and easier to analyze. In qualitative research, this process is carried out continuously during data collection to ensure that only relevant and meaningful information is retained. It helps researchers identify patterns, themes, and key insights that enhance their understanding of the studied phenomenon.

b. Data Display

This stage presents data through narrative summaries, diagrams, graphs, or other visual tools that illustrate relationships between categories. The most commonly used format is narrative presentation, which allows researchers to interpret findings, recognize trends, and determine the next steps for analysis.

c. Data Collection

Data collection refers to the systematic process of gathering information in a study. Various methods such as interviews, observations, and document analysis are utilized to obtain relevant insights aligned with the research objectives. A structured and procedural approach to data collection ensures the validity and credibility of the study's findings.

d. Conclusion Drawing/Verification

Conclusion drawing is the evaluation process in which researchers analyze findings and formulate initial conclusions based on the gathered data. These conclusions are subject to change if additional evidence or stronger insights emerge. At this stage, researchers aim to answer the original research questions, refining their interpretations as new information becomes available.

4. Results and Discussion

4.1. Research Results

4.1.1. Conceptual Background of the Adaptive Model of Military Strategy to Overcome Technological Threats and Geopolitical Changes

The global strategic landscape has undergone significant transformations over the past two decades, reshaping the nature of conflict and warfare. Threats have shifted beyond conventional battles, emerging in asymmetrical forms such as cross-border terrorism, cyberattacks, information operations, and multi-domain conflicts that leverage both physical and digital spaces. These asymmetric challenges necessitate a more flexible and adaptive military strategy, emphasizing the integration of advanced technology to enhance defense capabilities (Grosu, 2024).

The transformation of military strategy is closely linked to the continuous evolution of geopolitical dynamics. Analysis indicates that shifts in the global balance of power, competition among major powers in the Indo-Pacific, and the rise of unconventional threats necessitate strategic adjustments in military planning. To effectively address these challenges, structural flexibility and policy integration are deemed essential. In the Indonesian context, tensions in the South China Sea and the global competition for influence underscore the importance of defense diplomacy as a key strategic component in military transformation (Fanani et al., 2024).

Despite advancements in military strategy, many studies rely on traditional frameworks such as deterrence, force projection, and conventional war planning, often overlooking the complexity of asymmetric risks and the potential for collaborative technological innovation in military decision-making. Additionally, technology-based defense approaches are frequently fragmented and not fully integrated into adaptive military strategies (Ampun & Purba, 2021). This gap in research highlights a critical need for developing the Adaptive Model of Military Strategy to effectively counter technological threats and navigate geopolitical shifts.

This section presents an analysis of data gathered from literature reviews and empirical observations, focusing on the transformation of military strategies in response to modern conflicts. The examination is grounded in geopolitical dynamics and technological advancements. The Conceptual Background of the Adaptive Model of Military Strategy to Overcome Technological Threats and Geopolitical Changes serves as the foundation for understanding and developing a responsive and adaptive defense policy.

4.2. Discussion

the following is the Pillar of the Adaptive Model of Military Strategy to Overcome Technological Threats and Geopolitical Shift.

4.2.1. Pillar 1. Integration of Defense Technology and Artificial Intelligence

The incorporation of artificial intelligence (AI) into defense technology marks a pivotal advancement in enhancing operational efficiency, precision, and adaptability in addressing contemporary security threats. AI facilitates rapid data processing, autonomous weapon development, and enhanced threat detection and response, particularly in areas like cybersecurity. By leveraging AI, defense systems can operate more accurately, reducing human errors and optimizing decision-making in complex scenarios. Furthermore, AI integration enables the creation of interconnected technology networks, streamlining communication, coordination, and strategic planning in military operations. Utilizing AI effectively strengthens national defense resilience, fostering a more flexible and responsive approach to evolving security challenges in the modern technological era.

