

From Consumption To Investment: Defense Spending and Strategic Industrial Development In Indonesia

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Abstract: Indonesia's defense budget has increased substantially, yet spending remains dominated by routine operational and management needs rather than productive investment. This study analyzes the transformation of Indonesia's defense spending into strategic investment through a "spend-to-invest" approach in support of the Asta Cita national development agenda. Using a descriptive qualitative design and document analysis of defense spending data from 2021 to 2025, the study finds that the defense budget rose from Rp154.88 trillion in 2021 to Rp264.35 trillion in 2025, but the spending structure remains oriented toward management support and operational needs. Investment in research and development, local content (TKDN), technology mastery, and domestic defense industry involvement remains limited. Key obstacles include routine spending dominance, import-dependent procurement, weak technology transfer, and reliance on foreign components. The study recommends a five-pillar "spend-to-invest" model: budget recomposition, local-content-based procurement, research and technology transfer, domestic supply chain resilience, and indicator-based governance. This model can strengthen industrial self-reliance and economic resilience in support of Indonesia Emas 2045.

Keywords: Asta Cita; Defense Economy; Defense Industry; Strategic Investment; Spend-to-Invest

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A. Introduction

Under the leadership of President Prabowo Subianto, Indonesia has adopted a strategic framework known as Asta Cita. Asta Cita consists of eight national aspirations that serve as a compass for national transformation toward Indonesia

Emas 2045. The substantive direction of Asta Cita encompasses food security and energy independence, defense sovereignty, the domestic industrial ecosystem and downstream processing, digital transformation, the green economy and the blue economy, as well as improving the quality of human resources and a prosperous society (Agustinus Beo Da Costa, 2026).

Within this vision, the dimensions of defense and security occupy a central position as fundamental prerequisites for the realization of national prosperity. This statement aligns with the ideas of Soemitro Djojohadikusumo, who emphasized that political stability and national security are not byproducts of development but rather essential prerequisites for economic development to proceed. Interestingly, this idea also aligns with development theories in many developing countries: “security first, development follows.” This means that economic development cannot be sustainable if the foundation of security is fragile (Brief Asia, 2026).



Figure 1. Indonesia's Military Spending From 2015–2024

Source: World Bank (2026)

Based on Figure 1, Indonesia's military spending increased from USD 7.60 billion in 2015 to USD 11.04 billion in 2024. The spending fluctuated each year and reached USD 11.26 billion in 2023. The 2025 figure is projected to reach USD 15.02 billion or 1.04 percent of GDP (World Bank, 2026). The increase is still limited compared to the defense needs of an archipelagic country with a very vast maritime area.

The development of TNI capabilities demands the modernization of main weapon system tools (alutsista) in large quantities, and this need increases pressure on budget allocation. The draft 2026 state budget (APBN) includes an allocation of Rp424.8 trillion for the defense and security sector, consisting of Rp185 trillion for the defense sector, Rp179.4 trillion for the law and security sector, and Rp60.4 trillion for the legal sector (Liman, 2025). The increase in spending has not automatically resulted in a productive defense economy. The defense budget is still largely absorbed by management support (Table 2 and Table 4), while the defense industry, research and development activities, and technology transfer face limitations (Matthews et al., 2025). Therefore, the question arises to what extent defense spending can be viewed not merely as a fiscal burden, but also as a strategic investment instrument that contributes to the national economy.

For Indonesia, the challenge in managing the defense budget does not solely lie in the amount of budget available, but also in the composition of its usage. The indicative budget of the Ministry of Defense for 2025 shows that management support absorbs Rp79.28 trillion, more than modernization (Rp65.50 trillion) and research, industry, and higher defense education (Rp1.56 trillion) (Table 2) (Ahdiat, 2024).

