

Challenges of Indonesian Defense Resilience in the Face of Contemporary Technology Advancement: What's Next?

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Abstract: This article discusses the concept of national resilience in the digital era, which extends beyond the paradigm of conventional warfare to address a wide range of challenges. To develop the concept of national resilience ideology, a conceptual research method with a philosophical approach is employed, supported by data triangulation using Miles and Huberman's method. The main findings highlight the importance of digital security and privacy, as well as the role of digital local wisdom in strengthening national identity. Additionally, increased legal awareness is considered crucial in shaping cultural norms, while the sustainable development of human resources, supported by quality education and healthcare services, remains a key focus.

Keywords: 21st Century Challenges; Geopolitics; Geostrategy; Cybersecurity; National Resilience Strategies.

1. Introduction

The importance of national resilience is rooted in the need to address both physical and non-physical threats to the continuity of the state (Rahayu, 2021). Physical threats may include military aggression or insurrections, while non-physical threats arise from advancements in information technology, particularly through the internet, impacting the digital economy, such as online businesses, startups, unicorns, and more, both domestically and internationally (Soemarwoto, 2020, p. 6). The shift from offline to online business models not only reshapes economic patterns and societal behaviors within nations but also influences global interactions. According to Muhamad Rizal's cybersecurity research, national resilience is closely tied to cybersecurity, given the extensive reliance on digital technology in critical sectors like infrastructure, finance, and communication. Successful cyberattacks could severely damage critical infrastructure and destabilize the nation (Rizal & Yani, 2016, p. 61).

One key challenge in the digital era is the erosion of national identity among younger generations. Gen Z and Alpha, who predominantly live in the digital realm, demonstrate characteristics that diverge from previous generations. Their lifestyle in the digital world has resulted in social interactions, actions, and values that seem increasingly disconnected from the principles of Pancasila. Evidence of this disconnect can be found in a survey by LSI Denny JA, which reveals a decline in public understanding and trust in Pancasila over the past 13 years (Rokhman, Hum, Syaifudin, & Yuliati, 2014); (Prasetio, 2023, p. 126).

In their study, Anita Rahma Yeni and Dicky C. Pelupessy argue that national resilience also depends on two factors: (1) the extent to which the public feels threatened by issues like drug abuse (perceived threat), and (2) the public's ability to understand, manage, and find meaning in difficult situations (sense of coherence). The study highlights that society's vulnerability to stress and anxiety poses a challenge for state institutions,

especially when public well-being is compromised (Anita Rahma Yeni & Dicky C. Pelupessy, 2023). This highlights the importance of comprehensive strategic planning, including the implementation of national resilience measures across all aspects of life.

National resilience plays a crucial role in safeguarding Indonesia's national economy and the Unitary State of the Republic of Indonesia, based on Pancasila and the 1945 Constitution. The main objective is to confront various threats, challenges, obstacles, and disruptions (Setyaningrum, Trisiana, & Kirana, 2021). However, an analysis of national affairs reveals a lack of comprehensive understanding of the archipelagic concept, and the principles of Indonesia's archipelagic identity are not fully embraced by the public, particularly among national leaders responsible for high-level decisions. Leaders have both the right and duty to guide the nation towards its goals (Santoso, Marcellia, & Ramadhani, 2023).

A study by Goodwin et al. on Ukraine's national resilience found that resilience tends to be higher among young people, individuals with strong interpersonal trust, and those living in Ukrainian-speaking regions. The research suggests that supporting vulnerable groups, such as the elderly, those with limited mobility, and those in Russian-speaking regions, is vital for maintaining resilience in the face of national threats (Goodwin, Hamama-Raz, Leshem, & Ben-Ezra, 2023). It is important to foster interpersonal trust and providing support to vulnerable groups, such as older populations, those with limited mobility, and those in Russian-speaking regions, to ensure sustained resilience in the face of national threats.

Kimhi et al. emphasize the significant role of public trust in leadership as a key factor influencing national resilience during crises. Their study suggests that declining public trust weakens social cohesion and political stability, ultimately undermining national resilience (Kimhi, Eshel, Marciano, & Adini, 2021). Similarly, research by Jianping Li demonstrates that countries facing frequent natural disasters are more likely to experience weakened national resilience, underscoring the need to strengthen resilience in disaster-prone regions (Li, Yuan, & Suo, 2023).

Conducting studies on national resilience through Indonesia's geopolitics and geostrategy in the 21st century necessitates an expert team with experience and knowledge across multiple domains. However, a shortage of qualified human resources in this regard may pose a challenge. Numerous new challenges arise in the ever-evolving digital era, particularly concerning cyber security, data privacy, and emerging technologies, which may pose additional threats to national resilience. In nation-building, numerous challenges and issues pertain to the implementation of National Resilience. The background of these issues includes threats from various sources, external cultural influences, societal knowledge gaps regarding national resilience, and the rapid and complex shifts in global geopolitical dynamics (Faizah, 2023).