Artificial intelligence (AI) is important in enhancing the speed and accuracy of detecting cyberattacks and airstrikes. In cybersecurity, AI continuously analyzes data patterns to identify unusual activities, such as hacking attempts, malware distribution, or network anomalies, which are potential indicators of security threats. Through machine learning algorithms, AI can also predict future threats based on historical trends, enabling proactive defense strategies. For airstrike detection, AI utilizes advanced sensors and data processing technologies to track the movement of missiles, aircraft, and other aerial objects, even from long distances (Sarjito, 2024). The system categorizes threats based on the available intelligence and rapidly recommends defensive measures to strengthen air security protocols. By integrating AI into national defense systems, military operations gain greater efficiency, resilience, and adaptability, ensuring a robust defense framework against evolving technological threats.

4.2.2. Pillar 2. Adaptive Risk Management in Command and Control Systems

Adaptive risk management in command and control systems plays a crucial role in dealing with the uncertainties and dynamics that arise in military operations. This approach combines hands-on risk analysis with flexible decision-making capabilities, allowing for the identification of potential threats and the rapid and efficient implementation of risk mitigation. By leveraging modern technologies such as artificial intelligence and data analytics, adaptive risk management can monitor changing situations, provide relevant recommendations, and ensure the continuity of military operations. This approach makes command and control systems more responsive to unexpected challenges, while increasing effectiveness and reliability in carrying out strategic tasks.

Adaptive risk management in command and control systems offers significant advantages, particularly in handling unpredictable dynamics within military operations. This approach enables real-time risk monitoring, facilitating the early detection of potential threats and the implementation of timely countermeasures. Its flexibility empowers decision-makers to swiftly respond to evolving situations, ensuring operations remain effective even under external pressures. Moreover, the integration of advanced technologies, such as artificial intelligence (AI) and data analytics, enhances the precision of risk analysis, minimizes errors, and boosts efficiency in task execution (Putro, 2024).

4.2.3. Pillar 3. Multi-Domain Collaboration and Defense Diplomacy

Multi-domain collaboration and defense diplomacy function as strategic approaches that unify land, sea, air, space, and cyber domains to bolster global security and stability. As threats become increasingly complex, cross-domain cooperation enables the creation of comprehensive and innovative solutions to counter multidimensional challenges. By leveraging defense diplomacy, nations can strengthen international alliances, share critical intelligence and technological advancements, and develop mutually beneficial security policies. This strategy not only enhances military sector coordination but also reinforces diplomatic relations, fostering a secure and stable geopolitical environment amid intensifying global competition.

Multidomain collaboration is a strategic approach that integrates land, sea, air, space, and cyber domains to enhance national defense and security. Within the Indonesian Navy, this method enables the deployment of advanced technologies, including maritime radar, satellites, and artificial intelligence, to strengthen threat detection capabilities in territorial waters. Additionally, cross-sectoral partnerships and cooperation with international institutions create opportunities for data sharing and resource exchange, optimizing maritime operational strategies. This multidomain approach also enhances interoperability among

defense units, ensuring seamless coordination in responding to various threats in Indonesian waters. By leveraging these integrated strategies, the Indonesian Navy can effectively safeguard maritime security and sovereignty, ensuring a robust and adaptive defense framework.

4.2.4. Pillar 4. VUCA-Responsive Based National Resilience

National resilience, incorporating the VUCA (Volatility, Uncertainty, Complexity, and Ambiguity) framework, highlights the necessity for flexible and adaptive strategies to navigate shifting global dynamics. Under uncertain conditions, a VUCA-driven approach prioritizes rapid and precise responses to emerging threats and challenges through a comprehensive methodology (Döner & Efeoğlu, 2023). By integrating cutting-edge technology, data analytics, and cross-sector coordination, national resilience management becomes more responsive to evolving circumstances. Additionally, this approach fosters collaboration among governments, communities, and international partners, promoting the development of robust and proactive systems to strengthen national security and stability.