The limited support for the domestic strategic defense industry causes the modernization of the TNI to still rely on the procurement of defense equipment from abroad. As a result, the budget increase has not fully boosted national production capacity, and dependence on foreign industries has the potential to grow, limiting the multiplier effect of defense spending on the economy (Matthews et al., 2025). Additionally, Brief Asia (2026), Syawfi (2025) assesses that strengthening the private sector, MSMEs, digital innovation, local content, technology transfer, R&D, and domestic supply chains as directed in Law No. 16 of 2012 on the Defense Industry is crucial to transforming defense spending into a strategic investment for the national economy.

Law No. 16 of 2012 directs the procurement of defense equipment toward the development of a more systematic defense industry. However, the level of domestic component (TKDN) in defense products is estimated to have only reached 41 percent (Matthews et al., 2025). This figure indicates that there is still significant room to increase local content. This research will delve deeply into how the mechanism of converting defense spending into strategic investments can be optimized within the framework of *Asta Cita*.

Previous studies have discussed defense spending from various perspectives. von Boemcken & Bolaños Suárez (2026) examine the economic and social impact of military spending. Kofroň & Stauber (2024) compare personnel spending and equipment spending in NATO member countries. Bois & Buts (2024) raise the idea that countries need to spend more and better at the same time. For Indonesia, Maharani & Matthews (2023) assess the role of offsets for the strategic industry, Irfan et al. (2023) discuss the independence of the defense industry, Guild (2025) analyzes the political economy of military modernization, and Matthews et al. (2025) outline defense acquisition strategies. To the best of the author's knowledge, these studies have not yet linked the composition of Indonesia's defense budget with the *Asta Cita* agenda and the concept of public value. The novelty of this research lies in the integration of the three within a single analytical framework of *Spend to Invest* in the Archipelagic Defense Economy. This framework distinguishes between consumptive spending and productive investment to measure economic benefits such as the increase in Domestic Component Level (TKDN), domestic industry contracts, strengthening of strategic industries, and absorption of skilled labor.

This research provides three contributions. First, the theoretical contribution: this research integrates defense economics with the theory of public value. Collington & Mazzucato (2024) argue that the state needs to be directly involved in the production of public value. Zaki (2026) explains how public values transform into public value

through rules, organization, and implementation design. This research uses both concepts to interpret defense spending as a process that generates security, industrial capacity, and technological mastery for society, rather than merely a fiscal burden. Second, methodological contribution: this research applies compositional analysis to the budget ceiling of the Ministry of Defense. This analysis reads each component as part of the whole, so the overall budget increase does not obscure the shifts between components. Third, practical contribution: this research formulates a spend-to-invest model with five pillars, performance indicators, and responses to obstacles. The model can serve as a reference for the Ministry of Defense, the Ministry of Finance, and defense SOEs in formulating budget and procurement policies.

The purpose of this research is to analyze the transformation of Indonesia's defense spending from a consumptive-operational orientation to strategic investment through the optimization of the spend-to-invest concept within the Asta Cita framework. This research addresses five questions: what is the condition of defense spending, has the transformation toward investment occurred, what factors hinder it, what is the recommended spend-to-invest model, and how does it contribute to Asta Cita. The results are expected to enrich the development of defense economics in Indonesia and provide a practical basis for stakeholders in directing defense spending to strengthen defense capacity while supporting sustainable and sovereign national economic development.

B. Methods

The research method used in this study is a descriptive qualitative approach employing a document analysis method to examine the transformation of Indonesia's defense spending into a strategic investment within the framework of Asta Cita. The documents analyzed include the World Bank military spending series World Bank (2026) the indicative budget of the Ministry of Defense for 2024–2025 (Ahdiat, 2024), the proposed indicative budget of the Ministry of State-Owned Enterprises for 2025 Muhamad (2024), and scientific literature published from 2023–2026 by reputable publishers. The document describes the pattern of Indonesia's defense spending allocation for the period 2021–2025 and its implications for domestic defense economic development.