Although the term "national resilience" emerged in Indonesia in the 1960s, the elements of national resilience have essentially existed since the 1900s. The nation's history records May 20, 1908, as the day of national awakening. This national awakening ultimately led to the birth of the framework for achieving national resilience in Indonesia. Subsequently, the term "national resilience" appeared among the military of the Army Command and Staff College (SSKAD - Sekolah Komando dan Staf Angkatan Darat). This was a period when the influence of communism from the Soviet Union and China spread widely. This phenomenon influenced the military thinking of SSKAD, prompting them to observe these events. Their observations indicated a lack of persistent resistance against communist expansion in Indonesia. The development of these ideas increased after the end of the G30S PKI movement.

These phenomena affected the thinkers within the SSKAD or the current SESKOAD environment. They observed and investigated these events. In the 1960s, the communist movement spread further to the Philippines, Malaysia, Singapore, and Thailand (Suryatni, 2019). In 1965, Indonesian communists even launched a rebellion (the September 30, 1965 Movement), but it was eventually suppressed. With these recognitions, questions about the strength and the elements necessary for ensuring the future sustainability of Indonesia as a nation grew stronger (Sadewo & Purnasari, 2020, p. 22).

The study by Kimhi et al. places greater emphasis on psychological and social aspects, particularly on how trust in leadership affects national resilience. Their focus is on societal reactions to crises and how these reactions impact social-political stability and resilience. The authors attempt to identify gaps in existing research where further exploration is needed.

This article posits that the primary challenge for Indonesia's national resilience lies in navigating the complex technological advancements of the 21st century. The main findings emphasize the importance of digital security, privacy, and the preservation of national identity through the integration of digital local wisdom. Legal awareness is also pivotal in shaping the cultural norms necessary for resilience, while sustainable human resource development remains a key factor in ensuring long-term stability. Supporting arguments for these findings include the importance of fostering public trust in leadership, enhancing cyber security infrastructure, and addressing the generational gap in values alignment.

Research into the implementation of sustainable national resilience provides invaluable insights into how countries can adapt their policies and practices to dynamically changing conditions. Rapid shifts in political, economic, and technological landscapes necessitate nations to possess the capability to swiftly adapt and respond to emerging challenges. Hence, such research is pivotal in exploring how nations can implement national resilience strategies that not only effectively address current threats but also remain sustainable in the long term.

2. Methodology

The scholarly paradigm employed in this research is Anton Bakker's philosophy, specifically in understanding, classifying, describing, and reconstructing National Resilience strategies in the digital era through a descriptive-conceptual approach (Bakker & Zubair, 1990). This study adopts a qualitative-literature research method, utilizing various literature related to national resilience. Data collection is conducted through documentation. The analytical techniques employed include content analysis, Miles and Huberman's approach (data collection, data reduction, data display, and data verification), and data triangulation (Miles & Huberman, 1992).

3. Results and Discussion

3.1. The Idea of National Resilience

Since the proclamation of independence, August 17 1945, the Indonesian nation and state have not escaped various upheavals and threats from within and outside the country which have almost endangered the survival of the nation and state. But we are able to defend our independence and sovereignty against threats from outside, including Dutch military aggression and from within, able to uphold the authority of the state by crushing the separatist movement of the Indonesian Communist Party (PKI), DI/TII; even reclaimed Irian Jaya (Rahayu, 2021, p. 202).

The ability of the Indonesian people to keep their country standing is proof that we have the tenacity and toughness to develop national strength to overcome every form of national resilience wherever it comes from. In maintaining and developing our existence in the future, we must remain tenacious and tough and need to be developed continuously.

The term national resilience originated from the concept articulated by Bung Karno in 1958 in Kotaraja (now Banda Aceh) after receiving a defile. It is with great pride that we accept that if a nation wishes to become great and strong, it must fulfill three requirements, namely, it must possess three forms of resilience: firstly, military resilience, secondly, economic resilience, and thirdly, spiritual resilience. Examining national resilience should be viewed from two perspectives, namely, as a condition/input and a conception/output, as well as a condition for future conceptions. The formulation / definition of national resilience is highly necessary in facing the world's developments from one era to another. The formulation of national resilience must have a standardized understanding so that all citizens comprehend it. The necessary standardized understanding is: Indonesian national resilience is the dynamic condition of the Indonesian nation covering all aspects of national life in an integrated manner. National resilience embodies tenacity that contains the ability to develop national strength in confronting and overcoming all threats, disruptions, obstacles, and challenges, whether they arise domestically or internationally, and to ensure the integrity of the nation's identity, the survival of the nation and state, and the struggle to achieve national goals (Rahayu, 2021, p. 265).

Gubernur Lembaga Ketahanan Nasional Republik Indonesia (Lemhannas RI), Andi Widjajanto, posits that "Fundamentally, the defense doctrine formulated by Bung Karno still adheres to the principles of universal defense and the defense of the people." During Sukarno's administration, the evolution of the Indonesian Armed Forces (TNI) can be examined within three key political moments in Indonesia: the period of Independence War (1945-1949), the Parliamentary Democracy period (1950-1959), and the Guided Democracy regime (1960-1965).

