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Defense Budget Gaps and Legal Implications of Alternative Financing in Indonesia: A Legal Reform Perspective

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Abstract

This paper examines the critical defense budget gap in Indonesia, which has become a pressing issue over the past decade. With global challenges, particularly the escalating wars in the Middle East, Indonesia faces growing security concerns that necessitate a stronger defense program. However, the country's defense budget allocation, ranging from 0.5 to 0.9 percent of GDP, remains insufficient to meet the required defense expenditures. Using the Autoregressive Integrated Moving Average (ARIMA) approach, we predict future budget availability and compare it with the projected defense needs, revealing a significant gap. To address this, the paper explores alternative financing mechanisms, such as optimizing military assets, enhancing the defense industry, leveraging

Public-Private Partnerships (PPP), and integrating these strategies. The urgency of addressing this funding shortfall is heightened by Indonesia's need for robust defense capabilities in an increasingly unstable geopolitical environment. This study's novelty lies in analyzing the legal implications of these alternative financing options, an area that has received limited attention in defense policy discourse. It critically examines the legal challenges posed by these financing mechanisms, particularly in relation to Indonesia's existing laws, including Law No. 17 of 2003 on State Finances, Law No. 3 of 2002 on National Defense, and various regulations governing defense industry and national security. The paper's contribution lies in offering a comprehensive legal analysis of alternative financing in Indonesia's defense sector, proposing necessary legal reforms to facilitate these strategies. By providing policy recommendations, this study aims to inform lawmakers, defense planners, and legal scholars about the complexities and potential solutions to closing Indonesia's defense budget gap while ensuring compliance with national legal frameworks.

Keywords *Defense Budget, Alternative Financing, Defense Industry, Legal Implications, Legal Reform*

Introduction

Studies on defense budgets, alternative financing, and their legal implications in the defense sector have attracted the attention of academics, economists, and legal practitioners in various countries, especially amid global geopolitical uncertainty. In the midst of global political instability and increasing security threats, many countries, including Indonesia, face major challenges in maintaining national sovereignty and security. Various geopolitical conflicts, great power competition, and the dynamics of the Asia-Pacific region have triggered an increase in military budgets globally. A report by the Stockholm International Peace Research Institute, in 2023 noted that global military spending has reached a record high of $2.4 trillion. This shows an increasing trend in defense spending in many countries to deal with evolving threats.[1]

The US, China, and Russia are the three largest countries with significant defense spending. This increase in spending is mainly triggered by the ongoing conflict in Ukraine as well as escalating geopolitical tensions in Asia, Oceania, and the Middle East.[2] All major geographic regions saw an increase in military spending, with the biggest spikes seen in Europe and Asia. This phenomenon underscores the need for countries to maintain their military power in the face of increasing global uncertainty.

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1 SIPRI, *SIPRI Military Expenditure Database*, ed. SIPRI (Stockholm: SIPRI, 2023), https://www.sipri.org/databases/milex.

2 The escalation of global defense spending has been driven by several key factors, primarily the ongoing conflict in Ukraine. Russia's invasion of Ukraine has prompted European nations and others worldwide to increase military budgets as they reassess their defense needs and work to modernize their armed forces. The war has also heightened global security concerns and the proliferation of weapons, pushing countries to bolster their defense expenditures. In Asia, geopolitical tensions, especially between the US and China, have further fueled defense spending. China's efforts to modernize its military, particularly in preparation for potential conflicts such as a Taiwan crisis, are major drivers of its increased defense budget. Meanwhile, the United States is also increasing its defense allocation to maintain strategic advantages in Asia, especially in response to China's growing influence in the region. Moreover, regional conflicts in the Middle East and Oceania add to the global rise in defense expenditures. These areas are facing persistent security challenges, prompting nations to allocate more resources to ensure stability and address evolving threats. In summary, a combination of global and regional tensions, especially in Europe and Asia, has resulted in significant increases in defense spending across various parts of the world. *See* James, Andrew, and Thomas Teichler. "Defence and security: new issues and impacts." *Foresight* 16, no. 2 (2014): 165-175; Aries, Hannah, Bastian Giegerich, and Tim Lawrenson. "The Guns of Europe: Defence-industrial Challenges in a Time of War." In *Survival: June-July 2023*. (London: Routledge, 2023), pp. 7-23; Tian, Nan, et al. "Developments in Military Expenditure and the Effects of the War in Ukraine." *Defence and Peace Economics* 34, no. 5 (2023): 547-562; Momoh, Zekeri. "The implications of increasing military spending on human security: a global perspective." *JANUS. NET e-journal of International Relations.* 15 (2024): 120-132; Feryna, Jan, and Libor Kutěj. "Implications for China from the War in Ukraine: Comparison of the Western and Taiwanese Views." *Univerzita Obrany. Ustav Strategickych Studii. Obrana a Strategie* 2023, no. 2 (2023): 23-38.

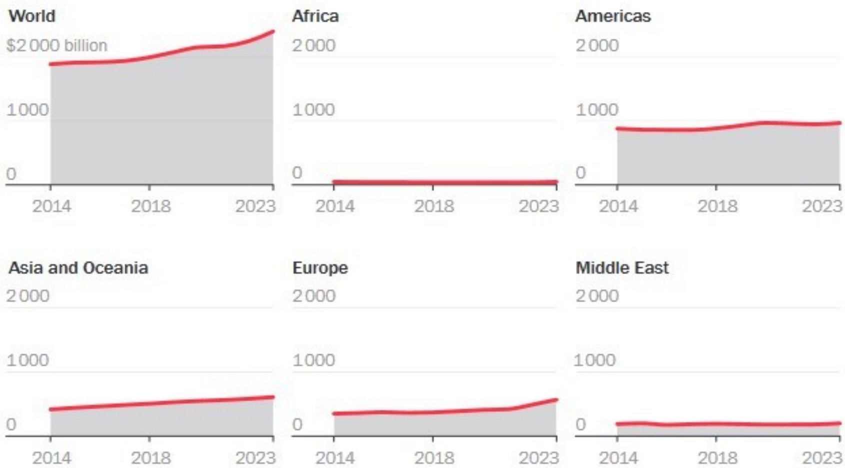

FIGURE 1. Military Expenditure by Region 2014-23
Source: Sipri, 2024

Domestically, Indonesia faces similar challenges. As a country with a large geostrategic area, Indonesia has a great need to strengthen its armed forces to maintain internal and external stability. However, despite its importance, Indonesia's defense budget is still relatively low when compared to the size of the area and the complexity of the security challenges it faces. Moreover, technology and the industrial revolution that continues to advance and develop, have changed the battlefield not only on land, sea, and air, but also in space and cyberspace by using artificial intelligence or AI technology.[3]

Data from the Ministry of Finance states that Indonesia's defense budget for 2023 is only Rp134 trillion, or around 0.8% of Gross Domestic Product (GDP). Although Indonesia's defense budget has increased every year over the past decade, in general its defense budget allocation is only around 0.5% to 0.9% of GDP, meaning that it is not even 1% far below the minimum standard recommended by various international organizations, which is about 2% of GDP.[4]

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3 David H. Ucko and Thomas A. Marks, *Crafting Strategy for Irregular Warfare: A Framework for Analysis and Action*. (Washington DC: National Defense University Press, 2022).