The analysis was conducted in three interactive stages: data reduction, data presentation, and conclusion drawing. At the presentation stage, this research applies compositional analysis. The researcher calculates the share of each program against the total budget, the difference in shares between years in percentage points, and the inter-program ratio. The inter-program ratio was chosen because its value does not change with the increase in the total budget, and compositional data information is indeed contained in the inter-part ratio (Nesrstová et al., 2025). This analysis is descriptive. This research does not use a compositional regression model because the budget ceiling data only covers two fiscal years. The researchers present the values in rupiah and US dollars according to the World Bank series, and calculate the 2025 US dollar value from the rupiah series and the official average exchange rate.

C. Results and Discussion

1. Result

The relationship between defense spending and economic growth has been a subject of debate in the literature on defense economics for more than five decades, with John Maynard Keynes (1936) viewing defense spending as a form of government spending that can stimulate aggregate demand and generate a multiplier effect through job creation, increased household income and consumption, and the development of defense infrastructure that could potentially be utilized for civilian purposes (dual-use infrastructure).

The Keynesian approach emphasizes that the economic impact of defense spending depends on its composition, not just the size of the budget. Allocations for domestic industries, research and development, and skilled labor have the potential to generate a greater multiplier effect than consumptive operational spending. The European Central Bank model study estimates a two-year average GDP multiplier of 0.93 with a range of 0.42–1.13 across various models, and shows that investment spending has a positive spillover effect on private investment (Eddy Cahyono Sugiarto, 2026). The study is based in the euro area, so this research uses it as a comparison, not as an estimate for Indonesia. Kofron & Stauber (2024) separate personnel spending and equipment spending in their panel analysis of NATO member countries. Iura (2025) assesses the impact of public sector financing models on national security outcomes and emphasizes that aligning fiscal strategies with defense planning is crucial for long-term sustainability.

The theory of public value complements the framework because it questions what the actions of the government actually produce for society. Collington & Mazzucato (2024) state that the separation of the state from the process of producing public value, for example through outsourcing, weakens the state's ability to learn and adapt. In the context of defense, dependence on imported procurement resembles that separation, as the state buys finished capabilities without participating in building its production capabilities. Zaki (2026) explains that public values, such as sovereignty and independence, need to be articulated, encoded in rules and resources, instilled in organizations, and implemented through design execution before society can feel the public value. In this study, the obligation of TKDN and offsets serve as rules, state-owned defense companies as organizations, and the five pillars of spend to invest as the design of implementation.

Defense research also produces spillover effects. Moretti et al. (2025) found that a 10 percent increase in government research funding is associated with a 5–6 percent increase in private research, and the increase in private research driven by defense research boosts productivity. Sanusi & Adeeko (2025) link dual-use innovation with the economic dynamics of military spending.

The relationship between defense spending and economic growth is unitary or depends on a series of moderating conditions. The European Central Bank model study identifies four factors that determine the direction and magnitude of the impact of defense spending (Eddy Cahyono Sugiarto, 2026) namely:

1. The composition of spending between consumption and investment.
2. The import content of spending that causes leakage to the multiplier.
3. The target sectors of spending and the consumption tendencies of the recipients.
4. The monetary policy response to increased government spending in certain sectors.

Trends in Defense Spending Relative to Gross Domestic Product

The European Central Bank study estimates that an increase in defense spending results in an average GDP multiplier of 0.93 over two years, with an inter-model range of 0.42–1.13 (Eddy Cahyono Sugiarto, 2026). This figure shows that defense spending can drive output, but the magnitude of the impact depends on the design of the spending and the economic structure. This study does not apply those figures to Indonesia because the Indonesian defense industry base is different from the Eurozone. The figures are only a comparison that the composition and consistency of allocation are as important as the size of the budget.

The research results show that Indonesia's military spending experienced a significant nominal acceleration during the 2021–2025 period. Its ratio to GDP increased from 0.74 percent to 1.04 percent, but remained within the one percent range.