The struggle to maintain Indonesia's independence and anti-colonialism in various countries also significantly influenced Sukarno's geopolitical thinking. However, in terms of defense posture, Indonesia's procurement of defense equipment during Sukarno's era was predominantly imports from the Soviet Union. The massive procurement of defense equipment during Sukarno's tenure earned Indonesia the moniker "*Macan Asia*." During this period, the two most acquired weapon systems were warships and fighter aircraft. This was in line with the geopolitical conditions where Indonesia needed to defend its archipelagic territory (Lemhannas RI, 2022).

Over time, Lemhannas has developed three concepts of National Resilience, starting from the conceptions of 1968 and 1969 that emphasized perseverance and resilience, to the final conception in 1972, which was an improvement upon the previous conceptions. Through these concepts, the Indonesian nation remains committed to building strong, dynamic, and integrated national resilience, serving as the foundation for collective progress and success (Sadewo & Purnasari, 2020, p. 22).

Essentially, national resilience is the ability and resilience of a nation to ensure its survival towards glory, with the belief that the success of national development will enhance overall national resilience. The concept of National Resilience involves five main aspects: ideology, politics, economics, socio-cultural, and defense and security. Ideological resilience reflects the mental strength of the Indonesian nation rooted in the belief in the truth of Pancasila, while political resilience highlights democratic political life based on Pancasila. On the other hand, economic resilience demands dynamic economic stability and national economic independence (Sadewo & Purnasari, 2020, p. 22).

Therefore, the term “national resilience” refers to the determination to pursue national interests. The meanings of “endurance” and “resistance” in English convey a more stable and flexible connotation compared to their original meaning, “national resilience.” National resilience is the dynamic state of a nation encompassing its perseverance and robustness, including the ability to overcome all challenges and threats, whether from within or outside, directly or indirectly endangering the nation's integrity. National resilience also includes the capacity to build national strength to confront challenges, obstacles, and upheavals, national identity, the survival of the state, and the struggle to achieve its goals. National resilience must be enhanced in line with current developments because the context and conditions continue to evolve.

3.2. Urgency of National Resilience

Indonesia consists of thousands of islands scattered throughout the archipelago, making the distribution of resources, personnel, and information very challenging. Innovative solutions may include: Technology, Infrastructure, Collaboration, Training and Education, Geographic Information Systems (GIS), Community Empowerment (Meiliza, 2022). The importance of innovative solutions in this context is to address the unique geographical constraints in Indonesia and ensure that national resilience can be effectively maintained across the archipelago. Resilience encompasses all aspects of implementation and policymaking, prevention and early detection, and citizen obligations. In addition to having rights, citizens also have a duty to protect the integrity and sovereignty of the state.

Therefore, community participation in national resilience is not only a right but also the essence of resilience itself. When national resilience weakens, it has an influence on population distribution relationships. Which can affect vulnerability to external threats, socio-economic disparities, limited resources, defense capabilities, economic development imbalances. However, to mitigate the negative effects of uneven population distribution on national resilience, the government may design policies supporting equitable development, infrastructure development, and fair resource distribution. This will help strengthen national resilience by reducing vulnerability to threats and maintaining social and economic stability nationwide.

To strengthen national resilience, the government can take steps in daily life. One way to do this is by increasing public awareness of the importance of maintaining national resilience. Building national resilience fosters a sense of unity, cohesion, and solidarity among diverse communities, fostering social cohesion, trust, and collaboration. It encourages inclusive governance, participatory decision-making, and community engagement to address shared challenges collectively. National resilience is closely related to geostrategic considerations, and geostrategic elements can have a significant impact on national resilience. Territorial security, access to resources, control of trade routes, strategic interests, and potential threats are some ways in which geostrategy and national resilience are interconnected. Many factors drive Indonesia to build national resilience (Fahrezi, Aulia, & Santoso, 2023).

Furthermore, with the presence of “Bhinneka Tunggal Ika” which means “Unity in Diversity” reflecting the diversity of cultures, religions, ethnicities, and languages in Indonesia. This inspiration teaches the importance of unity in diversity and forms a solid national unity. Third, independence and creativity. The spirit of self-reliance and creativity in overcoming challenges and developing the nation's potential has been a source of inspiration. Achievements in various fields such as science, technology, arts, and sports are real examples of this spirit of mutual assistance. The spirit of mutual assistance itself has become a tradition of social solidarity in Indonesia that has inspired joint efforts to

overcome natural disasters, economic crises, and other social problems. This spirit helps strengthen national resilience.

4. What's Next?

The concept of national resilience as a system of regulation and control demands a harmonious balance between the dimensions of welfare and security (defense). Within this regulatory framework, the characteristics and nature of national resilience are clearly delineated. The welfare of society becomes a crucial foundation, alongside the imperative to maintain national security. A dynamic equilibrium between these two dimensions is key to building a solid and sustainable national resilience.