Defense collaboration is actual in overcoming the challenges posed by the VUCA (Volatility, Uncertainty, Complexity, and Ambiguity) framework. Through cross-domain partnerships—spanning military units, governments, private sectors, and international alliances—nations can strengthen defense resilience and adapt to rapidly changing security environments (Maulana & Sy, 2024). This integrated approach enables real-time intelligence exchange, seamless adoption of cutting-edge technologies, and strategic coordination to counter emerging threats. The ability to detect dangers early, respond swiftly, and manage crises effectively ensures greater operational preparedness in military defense systems. Additionally, fostering strong collaborative networks bolsters national stability while enhancing capabilities to anticipate geopolitical uncertainties. A VUCA-responsive resilience framework is fundamental in maintaining security, adaptability, and strategic foresight in an unpredictable global landscape.

4.2.5. Pillar 5. Assessment and Mapping of Global and Regional Geopolitical Dynamics

Assessing and mapping regional geopolitical dynamics within the VUCA (Volatility, Uncertainty, Complexity, and Ambiguity) framework requires a focused and adaptable methodology to grasp interstate relations, local conflicts, and strategic alliances at the regional level. Utilizing advanced technologies such as data analytics and artificial intelligence, geopolitical trend analysis can be conducted thoroughly, enabling the identification of potential risks, emerging opportunities, and complex interaction patterns. A VUCA-based strategy supports the formation of responsive and adaptive policies, allowing for effective management of sudden geopolitical changes, including power shifts and escalating political tensions (Safaruddin, 2022).

Assessing and mapping regional geopolitical dynamics is crucial for strengthening the Indonesian Navy's defense capabilities, especially in countering increasingly complex maritime security threats. By continuously monitoring geopolitical shifts, the Navy can strategically determine defense equipment procurement and modernization, ensuring alignment with emerging security challenges. A comprehensive evaluation of regional power shifts, alliance networks, and potential conflict escalations enables the prioritization of fleet development, incorporating modern warships, AI-driven surveillance systems, and advanced weapon technologies. Furthermore, geopolitical mapping supports the formulation of a long-term investment strategy, ensuring the readiness and adaptability of defense assets for future maritime operations.

4.2.6. Pillar 6. Identify Asymmetric Strategic Risks

Identifying asymetric strategic risks is critical to anticipating asymmetric warfare, where unconventional tactics make threats highly unpredictable. A thorough analysis of potential security challenges, such as cyberattacks, sabotage of infrastructure, and guerrilla warfare conducted by state and non-state actors, is key to effective defense strategy development. By incorporating advanced analytics and artificial intelligence, risk assessments can generate accurate insights, supporting cybersecurity improvements, asset protection, and streamlined coordination between military and intelligence agencies. Additionally, risk mapping enables the creation of adaptive and proactive mitigation strategies, ensuring defense systems remain ready and resilient amid the ever-changing nature of asymmetric threats.

Strategic risk identification for anticipating asymmetric warfare relies on structured, data-driven analysis to assess potential threats. The process begins with intelligence gathering, using surveys, security evaluations, and threat assessments to pinpoint risks such as cyberattacks, infrastructure sabotage, and infiltration attempts by non-state actors. By employing cutting-edge technologies like artificial intelligence and predictive analytics, risk assessments can identify patterns, recognize emerging threats, and provide actionable insights for defense planning. This approach also includes mapping critical infrastructure, strengthening communication networks, and securing high-risk areas to bolster resilience. Effectively countering asymmetric warfare requires a proactive, multi-layered strategy that combines diplomatic engagement, technological innovation, and cross-sector cooperation, aligning with perspectives from Darumaya et al. (2023).