Table 1. Indonesia's Military Spending Period 2021-2025

Year	Military expenditure (trillion Rp)	Growth (%)	Military expenditure (billion USD)	Growth (%)	GDP ratio (%)
2021	125,89	–	8,80	–	0,74
2022	150,44	19,50	10,13	15,13	0,77
2023	171,55	14,03	11,26	11,10	0,82
2024	190,46	11,02	11,04	–1,92	0,86
2025	247,53*	29,96	15,02*	36,03	1,04

Source: from the World Bank (2026), processed by the author. Note: current prices; growth is calculated from unrounded values; (*) the value of the US dollar in 2025 is calculated from the rupiah series and the official average exchange rate of Rp16,477.87 per US dollar.

Table 1 shows that Indonesia's military spending increased from Rp125.89 trillion in 2021 to Rp247.53 trillion in 2025. The increase amounted to Rp121.64 trillion or 96.63 percent, with a compound annual growth rate of 18.42 percent. The annual growth in rupiah reached 19.50 percent in 2022, 14.03 percent in 2023, 11.02 percent in 2024, and 29.96 percent in 2025. In US dollars, spending increased from USD 8.80 billion to USD 15.02 billion. The 1.92 percent decline in 2024 is only visible in US dollars because the average exchange rate of the rupiah weakened from Rp 15,236.88 to Rp 15,855.45 per US dollar. In rupiah, spending still rose by 11.02 percent. This increase provides fiscal space for the modernization of defense equipment and the strengthening of the defense industry. However, Table 1 does not yet show a shift from consumptive spending to investment because this table does not include the composition of

spending. Furthermore, the scope of military spending in Table 1 (World Bank definition) is broader than the budget ceiling of the Ministry of Defense in Table 2, so the values of the two tables cannot be directly compared (World Bank, 2026). The composition analysis is presented in Table 4.

Table 2. Budget Allocation and Indicative Ceiling of the Ministry of Defense for the Years 2024 and 2025

Program	APBN Allocation (trillion Rp)	2025 Indicative Ceiling (trillion Rp)	Difference (trillion Rp)
Management Support	77,57	79,28	+1,71
Military Equipment Modernization	43,02	65,50	+22,48
Soldier Professionalism	12,37	5,67	-6,70
TNI Mission Execution	4,04	3,38	-0,66
Defense Industry Research	1,65	1,56	-0,09
Defense Development	0,597	0,571	-0,026
Defense Policy	0,025	0,025	0,00
Total	139,27	155,98	+16,71

Source: Databoks Katadata, processed from the indicative budget of the Ministry of Defense 2025 (Ahdiat, 2024). Note: the value of small components is presented in trillions of rupiah with three decimal places (Defense Resource Development Rp597.4 billion and Rp571.1 billion; Defense Policy and Regulation Rp24.7 billion); totals for 2024 and 2025 follow the source.

Table 2 shows that the indicative budget for the Ministry of Defense increased from Rp139.27 trillion in 2024 to Rp155.98 trillion in 2025, an increase of Rp16.71 trillion. The government primarily increased the modernization program budget from Rp43.02 trillion to Rp65.50 trillion. The program includes defense equipment, non-defense equipment, and defense infrastructure. On the other hand, the budget for the professionalism and welfare of soldiers, the execution of TNI duties, as well as research, industry, and higher defense education has decreased. The increase in the budget therefore needs to be balanced with the strengthening of human resources, research, and the domestic defense industry to support national defense economic independence and resilience (Ahdiat, 2024).

Management support remains the largest program, amounting to Rp79.28 trillion in 2025 (Table 2). President Prabowo Subianto targets an increase in defense spending to 1.5 percent of GDP from the historical range of 0.7–1.0 percent (Jessica Valentina et al., 2025). However, the increase in the budget does not automatically guaranty an increase in the proportion of productive spending that strengthens the national defense industry and economic capacity.

The modernization of Indonesia's defense in recent years still shows a dominance in the procurement of defense equipment from abroad. For example, the order of Rafale aircraft from France worth USD 8.1 billion and three Nagapasa-class submarines that began operating from 2017 to 2021 (Matthews et al., 2025). This procurement accelerated the enhancement of national defense capabilities. However, the procurement also has the potential to increase import dependence, pressure the current account, and reduce opportunities for domestic value creation through the strengthening of national production capacity and the defense industry.