Approaching national resilience as a way of thinking creates a specific and distinct meaning compared to conventional thinking. In the realm of science, this concept is linked to inductive and deductive methods, which also apply in the context of national security. All potential threats are regarded as a comprehensive whole, requiring strategies of prevention, response, diplomacy, and international cooperation. Thus, national resilience is not just about countering threats but also about building a strong foundation to safeguard the integrity and security of the nation.

If a country wishes to achieve its resilience as a nation, its resilience must be comprehensively and integratively understood socially and personally. Every component of the nation must work together to uphold national resilience, according to their abilities and capacities. Therefore, we all bear responsibility for national resilience, not just the Ministry of Defense or the Indonesian National Army.

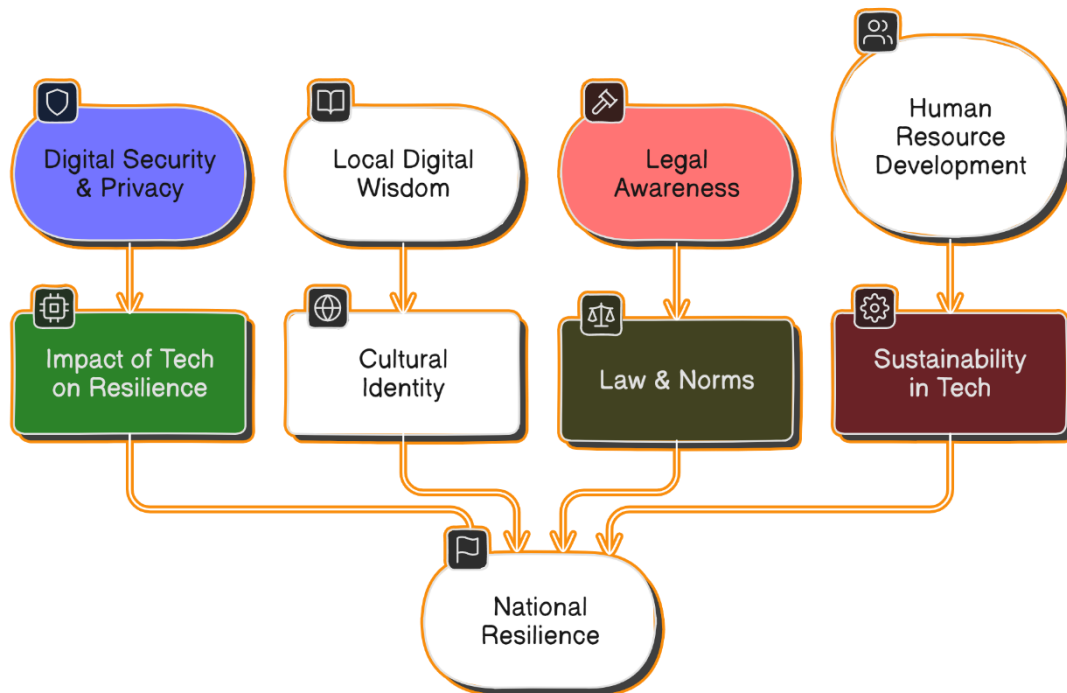


Figure 1. Indonesia's Defense Resilience in Digital Era

To achieve national resilience through the use of Indonesia's geopolitics and geostrategy in the 21st century, it is crucial to understand the complexity of security issues facing Indonesia today. Understanding the dynamics of international relations and Indonesia's foreign policy in an era of competition and globalization requires a geopolitical and geostrategic perspective. As a maritime nation with many islands and regions to manage, Indonesia must address issues of religion, ethnicity, culture, and defense against

non-military threats detrimental to national security. Additionally, Indonesia must enhance its economic strength regionally and nationally and bolster its military defense. The following will outline some representations of national resilience.

4.1 Foreign Policy

The concept of active foreign policy is often discussed in the context of how Indonesia handles conflicts, such as the one between Russia and Ukraine. In addition to maintaining neutrality, foreign political perspectives must effectively address crises and be closely related to a nation's foreign policy. This illustrates how the policies of other nations can impact a country, both positively and negatively. National interests play a crucial role in decision-making processes related to policy. Factors such as geography, history, economic resources, international partnerships, population, and ethnicity all contribute to shaping national interests. According to Jutta Weldes, international politics depends on national interests, which can be divided into two parts. The first part involves policymakers' understanding of national interests as the foundation for comprehending international policy objectives.

In Renne Johannes' research, territorial disputes have been a source of conflict among nations, notably China and its neighboring countries. Geographically, Indonesia shares borders with many other countries. Moreover, the South China Sea (SCS) region is a strategically important area for both commercial and military navigation. The primary impact of war is the long-term detriment it poses to any nation. The significance of the state's presence in the Natuna Sea, which falls within Indonesia's sovereign territory claimed through the Nine-Dash Line, cannot be overstated. This presence can be represented by both security forces and government personnel, as well as active civilian populations such as fishermen, serving as symbols of the nation (Rene Johannes, 2023, p. 211).