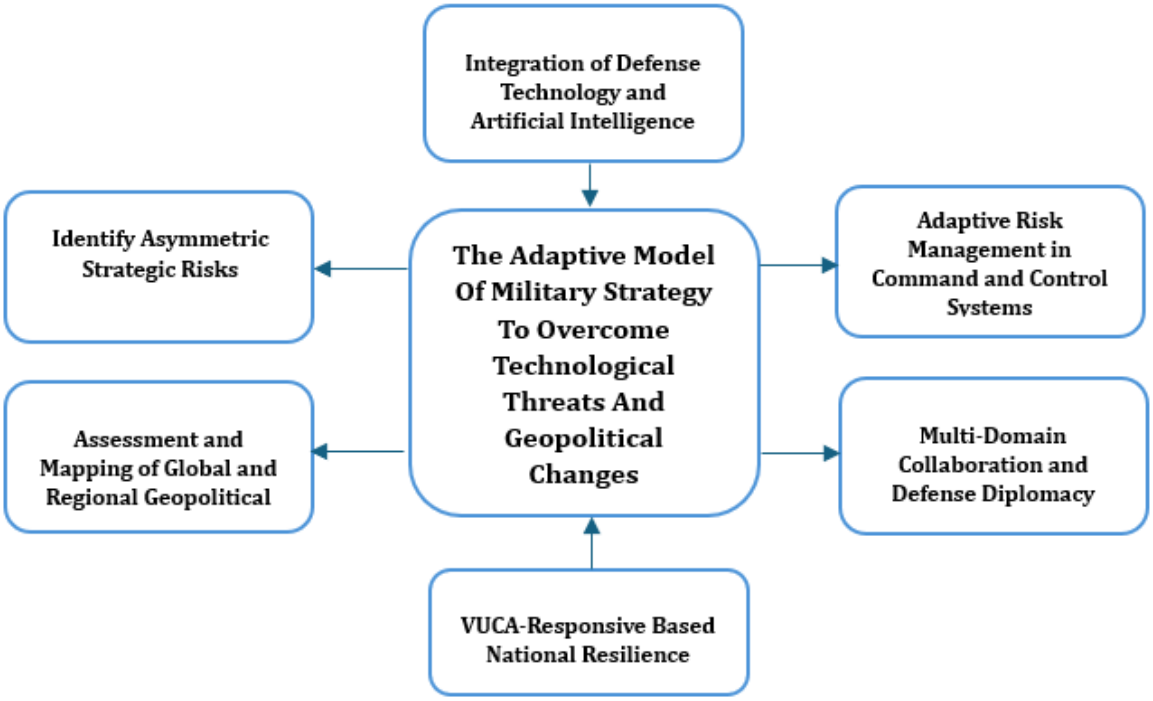

Figure 1. Pilar-Pilar the Adaptive Model of Military Strategy to Overcome Technological Threats and Geopolitical Changes
Source : Authors (2025)

5. Conclusion

The transformation of the TNI's military strategy in response to modern conflicts can be achieved through the implementation of the Adaptive Model of Military Strategy to Overcome Technological Threats and Geopolitical Changes. This model is structured around six key pillars, each with practical and strategic implications. The six pillars of that model are the newest concept in enhancing the adaptive model of military strategies because the military challenges in the modern era are multi-dimensional aspects. There are global and regional geopolitical, asymmetric war, collaboration, diplomacy, defence system, national resilience, VUCA Condition, and also Technology and AI phenomena. Additionally, the model provides guidance in designing and executing defense strategy policies, enhancing national security adaptability in the face of evolving threats.

Strengthening national defense planning is the best way to ensure adaptability to modern conflicts. This can be achieved by developing technology-driven defense strategies, enhancing cyber defense capabilities, and adopting multi-domain operations to improve security effectiveness. Additionally, advancing defense human resource expertise, reforming national defense management structures, and expanding international defense cooperation are critical in optimizing security measures. A robust defense system, built on Early Detection and Rapid Response mechanisms, further strengthens preparedness. Lastly, efficient allocation and optimization of defense resources and budgets ensure sustained military readiness in evolving geopolitical landscapes.

6. References

Aamir, O. (2021). Warfare's future in the coming decade: Technologies and Strategies. *Available at SSRN 3854390*.

Ahmed, S. K. (2024). The pillars of trustworthiness in qualitative research. *Journal of Medicine, Surgery, and Public Health*, *2*, 100051.