Table 3. Indicative Budget Proposal of the Ministry of State-Owned Enterprises for 2025

Component	Proposed budget 2025 (billion Rp)	Share (%)
Development & Oversight	122,8	35,69
Office Operations	94,4	27,43
Salaries & Allowances	77,6	22,55
Secretariat Budget	49,3	14,33
Total	344,1	100,00

Source: Databoks Katadata, processed from the indicative ceiling proposal of the Ministry of State-Owned Enterprises 2025 (Envanter Medya, 2026). Note: the portions are calculated by the author; the total sources are rounded to Rp344 billion.

Table 3 presents the indicative budget proposal of the Ministry of State-Owned Enterprises (BUMN) for 2025 as a comparison because this ministry oversees state-owned enterprises in the defense industry, such as PT Pindad, PT PAL Indonesia, and PT Dirgantara Indonesia. Development and supervision receive the largest share, amounting to Rp122.8 billion (35.69 percent). Office operations absorbed Rp94.4 billion (27.43 percent), salaries and allowances Rp77.6 billion (22.55 percent), and the secretariat budget Rp49.3 billion (14.33 percent). The budget structure indicates that the government still prioritizes the functions of development, supervision, and operational support in supporting the governance of SOEs (Envanter Medya, 2026).

The domestic component level (TKDN) of defense products is estimated to be 41 percent (Matthews et al., 2025). This study proposes a phased target of 60–70 percent for strategic procurement as a benchmark for progress. These achievements indicate that the national defense industry still relies on components and technology from abroad. PT Pindad, PT PAL Indonesia, and PT Dirgantara Indonesia, as the main defense industries, still face limitations in meeting component needs independently. PT Pindad still uses imported components, particularly engines and special materials that cannot yet be optimally produced domestically. PT PAL Indonesia built the Merah Putih frigate with an Italian design and several imported subcomponents (Bokan et al., 2025). These findings indicate that the increase in production capacity of the defense industry has not been fully matched by an improvement in technological independence and the domestic supply chain, thus the government needs to strengthen research, technology development, and the production capability of strategic components domestically.

Furthermore, a study by Jessica Valentina et al. (2025), which analyzed the role of state-owned defense enterprises, found that intra-industry synergy among these enterprises remains limited. Cooperation between PT Pindad and domestic private companies tends to be weaker than partnerships with foreign vendors, primarily due to reliance on imported components and gaps in technological capacity. This phenomenon reinforces the argument that current defense spending has not yet fully translated into domestic productivity investment a condition theoretically referred to as the “leakage effect” in the literature on defense economics.

2. Discussion

The “Spend to Invest” Concept and Success Indicators

In this study, the implementation of the “spend to invest” concept indicates a paradigm shift in defense economics—from a consumptive spending orientation toward strategic investment. According to the Bois & Buts (2024) summarize this idea as the need to spend more while also spending better. The defense budget not only meets short-term operational needs but also builds independent military capabilities, strengthens the domestic defense industry, and enhances technological mastery whose benefits can be felt by the civilian sector. In practice, the indicators of success for this conversion can be measured through four main metrics:

- a. The ratio of investment spending to total defense spending;
- b. The average local content (TKDN) achievement for strategic products;
- c. The volume of domestic contracts versus imports;
- d. The defense sector’s contribution to national gross fixed capital formation.

Cross-country benchmarks for the four metrics have not been consistently available in the reviewed literature. Therefore, this research assesses Indonesia’s progress against its own baseline conditions. Based on these four metrics, Indonesia’s defense spending still faces several gaps. Research, industry, and higher education in defense only receive 1.00 percent of the 2025 budget, and the domestic content is estimated at 41 percent. The procurement of major defense equipment, such as Rafale aircraft and Nagapasa submarines, comes from abroad (Matthews et al., 2025), while data on the value of domestic industry contracts is not consistently available. Data on the contribution of the defense sector to gross fixed capital formation (PMTB) is also limited. The procurement pattern oriented toward short-term needs indicates that defense spending has not yet been fully directed toward long-term investments and the strengthening of national production capacity.