The offensive component will generate ideas to achieve goals and assess the success and losses of policies. However, the defensive component is intended to deter other countries if a nation's interests are threatened and becomes a plan when prevention fails. Thus, forming the basis for state action. Secondly, it serves as a rhetorical tool to support political actions and state legitimacy, enabling the state to act. The term "national interest" is used as a tool to analyze strategies when describing, explaining, and evaluating a country's foreign policy. Such patterns will assist decision-makers in achieving their strategic objectives. Decisions already made will be easier to understand through tactical thought interpretation. Strategies consist of two parts: offensive and defensive components (Hutabarat, 2022).

Therefore, through diplomacy, international cooperation, and wise conflict management, foreign policy can assist a nation's resilience. Engaging in environmental, trade, and security agreements can strengthen a country's position in the global market. "Asymmetric" is defined in defense literature and international relations as significant differences in "strength" between two parties involved in a conflict. Material strength includes a large professional military, advanced economy, and sophisticated weapons.

Asymmetric warfare involves conflicts between states and groups; this is often referred to as "civil war" or "internal conflict." On the other hand, symmetric warfare occurs when two parties have equal military strength and resources, employing the same tactics but with different details and outcomes. Asymmetric warfare is also referred to as guerrilla warfare, insurgency, terrorism, low-intensity conflict, 4th generation warfare, and irregular warfare, among others (Hutabarat, 2022); (Mardhani, Runturambi, & Hanita, 2020).

4.2 State Defense by State Civil Servants

The role of civilian society in the national defense of a country can vary, from fostering national defense awareness to helping oversee security sectors democratically. In Indonesia, civilian society is also expected to contribute to national defense by assisting in the development of defense and security fields and combating corruption.

Competence of Civil Servants (ASN) in carrying out their duties, especially in public services by DJKN, must be based on Pancasila values, the 1945 Constitution of the Republic of Indonesia, the Archipelagic Outlook, basic values of National Defense, and awareness of national insight. With such attitudes and perspectives, despite the diversity of economic backgrounds, ethnicities, and religions, the spirit of unity, integrity, and dedication to defending the country can be well-maintained. These challenges become even more complex, especially amidst the Covid-19 pandemic, where every ASN is required to remain productive and provide optimal public services despite limitations (Nugroho, 2021).

To anticipate changes in the global dynamics, ASN needs to continually enhance guidance by strengthening the values of national defense in accordance with established concepts and always being responsive to strategic environmental changes. Furthermore, as part of the Ministry of Finance, ASN also needs to pay attention to the surrounding work environment to prevent potential threats, disruptions, obstacles, and challenges (AGHT). Guidance efforts for colleagues, horizontal and vertical care, and the dedicated implementation of tasks according to professional standards are concrete forms of national defense efforts (Nugroho, 2021).

Socio-cultural diversity and local wisdom must be managed wisely to become a strength for achieving national goals. Local wisdom in various regions must always be respected and upheld as local wisdom that enriches the nation's values. As ASN, active participation in realizing national goals, especially in the work environment, is a crucial step. By carrying out tasks according to professional standards, it is hoped that national goals can be optimally achieved.

To maintain the quality of readiness in detecting and anticipating all forms of potential threats, disruptions, obstacles, and challenges (AGHT), vigilance is needed starting from personal awareness. This vigilance is then developed into attention to the family environment, the workplace, and the broader environment. Thus, awareness of the importance of national security can be realized through layered monitoring and vigilance from individuals, families, and society at large.

However, according to Desy Fajar Lestari et al., the National Defense Education conducted within the ASN employee environment has not been accompanied by a national Grand Design. National Defense Education within the ASN employee environment is currently only at the basic level, and it was only in 2020 that National Defense Education would be implemented gradually and continued in the leadership training for supervisors and administrators. Efforts to counter the spread of radicalism within the ASN employee environment are not only effective through educational channels but must also be accompanied by supervision functions, both internally and externally, so that preventive efforts are no longer merely reactive but can be transformed into active participation (Lestari, Utama, & Yusnaldi, 2021).

As part of the national defense reserve, Civil Servants (ASN) undertake tasks such as unifying and rallying the nation, as well as participating in trials and socializing national defense concepts. Every country has a unique role for civilian society in safeguarding its borders. The role of civilian society in Indonesia's national defense is regulated by Law Number 23 of 2019 concerning the Management of National Resources for State Defense.

Several roles of civilian society in national defense include:

To begin with, through fostering national defense awareness, civilian society plays a role in building awareness and love for the homeland. By upholding national values, they help strengthen the spirit of national defense, which is the cornerstone of safeguarding the sovereignty and territorial integrity of the nation.