4 SIPRI, *SIPRI Military Expenditure Database*.

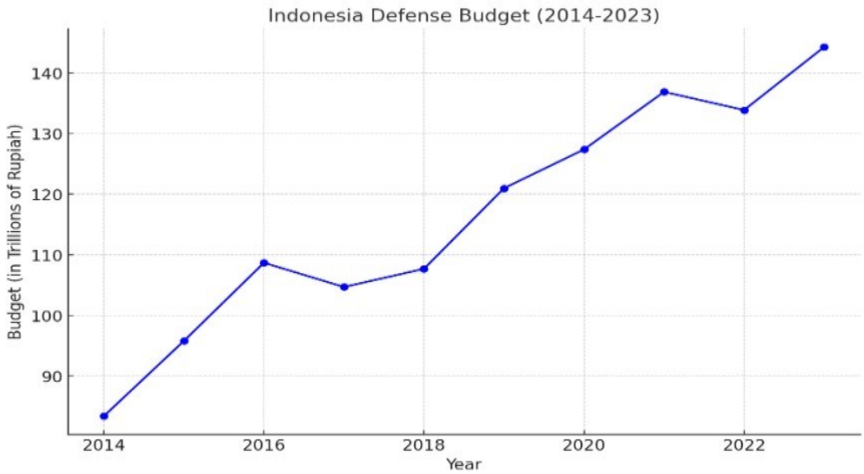

FIGURE 2. Indonesia Defense Budget (2014-2023)
Source: Indonesia Finance Ministry, 2024

This ratio is relatively low compared to neighboring countries in Southeast Asia such as Singapore, which allocate about 3% of its GDP to the defense sector. This low budget creates a big challenge for efforts to modernize the main equipment of the weapon system (*Alutsista*), develop defense technology, and improve the welfare of soldiers. This low budget is not in line with the current conditions, where defense technology continues to change rapidly. Regulation of the Minister of Defense Number 12 of 2020 concerning the Policy for the Implementation of State Defense for 2020-2024 explains that the Industrial Revolution 4.0 has changed the dynamics of the increasingly sophisticated battlefield. In line with that, Presidential Regulation (Perpres) Number 8 of 2021 stipulates that Indonesia's military defense posture must be adjusted to face the expansion of the war dimension due to the Industrial Revolution 4.0. This includes anticipating changes in the characteristics of modern warfare which is now increasingly based on information network connectivity or Network Centric Warfare (NCW).[5] Proportional budget allocation in accordance with defense needs will help build effective defense capabilities and be able to provide an antidote effect. In addition, an adequate defense budget also contributes to the stability of the country, which further encourages the

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[5] Gindarsah, Iis, et al. *Dinamika Persenjataan Global dan Proyeksi Pembangunan Pertahanan Indonesia 2045*. (Jakarta: Laboratorium Indonesia 2045, 2021.

smooth development of national development in the economic and welfare fields of the community.[6]

Faced with these limitations, the Indonesian government must look for financing alternatives by involving third parties, either through foreign loans, defense cooperation with other countries, or strategic partnerships with the private sector. This alternative financing is a funding mechanism outside of conventional sources such as the government budget/state budget to fund various projects.[7] The goal is to overcome the government's budget limitations and encourage the participation of the private sector, financial institutions, or investors to support the development of strategic projects with mutually beneficial schemes. However, the use of this alternative financing scheme is inseparable from existing legal challenges. Every project requires compliance with existing regulations, including Presidential Regulations, ministerial regulations, and related policies. In addition, the protection of state interests and transparency in the implementation of projects are also the main concerns. Contracts in alternative financing schemes must be carefully designed to avoid potential conflicts and ensure that risk sharing between the government and the private sector is carried out fairly and evenly.[8]

Normatively, budget policies and defense financing in Indonesia are regulated in several regulations. Article 30 of the 1945 Constitution outlines that the country's defense and security are the collective responsibility of the government and society. Law Number 17 of 2003

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6 Sloan, Elinor. *Military Transformation and Modern Warfare: A Reference Handbook*. (New York: Bloomsbury Publishing USA, 2008); Wardhana, Muhammad Andra, and Dwi Soediantono. "Analisis Strategi Pemberdayaan Industri Pertahanan Nasional dalam Mendukung Terwujudnya Minimum Essential Force." *Journal of Industrial Engineering & Management Research* 3, no. 5 (2022): 32-38; Michael Evans, "American Defence Policy and the Challenge of Austerity - Some Implications for Southeast Asia," *Asean Economic Bulletin* 30, no. 2 (2013): 167-178.

7 Artiningsih, Artiningsih, et al. "Skema pembiayaan pembangunan infrastruktur non-konvensional di Kota Semarang." *Jurnal Riptek* 13, no. 2 (2019): 92-100.

8 Paramita, Aulia Annisa, and Nurul Dwi Purwanti. "The Role of The Ministry of National Development Planning of The Republic of Indonesia in Public-Private Partnership." *Journal of Infrastructure Policy and Management (JIPM)* 6, no. 2 (2023): 103-116.

concerning State Finance provides a framework for managing state finances, including the regulation of the defense budget.

TABLE 1. Regulation of Defence and Financing of Indonesian Armed Forces

Laws and Regulations	Concerning
Undang-Undang Nomor 17 Tahun 2003 (Law Number 17 of 2003)	*Keuangan Negara* (State Finance)
Undang-Undang Nomor 3 Tahun 2002 (Law Number 3 of 2002)	*Pertahanan Negara* (National Defense)
Undang-Undang Nomor 34 Tahun 2004 (Law Number 34 of 2004)	*Tentara Nasional Indonesia* (the Indonesian National Army)
Undang-Undang Nomor 23 Tahun 2019 (Law Number 23 of 2019)	*Pengelolaan Sumber Daya Nasional untuk Pertahanan Negara* (Management of National Resources for National Defense)
Undang-Undang No. 16 Tahun 2012 (Law no. 16 of 2012)	*Industri Pertahanan* (Defense Industry)
Peraturan Menteri Pertahanan Nomor 28 Tahun 2016 (Regulation of the Minister of Defense Number 28 of 2016)	*Sistem Program dan Anggaran Pertahanan Negara* (the State Defense Program and Budget System)
Peraturan Pemerintah Nomor 141 Tahun 2015 (Government Regulation Number 141 of 2015)	*Pengelolaan Industri Pertahanan* (Management of Defense Industry)
Peraturan Menteri Pertahanan Nomor 12 Tahun 2020 (Regulation of the Minister of Defense Number 12 of 2020)	*Kebijakan Penyelenggaraan Pertahanan Negara Tahun 2020-2024* (the Implementation of National Defense Policy for 2020-2024)

Law No. 16 of 2012 concerning the Defense Industry emphasizes the importance of independence in providing defense needs through the development of the domestic defense industry. This law mandates reducing dependence on defense equipment imports and increasing local industry participation, both through state-owned enterprises, the private sector, and international cooperation. However, the development of the domestic defense industry is also constrained by budget limitations, which causes the government to look for alternative financing to support the procurement and modernization of defense equipment.