Dependence on foreign procurement remains a challenge. However, the defense policy under President Prabowo Subianto’s administration shows efforts to enhance the role of the national industry through accelerated modernization, joint production, defense cooperation with Turkey, South Korea, and Japan, as well as the development of defense technology (Bokan et al., 2025). The differentiation in the composition of this expenditure aligns with the analysis by Kofroň & Stauber (2024), which separates personnel expenditure from equipment expenditure. The implementation of the Domestic Content Requirement (TKDN), technology transfer, development of domestic suppliers, and strengthening of the domestic industry are important factors for defense spending to function as a productive investment. Without these mechanisms, increased spending has the potential to heighten import dependence, create structural imbalances, and increase fiscal pressure in the long term.

Furthermore, this research provides a critical perspective on the Asta Cita narrative, which has the potential to position the defense sector as one of the main priorities in economic development. Brief Asia (2026), Syawfi (2025) emphasizes that an excessive

focus on the defense sector without strengthening the service sector can lead to an imbalance in resource allocation, considering that the service sector has a significant contribution to the national economy. Therefore, the implementation of the spend to invest concept in Indonesia needs to be directed toward a balanced industrialization strategy through the strengthening of the strategic defense industry without reducing opportunities for the development of other productive sectors. This strategy can be realized through the integration of the defense industry with research and technology, a digital startup ecosystem, as well as the development of a green economy and a blue economy that align with the national development agenda in Asta Cita.

Analysis of Defense Spending Composition

An analysis of the indicative budget composition of the Ministry of Defense shows that an increase in budget does not automatically change spending orientation. Table 4 presents the share of each component in the total budget for 2024 and 2025 based on the data in Table 2, along with the nominal changes.

Table 4. Indicative Budget Composition of the Ministry of Defense for the Year 2024-2025

Program	Share 2024 (%)	Share 2025 (%)	Change in share (percentage points)	Nominal change 2024-2025 (%)
Management Support	55,70	50,83	-4,87	+2,20
Weapons and Equipment Modernization	30,89	41,99	+11,10	+52,25
Soldier Professionalism	8,88	3,64	-5,24	-54,16
Implementation of Military Duties	2,90	2,17	-0,73	-16,34
Defense Industry Research	1,18	1,00	-0,18	-5,45
Defense Development	0,43	0,37	-0,06	-4,40
Defense Policy	0,02	0,02	0,00	0,00
Total	100,00	100,00	0,00	+12,00

Source: calculated by the author from Table 2 (Ahdiat, 2024). Note: The portion is calculated against the total reported by the source; the number of portions may differ by 0.02 points due to rounding. Modernization includes defense equipment, non-defense equipment, and defense infrastructure. Databoks reported a change in the research program of -5.6 percent, while the above value is calculated from the rounded figures.

Table 4 shows three main patterns. First, management support remains the largest component with a share of 55.70 percent in 2024 and 50.83 percent in 2025, so more than half of the budget is still absorbed by the organization's supporting functions. This share decreased by 4.87 percentage points despite a nominal increase of 2.20 percent. Second, modernization grew by 52.25 percent and increased its share from 30.89 percent to 41.99 percent. The nominal increase of this component was Rp22.48 trillion, surpassing the total budget increase of Rp16.71 trillion because other components were cut, especially soldier professionalism, which decreased by 54.16 percent. Third, defense industry research decreased by 5.45 percent and only received 1.00 percent of the 2025 budget. The ratio of modernization to research increased from 26.07 times in 2024 to 41.99 times in 2025. This ratio does not depend on the total budget, indicating that the composition of the allocation is shifting away from research.