In addition, in the context of democratic oversight, civilian society has a significant contribution to monitoring the democratic system. Through their active involvement in monitoring democratic processes, transparent, fair, and accountable governance is expected to be established.

Furthermore, the role of civilian society in combating corruption also strengthens the nation's defense capabilities. Through active participation in anti-corruption efforts, they help eliminate factors that can undermine the security and stability of the nation.

In conclusion, as part of the national defense reserve component, Civil Servants (ASN) carry out important tasks such as unifying and rallying the nation. In trials and socialization of national defense concepts, the active role of civilian society is a crucial pillar in garnering support and compliance with national defense policies.

Thus, civilian society plays a central role in strengthening national resilience, whether through fostering national defense awareness, contributing to democratic oversight, participating in anti-corruption efforts, or serving as a reserve component of national defense.

5. Challenges to National Resilience

5.1 Digital Threats

The emergence of internet technology has transformed the landscape of criminal activities, giving rise to a category of illegal behavior known as cybercrime, which occurs within the digital realm. Phishing stands out as a prime example of cybercrime, characterized by deceptive techniques aimed at tricking individuals into divulging sensitive information such as passwords, credit card numbers, or personal data. This form of online fraud exploits vulnerabilities in cybersecurity measures and poses significant risks to individuals, businesses, and organizations operating in the digital domain. Cybercriminals often employ sophisticated tactics to deceive unsuspecting victims, highlighting the evolving nature of cyber threats in the modern era.

Cyberthreats encompass potential actions that may or may not manifest but have the capacity to create significant disruptions within computer networks or systems, affecting individuals and organizations alike. Given that computerized elements form a crucial part of governmental infrastructure, they are susceptible to exploitation by hackers and prone to cyberattacks, which can result in substantial economic ramifications (Anjani, 2021, p. 2). For businesses, threats such as intellectual property theft, security breaches, and data breaches are prevalent and require proactive mitigation efforts (Bendovschi, 2015). Similarly, individuals must remain vigilant against the risks of data theft and the proliferation of malicious software and viruses. The Indonesian National Cyber and Crypto Agency (Badan Siber dan Sandi Negara or BSSN) documented a staggering 290.3 million instances of cyberattacks in 2019, marking a notable increase from the 232.4 million cases reported the previous year (Anjani, 2021, p. 3).

In the context of Indonesia, the rapid advancement of technology has brought about both opportunities and significant challenges to national resilience. One notable example is the 2017 cyberattacks on government websites, including the website of the General Election Commission (KPU). These attacks targeted sensitive voter data and posed a severe threat to the integrity of Indonesia's democratic processes. The breaches demonstrated

how critical digital infrastructure, which plays a vital role in maintaining political stability, remains vulnerable to external manipulation.

Another major incident was the WannaCry ransomware attack in 2017, which affected hospitals and healthcare institutions across Indonesia. This global cyberattack significantly disrupted essential services, including patient care, by locking down hospital systems and demanding ransom for data recovery. The event highlighted the urgent need for stronger cybersecurity measures in critical sectors such as healthcare, where lives can be directly impacted by digital vulnerabilities.

In 2024, another significant data breach occurred when sensitive data from the Indonesian Ministry of Communication and Information Technology (Kemenkominfo) was reportedly stolen and sold for IDR 1.9 billion on the dark web. This breach compromised the personal information of millions of Indonesian citizens and highlighted the ongoing vulnerabilities in governmental digital infrastructure. The incident raised serious concerns about the state of cybersecurity at the highest levels of government, showing that even national ministries are not immune to cyber threats (Maulida & K. Nistanto, 2024).

Hence, it is crucial for those with technical expertise to fully understand how technology operates. As previously explained, the lack of user awareness plays a significant role in the proliferation of cybercrime, particularly in scientific activities such as phishing. A Certain Perspective asserts that crimes can be understood as reflections of societal conditions, with criminal activities being the result of the functioning of organizations and communities.

The issue of cybercrime has been a global concern for a considerable amount of time. For instance, at the 10th United Nations Congress on the Prevention of Crime and the Treatment of Offenders held in Vienna, Austria, in 2000, discussions included crimes related to computer networks. Despite this global awareness, not all states have established specific laws addressing cybercrime, and the level of concern varies, with developed nations and some developing countries showing greater interest in tackling this issue (Rizal & Yani, 2016, p. 62).

Indonesia is currently in urgent need of cyber security due to the alarming rise in cybercrime. Unlike other forms of crime, addressing cybercrime requires comprehensive thinking and strategies to combat it effectively. Cybersecurity encompasses a collection of tools, policies, security concepts, protection measures, guidelines, risk management approaches, actions, training, best practices, assurances, and technologies utilized to safeguard the cyber environment, organizational assets, and users. Within cybersecurity, organizational assets and users include connected computing devices, personnel, infrastructure, applications, services, telecommunications systems, and the entirety of information transmitted and/or stored within the virtual environment (Ardiyanti, 2014).