The use of this alternative financing scheme must remain in line with the principle of independence stipulated in the Defense Industry Law, while ensuring that national interests are not compromised by financial entanglements with foreign parties. Therefore, it is important to examine whether the use of alternative financing actually strengthens or even damages the national strategic goal of building an independent and competitive defense industry. A study by Efendi showed that the trade reward mechanism, as regulated in Government Regulation Number 76 of 2014 concerning the Trade Return Mechanism in the Procurement of Defense and Security Equipment from Abroad, is one way to maximize the value of foreign defense equipment procurement.[9] However, the involvement of foreign entities in this financing has the potential to increase dependence and affect the sovereignty of the country's strategic decision-making. Therefore, it is important to have a strong legal framework to regulate and protect the interests of the state in the use of alternative financing.

This study aims to analyze the defense budget gap in Indonesia and examine the legal implications of the use of alternative financing in the context of defense. By exploring relevant budgetary data, financing policies, and regulations, this study is expected to provide a

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9 The trade reward mechanism, as outlined in Government Regulation No. 76 of 2014, facilitates a reciprocal trade arrangement for the procurement of defense and security equipment from abroad. This regulation enables Indonesia to exchange its agricultural products, in which the country holds a competitive advantage, for foreign defense equipment. This mechanism is particularly advantageous as it allows Indonesia to leverage its strength in the global agricultural market to acquire defense equipment that cannot be produced domestically. By utilizing its agricultural exports, Indonesia can optimize the procurement of essential defense equipment, ensuring economic benefits both in the short and long term. Moreover, the mechanism aligns with Indonesia's strategic objective of maintaining a strong national defense system, ensuring the availability of critical defense equipment through international trade and cooperation. Thus, this approach not only enhances defense capabilities but also contributes to the country's economic and strategic interests. *See* Arifin, Zainal, Agus Suman, and Moh Khusaini. "Countertrade Mechanism of Global Arms Trade: Case Study of Indonesia." *International Journal of Financial Research* 11, no. 1 (2020): 307-317; Arifin, Zainal, Agus Suman, and Moh Khusaini. "Optimization of Selected Agricultural Export Commodities to Improve Indonesia's Weaponry Countertrade." *International Journal of Criminology and Sociology* 10 (2021): 579-588.

comprehensive understanding of how Indonesia can maintain national security without sacrificing economic and legal sovereignty.

This study uses a mix method approach to get a comprehensive overview of the defense budget gap and the legal implications of using alternative financing. This approach combines the power of quantitative data that allows analysis of budgetary aspects and qualitative data to uncover legal views, interpretations, and influences from credible sources. According to Creswell,[10] the mix method allows researchers to combine the strengths of both methods so that they can provide more in-depth and valid results. The quantitative approach will focus on the collection and analysis of statistical data on the defense budget. The quantitative data used in this study is state revenue obtained from the Ministry of Finance from 1983 to 2022 (quarterly data). By analyzing these data, this study will predict state revenue until 2045 as the Golden Year of Indonesia.

Meanwhile, a qualitative approach will be used to determine the amount of defense budget needs in facing the current global situation and challenges. A qualitative approach is also used to explore legal and policy aspects related to alternative financing. This will be done by conducting in-depth interviews with credible sources, in this case the Minister of Defense of the Republic of Indonesia for the 2019-2024 period. In addition, this study will also conduct a literature review of various regulations, laws, government regulations, and relevant legal journals to strengthen the analysis from the legal side.

In the initial stage, the research will begin with the collection of quantitative data to get an overview of the figures related to the defense budget and potential existing gaps. The analysis used by forcasting fiscal capacity in the next 20 years. The approach used is the Autoregressive Integrated Moving Average (ARIMA). Then, qualitative data collection will be carried out through in-depth interviews and literature reviews. The analysis used is thematic analysis.

The quantitative analysis model starts from the idea of government budget limits that total government expenditure (Exp) must be adequately financed by total government revenue (Rev) which is a variable of fiscal capacity. If the Rev is not enough to cover the Exp,

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10 Creswell, John W., and Cheryl N. Poth. *Qualitative Inquiry and Research Design: Choosing among five approaches.* (London: Sage Publications, 2016).

the financing option available is debt, so the interest payment (IRP) in the next period. The overall fiscal balance (deficit or surplus) is the difference between Rev and Exp:

$$OB = Rev - Exp \qquad (1)$$

When the IRP is excluded from total government spending, the main fiscal balance (PB) is obtained:

$$PB = Rev - (Exp - IRP) \qquad (2a)$$

Also,

$$OB = PB - IRP \qquad (2b)$$

Departing from the theoretical formulation above, the empirical formula in this study will follow the theoretical model, where the fiscal gap is the difference between the fiscal capacity obtained from the prediction of state revenue and the need for financing expenditure of Indonesia's defense strategy obtained through a qualitative approach, namely through in-depth interviews to credible sources that the Minister of Defense of the Republic of Indonesia has. The calculation formula is as follows:

Quantitative Approach:
Autoregressive Integrated Moving Average .... (3)

$$Cf = KpF - KbF$$

Quantitative Approach:
Process Tracing

Note
CF : *Celah Fiskal* (Fiscal Gap)
KpF : *Kapasitas Fiskal* (Fiscal Capacity)
KbF : *Kebutuhan Fiskal* (Fiscal Needs)

In the process of estimating KpF projections for the next 20 years, this study uses time series data analysis. This is because all variables used to calculate KpF have been absorbed into the model. The ARIMA estimation model used in this study to calculate KpF can be seen in equations (4) and (5) below:

$Y_t = \mu + Y_{t-1} + \beta_1 u_{t-1} + \varepsilon_t$ .... (4)

Where $E(u_t) = 0$, $E(u_t^2) = \sigma^2$, $E(u_t u_s) = 0$, $t \neq s$ .... (5)

Y_{t-1} = KpF value in the previous period

u_{t-1} = error term value of the previous period

ε_t = the assumed term error is independent and identically distributed (IID)

To ensure the validity of the data, the author employs two distinct methods. The first method is triangulation, a technique that involves cross-checking data by using alternative sources or approaches to verify its accuracy or serve as a comparison.[11] This process enhances the credibility of the findings by comparing different perspectives. The second method, perseverance observation, focuses on identifying and examining specific characteristics and elements within a situation that are most relevant to the issue at hand. By concentrating on these pertinent aspects in great detail, this method ensures a thorough and focused analysis, thereby reinforcing the validity of the data.

Result and Discussion

The forecasting process in this study uses a univariate time series analysis regression model, namely ARIMA by following the model (5). As previously explained, the variable examined in this study is the total state income of the state. Descriptive statistics for these variables can be seen in Table 2 below.

TABLE 2. Descriptive Statistics of Research Variables

Variable	Obs	Mean	Std. dev.	Min	Max
Total State Income	157	162,937.40	178,338.00	1,127.70	648,227.80

[11] Lexy J. Moleong. *Metodologi Penelitian Kualitatif.* (Bandung: PT Remaja Rosdakarya, 2018).

The total observation points used in this study are 157 observation points starting from the first quarter of 1983 to the first quarter of 2022. The average total state revenue per quarter during the observation period was IDR 162,937.4 billion with a maximum value of IDR 648,227.8 billion and a minimum value of IDR 1,127.7 billion. Meanwhile, the standard deviation value is IDR 178,338 billion.

Based on this data, we carried out several stages of estimation procedures using the ARIMA model. The first step is to conduct a stationery test through two tests, namely the Correlogram visual test and the root unit test. The type of root test unit used is the Dickey-Fuller Augmented test. Both the Correlogram visual test and the root unit test showed that the data was not stationary at the level level, but the data was stationary at the first difference level. Therefore, we estimate the ARIMA model using first difference data.