Akter, S., Bandara, R., Hani, U., Wamba, S. F., Foropon, C., & Papadopoulos, T. (2019). Analytics-based decision-making for service systems: A qualitative study and agenda for future research. *International Journal of Information Management*, *48*, 85–95.

Amil, A. C. (2024). Leadership Decision-Making in Vuca Bureaucracy: Glob-al Turbulence, Influence, Challenges, and Strategies. *International Journal of Multidisci Plinary Research & Reviews*, *3*(03), 109–127.

Amini, A. (2023). Implementation Of Blended Learning In Improving Students Self Efficacy. *Proceeding Of International Conference On Education, Society And Humanity*, *1*(1), 826–835.

Ampun, A. C. R. A., & Purba, A. O. (2021). Strategi pertahanan maritim indonesia sebagai poros maritim dunia. *NUSANTARA: Jurnal Ilmu Pengetahuan Sosial*, *8*(3), 321–325.

Asenahabi, B. M. (2019). Basics of research design: A guide to selecting appropriate research design. *International Journal of Contemporary Applied Researches*, *6*(5), 76–89.

Bazen, A., Barg, F. K., & Takeshita, J. (2021). Research techniques made simple: an introduction to qualitative research. *Journal of Investigative Dermatology*, *141*(2), 241–247.

Bitzinger, R. A. (2021). Asian arms industries and impact on military capabilities. In *Defence Industries in the 21st Century* (pp. 115–131). Routledge.

Busetto, L., Wick, W., & Gumbinger, C. (2020). How to use and assess qualitative research methods. *Neurological Research and Practice*, *2*(1), 14.

Dado, M., Spence, J. R., & Elliot, J. (2023). The case of contradictions: How prolonged engagement, reflexive journaling, and observations can contradict qualitative methods.

International Journal of Qualitative Methods, *22*, 16094069231189372.

Darumaya, B. A., Maarif, S., Toruan, T. S. L., & Swastanto, Y. (2023). Assesing Indonesia's Cyber Capabilities: A New Paradigm of State Power. *Journal of Law and Sustainable Development*, *11*(8), e1439–e1439.

Döner, E., & Efeoğlu, İ. E. (2023). Being Affected By VUCA Factors? Developing The "Perceived VUCA Exposure" Scale. *GAB Akademi*, *3*(2), 28–53.

Fanani, A., Midhio, I. W., & Hendra, A. (2024). Tantangan Pertahanan Nasional Menuju Indonesia Emas 2045. *TheJournalish: Social and Government*, *5*(4), 379–391.

Freedman, L. (2017). *The future of war: a history*. PublicAffairs.

GRoSU, R. (2024). An Academic Approach Of The Military Doctrine Transformation In The Context Of Asymmetrical Conflicts. *Strategic Impact*, *90*(1), 23–50.

Hendra, Z., Musani, I., & Samiaji, R. (2021). Studi Kasus Perang Modern Antara Rusia Dengan Ukraina Tahun 2014 Di Tinjau Dari Aspek Strategi Dan Hubungan Internasional Serta Manfaatnya Bagi Tni AL. *Jurnal Manajemen Pendidikan Dan Ilmu Sosial*, *2*(2), 730–746.

Khoa, B. T., Hung, B. P., & Hejsalem-Brahmi, M. (2023). Qualitative research in social sciences: data collection, data analysis and report writing. *International Journal of Public Sector Performance Management*, *12*(1–2), 187–209.

Klar, S., & Leeper, T. J. (2019). Identities and intersectionality: a case for Purposive sampling in Survey-Experimental research. *Experimental Methods in Survey Research: Techniques That Combine Random Sampling with Random Assignment*, 419–433.

Krpec, O., & Kříž, Z. (2025). Structural challenges in adapting to modern warfare: lessons from the Ukrainian War and the Czech defence industry. *Defense & Security Analysis*, 1–28.