Cybersecurity is further defined as all mechanisms implemented to safeguard and minimize disruptions to the confidentiality, integrity, and availability of information. These mechanisms must protect information from both physical and cyber-attacks. Cybersecurity is an effort to shield information from cyber-attacks, and its fundamental elements include:

1. Security policy documents serve as standard references for conducting all processes related to information security.
2. Information infrastructure comprises the media essential for information operation continuity, encompassing hardware and software such as routers, switches, servers, operating systems, databases, and websites.
3. Perimeter Defense functions as defense components within information infrastructure, including IDS, IPS, and firewalls.

4. Network Monitoring Systems monitor the suitability, utilization, and performance of information infrastructure.
5. System Information and Event Management monitors various network events, including security-related incidents.
6. Network Security Assessment is a cybersecurity element serving as a control mechanism and providing a measurement of information security levels.
7. Human resources and security awareness relate to human resources and their awareness of information security (Ardiyanti, 2014, p. 19).

In addition to cybersecurity, the continuity of information operations also depends on physical security, which pertains to all physical elements such as data center buildings, disaster recovery systems, and transmission media.

To address national interests, the Ministry of Defense (MoD) must comprehend, analyze, evaluate, forecast, and prepare measures to counter potential cyber threats that pose risks to the country's defense. The nature of threats has evolved due to technological advancements, transitioning from conventional to virtual and asymmetrical forms. Despite being virtual, these threats are real and can have tangible impacts. They may originate internally or externally, displaying various modes and motives, often being destructive while remaining oblivious to existing laws. This disparity highlights the potential for minorities to overcome majorities (Rizal & Yani, 2016, p. 72)

In the era of globalization, the delivery of public services is heavily reliant on the availability, integrity, and confidentiality of information within cyberspace. Recognizing that cyber-attacks can directly impact national defense, it is imperative to acknowledge that cybersecurity is not solely a matter of technical computer security. Instead, it encompasses ideological, political, economic, social, cultural aspects, and is intricately linked with national security.

5.2 National Identity

The identity of every individual is shaped by their living environment, where acculturation naturally occurs, giving rise to distinctive traits or unique characteristics within societal norms. Identity is defined as a special characteristic or condition; in anthropology, it refers to unique qualities that describe and resonate with personal self-awareness, one's own group, community, and nation. Identity extends beyond individuals to encompass groups as well (Rahayu, 2021).

Identity encompasses values, norms, and symbolic expressions as social bonds aimed at fostering solidarity and social cohesion to confront external forces, becoming symbolic justifications for actions in the past, present, and future. Meanwhile, 'national' pertains to one's own nation or encompasses the nation itself. National identity serves as a framework for delineating culture, often encapsulated within bounded and essentialized constructs of 'being'. This notion of 'being' is intricately linked to the concept of 'belonging', particularly within the context of citizenship. For example, the status of Black identity in relation to belonging in the North (Australia, US, UK, and Europe) often results in a mutual exclusivity between being Black and being English (Tolia-Kelly, 2009).

Indonesian national identity forms the core essence shaping the nation, embracing diverse ethnic groups, religions, the Indonesian language, national culture, archipelagic territory, and the Pancasila ideology. The inseparability of national identity from nationalism underscores its integral connection to the nation's essence.

The urgency of legal consciousness within culture and identity for the 2045 Golden Generation is paramount, as it correlates with endeavors to cultivate a superior legal culture. This notion resonates with the insights of Berger & Luckmann, who underscore that the

formation of individual identity is deeply intertwined with society's historical trajectory from its inception, embodying both social and cultural dimensions. The identified gap in this analysis underscores the necessity of the forthcoming research. It is anticipated that the 2045 Golden Generation will augment their legal knowledge, comprehension, and awareness, fostering a milieu of social order in community life (Berger & Luckmann, 1990).

National identities remain strong and are promoted within the education system, exemplified by Indonesia's Pancasila (Five Principles). However, they are also challenged by the strength and persistence of local affiliations, languages, and ethnic ties, which sometimes transcend national borders. Linguistic diversity is a prominent feature of several systems; for instance, Indonesia alone boasts 300 languages, including the national language Bahasa, spoken by 200 million as their second language (Welch, 2023).

In an endeavor to uphold the sovereignty and interests of the nation, the younger generation can engage in preserving local culture and values, which form the identity of their nation. They will prioritize the preservation of cultural heritage, traditions, language, and customs, which constitute an essential part of the nation's wealth. Through their roles and responsibilities in safeguarding the nation's sovereignty and interests, the younger generation can contribute to efforts aimed at enhancing social welfare. They can participate in social development programs, such as improving access to education, healthcare, housing, and poverty alleviation, which have a positive impact on society as a whole and elevate the nation's achievements and success. With the awareness and commitment of the younger generation to maintaining sovereignty and defending the homeland, there are several defining characteristics, including a profound concern for the homeland (Fahrezi et al., 2023; Santoso et al., 2023).