We used Akaike's information criterion and Bayesian information criterion approaches to obtain orders that are estimated to affect changes in total state revenue. Based on these experiments, the best combination of ARIMA orders that can be used is ARIMA (1,1,1). The results of processing the ARIMA model with the help of STATA 17 tools were obtained as seen in Table 3.

TABEL 3. Data Processing Results Using the ARIMA Model

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ARIMA regression

Sample: 1983q2 thru 2022q1                      Number of obs     =        156
                                                Wald chi2(2)      =   47337.59
Log likelihood = -1898.208                      Prob > chi2       =     0.0000
```

D.totrev	Coefficient	OPG std. err.	z	P>|z|	[95% conf.	interval]
totrev						
_cons	3584.732	4260.763	0.84	0.400	-4766.211	11935.67
ARMA						
ar L1.	-.9974842	.006051	-164.85	0.000	-1.009344	-.9856245
ma L1.	.8654761	.0417158	20.75	0.000	.7837146	.9472375
/sigma	46186.27	1763.88	26.18	0.000	42729.13	49643.41

Note: The test of the variance against zero is one sided, and the two-sided confidence interval is truncated at zero.

Based on the ARIMA model with the help of STATA 17 data processing tools, the estimated total state revenue in 2025 to 2045 is seen in Table 4 below.

TABLE 4. Estimated Total State Revenue for 2025 – 2045 Using the ARIMA Model (1,1,1)

Year	Estimated Total State Revenue (billion Rp)	State Revenue Growth (%)
2025	2,457,961.50	-
2026	2,515,320.40	2.33
2027	2,572,679.30	2.28
2028	2,630,038.10	2.23
2029	2,687,397.00	2.18
2030	2,744,755.70	2.13
2031	2,802,114.40	2.09
2032	2,859,473.10	2.05
2033	2,916,831.70	2.01
2034	2,974,190.40	1.97
2035	3,031,549.10	1.93
2036	3,088,907.60	1.89
2037	3,146,266.30	1.86
2038	3,203,624.70	1.82
2039	3,260,983.10	1.79
2040	3,318,341.80	1.76
2041	3,375,700.20	1.73
2042	3,433,058.50	1.70
2043	3,490,416.90	1.67
2044	3,547,775.30	1.64
2045	3,605,133.70	1.62

Based on the ARIMA model (1,1,1), it is estimated that the total state revenue in 2045 will be IDR 3,605.13 trillion. This estimated total revenue data will be compared with the total defense budget needs until 2045 so that it is known how much the gap between fiscal capacity and defense budget needs is. The amount of defense budget needs was obtained through an in-depth interview with the Minister of Defense of the Republic of Indonesia.

Based on a qualitative approach, both through literature studies and interviews with informants, it is known that the ideal defense budget needs are Rp1,700 trillion. This need is targeted to be met in five years so that a budget of Rp340 trillion must be available per year. From the results of the process tracing of the defense budget allocation contained in the 2023 state budget, a figure of IDR 52.4 trillion was obtained, resulting in a very large fiscal gap of around IDR 287.6 trillion for 2023. This fiscal gap will continue to occur and get bigger if the fulfillment of this ideal military budget needs only relies on the current state budget posture.

If we follow the results of the estimated calculation of state revenue using the ARIMA time series analysis model as in the previous Table 4, it is estimated that the average annual growth of state revenue is only around 1.93 percent. With such a large growth rate, it is very impossible to meet the needs of the defense budget only relying on state budget revenues as the revenue trend has been so far. Therefore, out-of-the-box measures are needed outside the state budget to meet the needs of the ideal defense budget.

Based on the results of in-depth interviews with informants, four alternative financing strategies have been identified to bridge the fiscal gap between the available budget and the defense budget needs. The first strategy emphasizes the optimization of the defense industry. This approach seeks to enhance the domestic defense production sector, improving its efficiency and capacity to meet the country's defense requirements, thereby reducing reliance on external sources. The second strategy focuses on the optimization of defense assets. By better managing and utilizing existing defense resources, this strategy aims to maximize their value, ensuring that available assets contribute more effectively to the nation's defense goals. The third strategy involves optimizing the participation of third parties, particularly the private sector. Increased private sector involvement is seen as a crucial factor in addressing the fiscal shortfall, as it can bring additional financial resources and innovative solutions to the defense sector. Finally, the integration of these strategies—optimizing the defense industry, managing defense assets more effectively, and encouraging private sector participation—represents a comprehensive approach. This combined strategy offers a holistic solution to financing defense needs, aiming to create a sustainable and balanced framework for securing the nation's defense priorities in the long term.

Alternative Financing in the Defense Sector

Optimizing the defense industry in the context of alternative financing is an important strategy to reduce dependence on procurement of defense equipment from abroad. This step not only helps reduce pressure on the state budget, but also plays a role in strengthening national capacity to produce strategic defense equipment. Within this framework, the government needs to make various optimization efforts in several aspects.

1. Optimization of Military assets

Optimizing Military (TNI) assets is the first step in alternative financing for the defense sector. This involves the use of assets belonging to the TNI, such as land, buildings, military facilities, and other property that is not directly used for operational activities. TNI assets are basically part of state property or are called BMN. Based on Article 1 paragraph 1 of Government Regulation Number 27 of 2014 concerning Management of State/Regional Property, BMN is all goods obtained through the APBN or other legal sources. This includes all TNI assets such as land, buildings and military equipment.[12]

Management of TNI assets is under the authority of the Minister of Defense, who is empowered by the Minister of Finance to manage all state-owned assets related to defense. The Minister of Defense is responsible for managing TNI assets spread throughout Indonesia. This management must be carried out based on the principles of legal certainty, transparency, efficiency and accountability, as well as providing optimal economic value for the country. Furthermore, Article

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[12] *See also* Sianipar, Pander Eripson, Afrizal Hendra, and Martinus Dwi Arjanto Widodo. "Efisiensi Manajemen Aset Negara: Strategi Meningkatkan Kesiapan Operasional TNI Angkatan Udara." *Indonesian Journal of Innovation Multidisipliner Research* 2, no. 3 (2024): 489-502; Mumpuni, Niken Wahyuning Retno, and Wahyu Adi Mudiparwanto. "Tinjauan Yuridis Mengenai Pengelolaan Barang Berupa Tanah Dan Bangunan Milik Negara di Lingkungan Tentara Nasional Indonesia Angkatan Darat (TNI AD)." *Jurnal Yuridis* 8, no. 1 (2021): 63-82.

27 in the same law explains the various forms of permitted use of State Property, namely:

a. *Rent*
   Rental of BMN to other parties with certain payments within a certain period.
b. *Borrow to Use*
   Borrowing BMN to other parties at no cost, usually for purposes that support government functions or public interests.
c. *Utilization Cooperation*
   Utilization of BMN through collaboration with third parties to increase efficiency and economic value of these assets.
d. *Build for Handover or Build for Handover*
   A cooperation scheme in which a third party builds a facility on state-owned land, operates it for a certain period of time, and then hands it back to the government.
e. *Cooperation in Providing Infrastructure*
   Collaboration with the private sector to provide infrastructure by optimizing the use of BMN, such as building public facilities that support state functions.

Based on Minister of Finance Regulation Number 54/PMK.06/2015 concerning Structuring the Use of State Property (BMN) within the Indonesian National Army (TNI), Article 5 regulates that the utilization of BMN within the TNI can only be carried out by the user of the goods (in this case the TNI) through collaboration with third parties. The third parties in question include various entities, namely: (i) Private: Companies or non-governmental business entities operating in various sectors. (ii) Regional Government: Government agencies at the provincial, city or district level. (iii) State-Owned Enterprises (BUMN): Companies owned by the state, such as PT Pertamina, PT PLN, and others. (iv) Regionally Owned Enterprises (BUMD): Companies owned by the regional government. (v) Other Legal Entities: Includes limited liability companies, cooperatives, foundations, and other entities that have legal entities. And (vi) State