Maulana, A., & Sy, S. (2024). *Cooperation Management System Model Kerjasama Sipil-Militer dalam Pengelolaan Sumber Daya Nasional*. MEGA PRESS NUSANTARA.

Metz, S. (2022). *Strategy and the revolution in military affairs: from theory to policy*. Diane Publishing.

Mezmir, E. A. (2020). Qualitative data analysis: An overview of data reduction, data display, and interpretation. *Research on Humanities and Social Sciences*, *10*(21), 15–27.

Pahlawati, E., Norman, E., Supriyatna, R. K., & Hermaliana, M. (2022). Dampak Stres Kerja dan Disiplin Kerja terhadap Kinerja Pegawai RSUD Kota Bogor pada Masa Pandemi Covid 19. *Reslaj: Religion Education Social Laa Roiba Journal*, *4*(1), 101–119.

Putro, T. W. A. (2024). Implementasi Big Data dan Artificial Intelligence Untuk Meningkatkan Kemampuan Intelijen TNI. *Ranah Research: Journal of Multidisciplinary Research and Development*, *6*(6), 2864–2872.

Rahayu, R. S., Arvianti, E. Y., & Sasmito, C. (2024). Dampak Implementasi Pemberian Tambahan Penghasilan Pegawai (TPP) Terhadap Kinerja Aparatur Sipil Negara di Dinas Pertanian dan Ketahanan Pangan Kota Batu. *Jurnal Administrasi Publik*, *20*(2), 227–248.

Safaruddin, S. (2022). *Implementasi Kebijakan Publik Di Era Disrupsi (Studi Implementasi Kebijakan Pendidikan Dasar Di Kota Makassar)= The Implementation of Public Policy in Disruption Era (A Study on Implementation of Elementary Education Policy in Makassar City)*. Universitas Hasanuddin.

Sarjito, A. (2024). Enhancing National Security: Strategic Policy Development in Defense Management. *Jurnal Pelita Nusantara*, *2*(1), 56–68.

Schafer, R., & Phillippi, J. C. (2025). Updating and Advancing Member-Checking Methods: Use of Video and Asynchronous Technology to Optimize Participant Engagement. *International Journal of Qualitative Methods*, *24*, 16094069251315396.

Schreier, M. (2018). Sampling and generalization. *The SAGE Handbook of Qualitative Data Collection*, 84–97.

Scianna, B. M. (2019). Stuck in the past? British views on the Spanish army's effectiveness and

military culture, 1946–1983. *War & Society*, *38*(1), 41–56.

Sileyew, K. J. (2019). *Research design and methodology* (Vol. 7). Cyberspace London.

Singer, P. W. (2009). *Wired for war: The robotics revolution and conflict in the 21st century*. Penguin.

Storey, I. (2013). Singapore and the rise of China: Perceptions and policy. In *China Threat: Perceptions Myths* (pp. 205–226). Routledge.

Supriyadi, A., Moeljadi, M., Kusumaningrum, A., & Susilo, S. (2024). The Concept of Victory in Marine Corps Defense Planning. *Wacana Journal of Social and Humanity Studies*, *27*(1), 18–25.

Suspurwanto, J. (2020). Kepemimpinan Strategis Jenderal Sudirman Dalam Pengabdiannya Sebagai Prajurit Tentara Nasional Indonesia. *Strategi Perang Semesta*, *6*(1).

Suzen, H. (2024). *Understanding the changing character of political warfare which employs disruptive technologies in contemporary great power competition: a comparative study of Russian and the Western digitalized political warfare in Ukraine*. University of Antwerp.

Swain, J., & King, B. (2022). Using informal conversations in qualitative research. *International Journal of Qualitative Methods*, *21*, 16094069221085056.

Tisdell, E. J., Merriam, S. B., & Stuckey-Peyrot, H. L. (2025). *Qualitative research: A guide to design and implementation*. John Wiley & Sons.

Vaughn, B. (2007). *US Strategic and Defense Relationships in the Asia-Pacific Region*. Congressional Research Service Washington DC.