5.3 Development of Sustainable Human Resources

Human resources serve as the backbone of organizations and institutions, including educational institutions. Therefore, business management or human resource management plays a crucial role in organizations, particularly those operating in the service sector. This is because human resources are directly involved in the quality of service received by consumers. The effectiveness of human resource management is said to have the greatest impact compared to the management of other resources. If human resources are not managed properly, the expected effectiveness will not be achieved.

Indonesia, among the emerging nations, is anticipated to experience significant economic growth. Projections suggest that Indonesia's economic progress will play a leading role in global economic trends by 2025, positioning the country to emerge as a major industrial player by 2045 (Rokhman et al., 2014, p. 1161).

To respond to those challenges, teachers bear direct responsibility for instilling educational values in their students. The quality of educational services can be directly recognized and reflected in the individuality of each student. This service product is indirectly perceived by the legitimate guardians of the students. More than half a century has passed since the establishment of educational institutions in the year educational institutions emerged like mushrooms nationwide. In the public perception, this reality is important for implementing the government's proposal for "mandatory 12 years of education." However, from the perspective of educational institutions, this poses challenges. This is because, to ensure their survival, educational institutions need to offer unique advantages both quantitatively and qualitatively, including choices of higher education programs.

From an educational perspective, young generations have the opportunity to actively participate in youth organizations, social movements, or other community groups dedicated

to advancing and safeguarding national sovereignty and interests. This involvement can take the form of engaging in organizational activities, advocating for causes, participating in campaigns, or undertaking other actions aligned with these goals (Fahrezi et al., 2023, p. 400).

Moreover, educational initiatives can play a crucial role in implementing these objectives by fostering the potential and skills of young people. Such programs may encompass leadership training, entrepreneurship development, technical skill-building, or other competencies necessary for addressing the challenges associated with safeguarding national sovereignty and interests. Through comprehensive development efforts, young individuals can enhance their effectiveness in contributing to various fields of relevance.

Additionally, the democratic process offers avenues for young generations to participate, including general elections, youth elections, or contests within youth organizations. Through active engagement in these electoral processes, young people can exercise their right to choose and support leaders who are dedicated to upholding national sovereignty and interests.

Belladonna et al. discovered an important insight: Creating a golden generation in 2045 also necessitates an understanding of health. Through interviews with informants, it was revealed that comprehending the health perspective of students serves as an endeavor to elucidate every thought and action, thereby encouraging students to engage in positive endeavors. In accordance with these findings, several social and educational issues aimed at fostering sustainability include the imperative to educate students on the ability to maintain health in our increasingly complex world. Consequently, providing an understanding of health will fortify a healthy Indonesian national identity in behavior and ensure the provision and protection of citizens' basic needs (Belladonna, Hidayah, & Tripuspita, 2023, p. 878).

Changes in thinking will result in strategic choices and life strategies. To address the challenges of the 2045 Golden Generation, the younger generation must be prepared with all their abilities and competencies to be sensitive to the obstacles towards Indonesia's 2045 Golden Generation. When fundamental compositions are obtained from various activities and when the younger generation has legal awareness and a sense of Indonesian identity, they will contribute honest work for the existence of Indonesia's golden age in 2045.

Research by Belladonna et.al suggests that a law-abiding Golden Generation is a reality that must be pursued by Indonesian society, considering the strong influence of globalization and its positive and negative impacts on the Indonesian nation. The strategy to enhance the Golden Generation in response to the challenges of the 2045 Golden Generation is to increase morality and creativity in the digital era through Civic Education Learning that teaches creativity in the digital era, thus creating a culture of legal awareness. (2) Enhancing a law-abiding Golden Generation is also done by strengthening the nation's identity, through various perspectives in terms of law, entrepreneurship, and health, and realizing a law-abiding, creative, and planned Golden Generation by 2045 (Belladonna et al., 2023).

6. Conclusion

In summary, the 21st century demands a reassessment of national defense strategies, shifting beyond traditional warfare to address contemporary challenges, particularly in the digital realm. The increasing prevalence of cyber threats underscores the necessity for robust defense mechanisms and strategic preparedness in digital security.

This research highlights the critical role of digital security and public privacy in reinforcing national identity, as well as the potential of online religious engagement to

enhance unity and solidarity through virtual interactions. Additionally, fostering legal awareness and integrating local wisdom into educational and digital media frameworks are crucial for shaping national identity and culture. The development of human resources, supported by quality education and healthcare, remains a key focus for ensuring resilience and advancing national capabilities in the modern era.

This research is limited by the scope of available data and the rapidly changing digital landscape, which may not be fully captured. The study focuses primarily on digital aspects, potentially overlooking other critical dimensions of national resilience. Future research should explore the relationship between digital security and other aspects of national resilience, including social and political stability. Comparative studies across different countries and contexts would provide a broader understanding of digital resilience strategies. Expanding the analysis to include social and economic dimensions is also recommended.

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