Government Organizing Activities Support Unit: Unit that supports the implementation of government activities.[13]

This article provides a legal basis for the TNI to carry out productive and profitable cooperation with various parties, ensuring that state-owned assets are managed optimally to support defense sector financing.

2. Optimization of the Defense Industry

Apart from managing TNI assets, developing the national defense industry is another component that can be carried out in encouraging alternative defense financing. UU no. 16 of 2012 concerning the Defense Industry encourages the involvement of the national private sector in the development of the defense industry to accelerate independence and innovation in military technology. An independent and strong defense industry can reduce dependence on imported defense equipment and enable Indonesia to produce the necessary military equipment itself.

Basically, Indonesia has long had the ambition to develop an independent defense industry. In 2010, the Defense Industrial Policy Committee (KKIP) was formed to coordinate national policies regarding this industry. The government's commitment was then realized through Law no. 16 of 2012 concerning the Defense Industry, which aims to realize industrial independence, improve product quality and competitiveness, encourage technological innovation, and support national development.

The national defense industry includes state-owned companies and private companies that produce equipment and maintenance services for defense and security in Indonesia. Based on the 2018-2019 Defense Industry Directory, there are 41 business actors: 8 BUMN, Pindad (Persero), PAL Indonesia (Persero), Dirgantara Indonesia, Nusantara Turbine and Propulsion, LEN Industri (Persero), Inti (Persero), Kodja Dock and Shipping Bahari (Persero), and Dahana (Persero), as well as 33 private companies.

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[13] *See* Purnomo, Edi. "Kewenangan Pengelolan Aset Negara Berdasarkan Undang-Undang Nasionalisasi oleh Tentara Nasional Indonesia". *Thesis.* (Surabaya: Universitas Muhammadiyah Surabaya, 2019).

The research results show that there are five companies that have great potential to increase optimal profits to cover the fiscal gap. These companies are PT. Pindad, PT. PAL Indonesia, PT. Dirgantara Indonesia/DI, PT. National Electronics Institute/LEN, and PT. Dahana. These five companies were chosen because they act as main guides (lead integrators) in Indonesia's strategic industrial ecosystem. In general, this company is also the main absorber of products from other strategic industries, both from private and government companies, which produce various components and materials. [14]

First: PT Pindad. PT Pindad is an Indonesian defense manufacturing company that was founded in 1808 and was acquired by the Indonesian government in 1950, then changed its name to Army Industry in 1962. As a state-owned company, PT Pindad has healthy financial performance, with its 2022 report showing revenue of IDR 6,439 trillion and net profit of IDR 101.68 billion. Other financial ratios, including the debt to asset ratio and inventory turnover, also show stable conditions. PT Pindad excels in the production of defense equipment, such as assault rifles, pistols, ammunition of various calibers, as well as special vehicles such as the Anoa and Komodo. Its products have led the TNI to win various international shooting competitions and are exported to various countries. With a strong reputation and performance, PT Pindad is considered one of the mainstay companies ready to fill the needs of the national defense budget.

Second, PT PAL Indonesia. This PT was founded in 1980 in Surabaya, is a company that specializes in shipbuilding and engineering, including military, commercial and offshore support vessels. PT PAL has the capability to produce various military vessels, such as patrol boats (FPB), fast missile boats (KCR), Landing Platform Dock (LPD) vessels, strategic sealift vessels (SSV), and Nagapasa class submarines. Apart from that, PT PAL is also capable of producing commercial vessels such as bulk vessels, containers and tankers, as well as vessels supporting offshore oil and gas operations.

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[14] *See also* Brahmana, Dedy Putra, et al. "Pengaruh Defense Cooperation Agreement Indonesia Dan Singapura Terhadap Lingkungan Strategis di Asia Tenggara dalam Perspektif Manajemen Pertahanan." *NUSANTARA: Jurnal Ilmu Pengetahuan Sosial* 10, no. 7 (2023): 3585-3596.

PT PAL is not only able to produce ships independently, but also collaborates with international companies such as Damen Schiede Naval Ship Building (Netherland) and Daewoo Shipbuilding & Marine Engineering (South Korea) to produce frigates and submarines. Domestically, PT PAL is responsible for the maintenance and repair of Indonesian Navy ships, including surface ships and submarines. In the international market, PT PAL has carried out promotions and participated in auctions for ship projects for navies in countries such as the Philippines and Malaysia. With experience and a solid project portfolio, PT PAL has great potential to reach global markets, both for countries, private companies and state-owned companies. PT PAL's business prospects look promising, both from the domestic and international markets.

Third, PT DI. PT Dirgantara Indonesia is a state-owned company that was founded in 1976 in Bandung and is the only aircraft manufacturer in Indonesia, even in Southeast Asia. PTDI plays an important role in meeting the needs of civil, military and special mission aviation in Indonesia. They have produced various types of aircraft, including the CN235 for civil and military transport, maritime aircraft, and coast guard aircraft. To date, PTDI has delivered nearly 400 aircraft to 50 operators throughout the world.

PTDI's superior products include the N219 (19 seat civil transport aircraft), CN235 (medium scale multipurpose transport aircraft), NC212i (military transport aircraft), and the Nurtanio Colibri light helicopter. PTDI's advantage lies in its integrated operational processes, from design to aircraft production. With the support of capacity, experience and global partnerships, PTDI has great potential in the aviation industry. Even though the majority of its products are used for domestic needs, PTDI has succeeded in marketing some of its products to international markets. Products such as the CN235 and transport helicopters have successfully reached the civilian market. With its capabilities, PTDI is expected to make a significant contribution in closing the fiscal gap in the defense sector.

Fourth, PT LEN. Has great potential in the national defense industry. As the holding company of the BUMN Defense Industry DEFEND ID, PT LEN focuses on C5ISR (Command, Control, Communication, Computers, Cyber, Intelligence, Surveillance, and

Reconnaissance) and has five subsidiaries that support its operations. Great opportunities are open for PT LEN in the domestic and international markets, especially in the fields of infrastructure, digitalization and defense. PT LEN can play an active role in national projects and meet the needs of advanced defense systems. In international markets, especially Asia and Africa, PT LEN has exported its products and established strategic collaborations. With its potential and capabilities, PT LEN needs to be optimized to help close the gap in Indonesia's defense budget.

Fifth, PT Dahana. This PT has very promising prospects and is worthy of being optimized to support Indonesia's defense budget needs. As a member of the Defense Industry BUMN Holding (DEFEND ID), Dahana operates in the strategic industry by providing integrated explosives services covering four business lines: Explosives Manufacturing, Drilling & Blasting, Related Services, and Defense Related. The services they offer are used in various sectors, such as mining, quarries, construction, oil and gas, to military operations. Dahana has been a pioneer in the blasting industry in Indonesia with a trusted reputation as a manufacturer of explosives and provider of comprehensive blasting services. This makes them able to meet all the needs of the blasting process stages in various industries. Dahana's operational area is spread across 15 provinces in Indonesia and has expanded the market by exporting their products to various countries such as Canada, Oman, Iran, Egypt, China, Qatar, Australia and ASEAN countries.

The 2022 annual report shows that PT Dahana posted a profit of IDR 260.70 billion, with the majority of revenue coming from non-defense businesses amounting to IDR 3.31 trillion. The capital to total activity ratio of 43.31 also shows a healthy financial condition and large growth potential. With broad market coverage, a reputation as a leading explosives manufacturer, and stable finances, Dahana has great opportunities to optimize in supporting the defense industry. This potential makes Dahana an important pillar in closing the gap in Indonesia's military budget. Dahana's optimization efforts can be focused on market expansion, increasing international collaboration, and developing high-quality defense products, so that it can contribute more to national defense needs.

These five industrial companies have great potential in boosting national defense financing, but without supporting adequate quality research and development budgets, the potential of these companies will be difficult to maximize. Strengthening research and development (R&D) is the main pillar in efforts to optimize the defense industry, especially in facing increasingly complex global challenges (Endro Tri Susdarwono, 2020). An advanced defense industry depends not only on production capabilities, but also on innovation resulting from continuous R&D activities. Strengthening R&D is the key to the independence of the national defense industry because it allows the development of defense technology in accordance with the country's strategic needs (Katarzyna Zysk, 2021).

Developed countries such as the United States and South Korea, have allocated significant budgets for R&D in the defense sector. This investment allows them not only to meet domestic defense equipment needs, but also to compete globally (Kogila Balakrishnan and Treesna Nadira Johar, 2023; Haripin, 2011). For comparison, in 2017, the proportion of R&D expenditure in GDP in the US was 2.8%, Germany 3.03%, China 2.12%, Japan 3.2%, South Korea and Israel each reached 4.5% (Gregova et al., 2020). In Indonesia, the budget allocation for R&D in the defense sector is still relatively small, in the last ten years the research budget only reached 0.003% - 0.015% of GDP (Gindarsah, 2021, Yanto, 2019). To optimize this potential, the government needs to increase budget allocations through alternative financing schemes, such as establishing public-private partnerships (PPP) and utilizing innovation funds from international financial institutions or private investors.

In addition, the legal framework supporting R&D must be strengthened. Article 43 of Law No. 16 of 2012 concerning the Defense Industry, emphasizes that the defense industry must provide at least 5% of net profits for research and development purposes. In this context, Indonesia is handing over R&D activities to the defense industry. According to research by Gindarsah, et al[15], handing over research

[15] Gindarsah, Iis, and Adhi Priamarizki. "Explaining Indonesia's Under-balancing: The Case of the Modernisation of the Air Force and the Navy." *Journal of Asian Security and International Affairs* 8, no. 3 (2021): 391-412; Gindarsah, et

activities to industry cannot be carried out optimally, because the conditions in the defense industry are still not ideal. In fact, the research budget carried out is no more than 3%. So, a special allocation is needed from the government through the APBN for R&D which can encourage the growth and development of innovation.

3. Optimizing Public-Private Partnerships (PPP)

Public-Private Partnerships (PPP) or partnerships between the government and the private sector are one of the strategic approaches for alternative financing in the defense sector. Through PPP, the government can encourage the private sector to be actively involved in developing infrastructure, technology and defense systems without having to completely depend on the state budget. This approach offers great potential in facing government budget constraints and can provide added value in the form of innovation, efficiency and expertise from the private sector.[16]

In Indonesia, Public-Private Partnership (PPP) is known as Government Cooperation with the private sector or with Business Entities (KPBU), as regulated in Presidential Regulation Number 38 of 2015 concerning Government Cooperation with Business Entities in Providing Infrastructure. PPPs involve government commitments to private parties to develop, plan and operate infrastructure projects. Apart from that, alternative financing for infrastructure provision is also carried out through the Government Non-Budget Investment Financing (PINA) mechanism. The PINA scheme complements the PPP scheme (PPP) by offering wider sources of financing.[17]

One successful example of government facilitation in infrastructure financing is the achievement of financial closing for the Waskita Toll Road toll road project, which involved the role of PT

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al. *Dinamika Persenjataan Global dan Proyeksi Pembangunan Pertahanan Indonesia 2045*.

16 Rostiyanti, S. F., and R. Z. Tamin. "Identification of challenges in public private partnership implementation for Indonesian toll road." *Proceedings of the First Makassar International Conference on Civil Engineering, March*. 2010; Rifai, Bahtiar. "Kendala Implementasi Ppp Kelistrikan dan Kebutuhan Perbaikan Kebijakan." *Jurnal Ekonomi Pembangunan LIPI* 24.1 (2016): 51-66.

17 Artiningsih et al., "Skema Pembiayaan Pembangunan Infrastruktur Non-Konvensional Di Kota Semarang."

Sarana Multi Infrastruktur (Persero) and PT Taspen (Persero) in equity financing. This project is expected to be able to connect cities on the island of Java in 2018. The success of this project is a real example and case study for the application of the PINA scheme in infrastructure financing. The Ministry of National Development Planning/Bappenas, which has been given a mandate by the President of the Republic of Indonesia, continues to facilitate the implementation of the PINA scheme for infrastructure and other non-infrastructure projects.[18]

In this context, the government can encourage the private sector to become more involved in the defense industry by creating fiscal incentives and more flexible regulations. Presidential Regulation no. 38 of 2015 concerning Government Cooperation with Business Entities can be a legal umbrella for the development of PPP schemes in the defense sector. This partnership will not only ease the budget burden, but also accelerate the transfer of technology and innovation needed by the domestic defense industry.[19]

4. Integrated Optimization of the Three Sectors

An integrated approach involving optimizing TNI assets, developing the national defense industry, and Public-Private Partnerships (PPP) is a comprehensive solution in alternative financing efforts for the defense sector. The combination of these three sectors can complement and support each other to produce a greater impact.

The following are several concrete steps for integrated optimization of the three sectors: *First*, Synergy in the Utilization of TNI Assets through PPP. Optimizing TNI assets, such as land and military facilities, can be done by collaborating with the private sector through a PPP scheme. For example, TNI-owned land that is not used for operations can be leased to private parties to build commercial or defense industrial facilities. Revenue from these rentals can be used to fund defense budget needs. Strategic TNI assets, such as air bases or military ports, can be used in collaboration with national defense

18 Annisa Paramita and Dwi Purwanti, "The Role of The Ministry of National Development Planning of The Republic of Indonesia in Public-Private Partnership."

19 Rifai, "Hinderence of Electricity Public Private Partnership (PPP) and Need of Policy Improvement."

companies to produce and maintain defense equipment. By utilizing TNI assets as a production base, operational costs can be reduced and efficiency can be increased.

Second, Defense Industry Integration with Public-Private Partnerships. National defense industries such as PT Pindad, PT PAL, PT DI, and others can expand production capacity through collaboration with the private sector in the PPP model. The government can provide fiscal stimulus and regulatory support to encourage private companies to participate in defense industry projects. For example, PT Pindad can collaborate with private companies to produce combat vehicles or weapons with the latest technology. This PPP scheme allows risk and cost sharing between the government and the private sector, as well as providing space for technology transfer and innovation in the production of defense equipment.

Legal Implications in the Use of Alternative Financing

The use of alternative financing in the defense sector, which includes optimizing the use of TNI assets, developing the defense industry, and optimizing the role of third parties such as PPP, presents a number of great benefits as explained in the previous sub-discussion. However, behind its benefits, the use of alternative financing has various legal implications that require special attention. The legal implication itself is a consequence or legal impact that arises from an action, event or decision. Legal implications can be in the form of rights, obligations, sanctions, or responsibilities arising from statutory regulations or other legal rules. This implication occurs because an action or situation has effects related to applicable legal norms or rules.[20]

This analysis will explain the juridical aspects of three areas (use of TNI assets, optimization of the defense industry, and optimization of Public-Private Partnerships) based on the principles of legal certainty, transparency and accountability, as well as state security and sovereignty.

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20 Peter Mahmud Marzuki, *Teori Hukum* (Jakarta: Kencana, 2020).

1. Legal Certainty

The management and use of TNI (Indonesian National Army) assets must be governed by principles of legal certainty, as outlined in relevant regulations. TNI assets, classified as state property (BMN), are subject to the provisions of Government Regulation No. 27 of 2014 concerning the Management of State/Regional Property and Law No. 1 of 2004 on State Treasury. These regulations emphasize that any optimization of TNI assets, such as leasing, joint use, or construction for use, must have a solid legal basis. The agreements for such optimizations must include key details such as the parties involved, the type and quantity of assets, the duration of the agreement, and the responsibilities regarding operational and maintenance costs. Articles 28-39 of the regulation stress the importance of formalizing these arrangements to avoid legal disputes, third-party ownership claims, or the misuse of state assets. Without a clear legal foundation, the management of TNI assets is susceptible to risks, including financial loss, for which the responsible parties may face administrative or criminal sanctions. Therefore, regulations like Law No. 34 of 2004 concerning the TNI are critical in defining the boundaries and mechanisms for the use of military assets for commercial purposes, ensuring that all actions comply with legal and operational standards.

The optimization of the defense industry is another crucial area that requires adherence to clear legal frameworks. The development of Indonesia's defense industry, particularly through collaborations with private and foreign entities, must align with the provisions of Law No. 16 of 2012 concerning the Defense Industry. This law sets the regulatory boundaries for foreign investment and technology transfer within the defense sector, ensuring that foreign involvement does not compromise national security or technological sovereignty. Legal certainty in this area is vital to protect the country's defense capabilities and prevent foreign entities from exerting undue control over sensitive technological advancements. By establishing clear regulations for these partnerships, Indonesia can balance the need for foreign expertise and investment with the protection of its strategic interests and intellectual property.

Public-private partnerships (PPP) also play a significant role in optimizing the defense sector, particularly in projects related to military infrastructure or the procurement of defense equipment. These partnerships require legal certainty to ensure that they function effectively and in compliance with established regulations. Presidential Regulation No. 38 of 2015, which governs government cooperation with business entities, provides a legal framework for PPP schemes, along with other regulations that guide the collaboration between the government and private sector. Such legal structures ensure that PPPs are transparent and aligned with both national and international standards, thereby protecting the country's fiscal sovereignty. However, while PPP models have proven successful in other countries, including South Korea and the United Kingdom, they are not without risks. Legal disputes, misaligned risk-sharing arrangements, or violations of fiscal sovereignty can arise if the regulations governing these partnerships are not followed meticulously. Therefore, establishing clear, legally sound cooperation agreements is essential to mitigate these risks and ensure the long-term success of PPP initiatives in the defense sector.

2. Transparency and Accountability

The use of TNI (Indonesian National Army) assets requires adherence to the principles of transparency and accountability, as outlined in Government Regulation No. 27 of 2014 concerning the Management of State/Regional-Owned Goods. This regulation mandates that the management of state-owned assets, including TNI assets, be conducted in an open and accountable manner. Specifically, when TNI assets are used for purposes such as cooperative use or rental, a transparent partner selection process must be implemented, accompanied by accountable reporting on asset utilization. The legal implication of failing to maintain transparency in the management of TNI assets is significant; it can be seen as a violation of state financial management principles and may lead to accusations of corruption, abuse of authority, or procedural irregularities. Such outcomes could undermine public trust and expose the government to legal and financial risks.

In the context of the defense industry, collaboration with private and foreign parties is essential for advancing national defense capabilities. However, this collaboration must be grounded in transparency, particularly with regard to investment processes, technology transfer, and the management of results. Law No. 16 of 2012 on the Defense Industry emphasizes the necessity of transparency and accountability to prevent monopolies and foreign domination in strategic sectors. If these principles are not implemented, the legal implications are serious. A lack of transparency could lead to legal disputes between the government and private partners, including the risk that foreign entities could gain undue control over critical defense assets. Such scenarios could jeopardize national sovereignty and security, as foreign control over strategic defense assets may compromise the country's independence in defense matters.

Similarly, optimizing Public-Private Partnerships (PPP) in defense projects requires transparent and accountable management. Presidential Regulation No. 38 of 2015, which governs government cooperation with business entities, mandates that the government provide clear and open information regarding cooperation agreements, risk-sharing mechanisms, and financing arrangements. The legal implications of failing to meet these transparency and accountability requirements are significant. It can result in budget irregularities, an unequal distribution of benefits and risks, and potential legal sanctions if the terms of the cooperation agreement are not adhered to. Inadequate transparency in PPP management could undermine the integrity of defense sector financing and diminish the effectiveness of such partnerships. Therefore, ensuring full transparency and accountability is crucial for maintaining legal and operational stability in PPP initiatives.

3. Security and State Sovereignty

The use of TNI assets is a crucial aspect of national defense and security. Given their strategic importance, the management of military assets for alternative financing must be conducted in a manner that ensures the preservation of the country's security and sovereignty. The legal implication of this is that any use of TNI assets for commercial purposes must be accompanied by clear and binding clauses in cooperation agreements that safeguard sensitive information and impose strict limitations on access to these assets. Failure to adhere to these provisions may be considered a threat to national security and could result in severe legal sanctions under Law No. 34 of 2004 concerning the TNI, Law No. 1 of 2004 concerning the State Treasury, and other related legislation. These legal frameworks are designed to protect the integrity of the nation's defense infrastructure and prevent misuse of military assets that could compromise national security.

The optimization of the defense industry, particularly through collaboration with foreign parties, introduces potential risks to the country's security and sovereignty, especially concerning the transfer of military technology. The legal implications of such cooperation are significant, as violations in this area could lead to the unauthorized leakage of sensitive military technology or strategic information. This breach could violate provisions of Law No. 16 of 2012 concerning the Defense Industry, as well as national security regulations designed to protect the integrity of the country's defense capabilities. Such violations may also lead to international sanctions, which could damage the country's credibility in global defense affairs and weaken its strategic position. Therefore, strict adherence to legal frameworks governing foreign collaboration in the defense industry is essential to mitigate these risks.

In the case of Public-Private Partnerships (PPP) in the defense sector, careful consideration must be given to their impact on state sovereignty and national security. The legal implication of failing to account for national interests in PPP contracts is the potential for excessive dependence on private or foreign entities in critical defense projects. This dependency could undermine the country's control over its defense infrastructure and expose it to foreign influence. PPPs in the defense sector must be managed with a high degree of prudence and under strict oversight to ensure that these partnerships do not compromise state sovereignty. Legal frameworks must be rigorously followed to ensure that the defense sector remains secure and shielded from undue foreign influence, thus preserving the nation's autonomy in matters of national security.

Conclusion

Based on the estimations using the ARIMA model, it is clear that if state revenue growth continues along its current trajectory, the state will face a persistent fiscal gap between the defense budget requirements and available revenues, with the gap projected to remain unaddressed until 2045. This shortfall underscores the urgent need for alternative financing strategies to support national defense. Through in-depth interviews, four potential financing alternatives have been identified to bridge this fiscal gap: optimizing the defense industry, maximizing the use of TNI assets, increasing private sector involvement, and combining these three approaches.

However, the implementation of these alternatives necessitates substantial regulatory adjustments. Key laws, including Law No. 17 of 2003 concerning State Finances, Law No. 3 of 2002 concerning National Defense, Law No. 34 of 2004 concerning the Indonesian National Army, Law No. 23 of 2019 concerning the Management of National Resources for National Defense, and Law No. 16 of 2012 concerning the Defense Industry, require modification. In addition, annual revisions to the APBN Law, along with updates to ministerial regulations such as Minister of Defense Regulation No. 28 of 2016 and Minister of Defense Regulation No. 12 of 2021, are necessary. Furthermore, Government Regulation No. 141 of 2015 concerning Defense Industry Management also requires adjustments.

These regulatory changes are essential to ensure legal certainty, transparency, and accountability in the defense financing process. They will also help maintain the integrity of state security and sovereignty. In conclusion, while alternative financing strategies offer potential solutions to the fiscal gap, their successful implementation hinges on careful legal adjustments, which are crucial for ensuring the long-term stability and security of the defense sector.

References

Aries, Hannah, Bastian Giegerich, and Tim Lawrenson. "The Guns of Europe: Defence-industrial Challenges in a Time of War." In *Survival: June-July 2023*. (London: Routledge, 2023), pp. 7-23.

Arifin, Zainal, Agus Suman, and Moh Khusaini. "Countertrade Mechanism of Global Arms Trade: Case Study of Indonesia." *International Journal of Financial Research* 11, no. 1 (2020): 307-317.

Arifin, Zainal, Agus Suman, and Moh Khusaini. "Optimization of Selected Agricultural Export Commodities to Improve

Indonesia's Weaponry Countertrade." *International Journal of Criminology and Sociology* 10 (2021): 579-588.

Artiningsih, Artiningsih, et al. "Skema pembiayaan pembangunan infrastruktur non-konvensional di Kota Semarang." *Jurnal Riptek* 13, no. 2 (2019): 92-100.

Brahmana, Dedy Putra, et al. "Pengaruh Defense Cooperation Agreement Indonesia Dan Singapura Terhadap Lingkungan Strategis di Asia Tenggara dalam Perspektif Manajemen Pertahanan." *NUSANTARA: Jurnal Ilmu Pengetahuan Sosial* 10, no. 7 (2023): 3585-3596.

Creswell, John W., and Cheryl N. Poth. *Qualitative Inquiry and Research Design: Choosing among five approaches*. (London: Sage Publications, 2016).

Feryna, Jan, and Libor Kutěj. "Implications for China from the War in Ukraine: Comparison of the Western and Taiwanese Views." *Univerzita Obrany. Ustav Strategickych Studii. Obrana a Strategie* 2023, no. 2 (2023): 23-38.

Gindarsah, Iis, and Adhi Priamarizki. "Explaining Indonesia's Under-balancing: The Case of the Modernisation of the Air Force and the Navy." *Journal of Asian Security and International Affairs* 8, no. 3 (2021): 391-412.

Gindarsah, Iis, et al. *Dinamika Persenjataan Global dan Proyeksi Pembangunan Pertahanan Indonesia 2045*. (Jakarta: Laboratorium Indonesia 2045, 2021.

James, Andrew, and Thomas Teichler. "Defence and security: new issues and impacts." *Foresight* 16, no. 2 (2014): 165-175.

Marzuki, Peter Mahmud. *Teori Hukum* (Jakarta: Kencana, 2020).

Michael Evans, "American Defence Policy and the Challenge of Austerity - Some Implications for Southeast Asia," *Asean Economic Bulletin* 30, no. 2 (2013): 167-178.

Moleong, Lexy J. *Metodologi Penelitian Kualitatif*. (Bandung: PT Remaja Rosdakarya, 2018).

Momoh, Zekeri. "The implications of increasing military spending on human security: a global perspective." *JANUS. NET e-journal of International Relations*. 15 (2024): 120-132.

Mumpuni, Niken Wahyuning Retno, and Wahyu Adi Mudiparwanto. "Tinjauan Yuridis Mengenai Pengelolaan Barang Berupa Tanah Dan Bangunan Milik Negara di Lingkungan Tentara Nasional

Indonesia Angkatan Darat (TNI AD)." *Jurnal Yuridis* 8, no. 1 (2021): 63-82.

Paramita, Aulia Annisa, and Nurul Dwi Purwanti. "The Role of The Ministry of National Development Planning of The Republic of Indonesia in Public-Private Partnership." *Journal of Infrastructure Policy and Management (JIPM)* 6, no. 2 (2023): 103-116.

Purnomo, Edi. "Kewenangan Pengelolan Aset Negara Berdasarkan Undang-Undang Nasionalisasi oleh Tentara Nasional Indonesia". *Thesis.* (Surabaya: Universitas Muhammadiyah Surabaya, 2019).

Rifai, Bahtiar. "Kendala Implementasi Ppp Kelistrikan dan Kebutuhan Perbaikan Kebijakan." *Jurnal Ekonomi Pembangunan LIPI* 24, no. 1 (2016): 51-66.

Rostiyanti, S. F., and R. Z. Tamin. "Identification of challenges in public private partnership implementation for Indonesian toll road." *Proceedings of the First Makassar International Conference on Civil Engineering, March*. 2010.

Sianipar, Pander Eripson, Afrizal Hendra, and Martinus Dwi Arjanto Widodo. "Efisiensi Manajemen Aset Negara: Strategi Meningkatkan Kesiapan Operasional TNI Angkatan Udara." *Indonesian Journal of Innovation Multidisipliner Research* 2, no. 3 (2024): 489-502.

SIPRI, *SIPRI Military Expenditure Database*, ed. SIPRI (Stockholm: SIPRI, 2023), https://www.sipri.org/databases/milex.

Sloan, Elinor. *Military Transformation and Modern Warfare: A Reference Handbook*. (New York: Bloomsbury Publishing USA, 2008).

Tian, Nan, et al. "Developments in Military Expenditure and the Effects of the War in Ukraine." *Defence and Peace Economics* 34, no. 5 (2023): 547-562.

Ucko, David H. and Thomas A. Marks, *Crafting Strategy for Irregular Warfare: A Framework for Analysis and Action*. (Washington DC: National Defense University Press, 2022)

Wardhana, Muhammad Andra, and Dwi Soediantono. "Analisis Strategi Pemberdayaan Industri Pertahanan Nasional dalam Mendukung Terwujudnya Minimum Essential Force." *Journal of Industrial Engineering & Management Research* 3, no. 5 (2022): 32-38.

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