The finding demands a distinction between capital expenditure and strategic investment. The modernization of defense equipment is classified as capital expenditure because it adds to defense assets. New capital expenditure becomes a strategic investment if it strengthens production capacity, technology mastery, and the domestic supply chain. The modernization category within the budget also includes non-weaponry and infrastructure programs, so not all of the increase is for weapon procurement (Ahdiat, 2024). The latest literature review examines the relationship between military spending and development (von Boemcken & Bolaños Suárez, 2026), while the European Central Bank study shows that import content and spending composition determine the magnitude of the multiplier (Eddy Cahyono Sugiarto, 2026). Therefore, the increase in modernization allocation cannot yet be interpreted as evidence of transformation as long as domestic contracts, local content, and technology transfer have not increased.

Assessment of the Transformation Towards Investment

Based on these four metrics, this study concludes that Indonesia's defense spending transformation towards investment is happening only partially and is still at an early stage. On the input side, fiscal commitment has strengthened. Military spending increased by 96.63 percent in rupiah during 2021–2025 with a compound annual growth rate of 18.42 percent. The ratio to GDP rises from 0.74 percent to 1.04 percent, and the allocation for modernization within the Ministry of Defense's budget grew by 52.25 percent. On the output side, productive indicators have not moved in the same direction. The TKDN of 41 percent has not yet reached the target of 60–70 percent. Research only received a 1.00 percent allocation, and its allocation has decreased. The gap between inputs and outputs indicates that the budget increase has not yet resulted in structural changes.

The gap is related to the mechanism of import leakage. When procurement relies on foreign suppliers, most of the additional demand flows to overseas producers, weakening the domestic multiplier effect. The order for Rafale aircraft worth USD 8.1 billion (Matthews et al., 2025) illustrates the magnitude of potential leakage if the contract is not accompanied by adequate local content and technology transfer. On the other hand, contracts involving domestic industries prevent leaks and extend the domestic value chain. Joint production cooperation, such as the Harimau D5 medium tank (Envanter Medya, 2026), indicates the direction of this change, but the scale and economic impact have yet to be measured.

Obstacles to Transformation

This research identifies five groups of inhibiting factors. The first factor that hinders the optimization of defense spending is the relatively rigid budget structure. Management support absorbs 50.83 percent of the indicative ceiling for 2025, while routine personnel, operational, and logistics expenditures limit the fiscal space for industrial research and development, which only receives 1.00 percent of the ceiling. This condition shows that the issue of defense spending is not solely related to the size of the budget, but also to its composition (Kofroň & Stauber, 2024);(Bois & Buts, 2024).

The second factor is the dependence of defense equipment procurement on foreign suppliers, which has not yet been fully balanced by the ability to absorb technology, even though Law No. 16 of 2012 requires a combination of countertrade, local content, and offsets of at least 85 percent of the main contract value. The offset portion is at least 35 percent and increases by 10 percentage points every five years (Matthews et al., 2025). In practice, the effectiveness of offsets still faces challenges such as limited core technology transfer and the low absorption capacity of the domestic industry, although the scheme is considered to play a role in building the national defense industry's capacity (Maharani & Matthews, 2023).

The third factor is the limited capacity of the industry and dependence on imported components. PT Pindad still uses imported special machines and materials, while PT PAL Indonesia builds the Merah Putih frigate with an Italian design and imported subcomponents (Bokan et al., 2025). Jessica Valentina et al. (2025) found that the synergy among state-owned defense enterprises is still limited and PT Pindad's collaboration with national private companies is weaker than its partnerships with foreign vendors. This pattern exacerbates the leakage effect and hinders the creation of added value.

The fourth factor is the low funding and the lack of guaranteed continuity in defense industry research. The allocation for defense research, industry, and higher education decreased from Rp1.65 trillion to Rp1.56 trillion (Table 2). The increase in government funding has proven to encourage private research: a 10 percent increase in government funding correlates with a 5–6 percent increase in private research (Moretti et al., 2025). Stable cross-year allocations are therefore important for realizing that effect.

The fifth factor is the limitation of data and measurement indicators. The contribution of defense spending to gross fixed capital formation, the comparison of domestic and import contracts, as well as the achievement of the domestic content level (TKDN) are not yet consistently and comprehensively available. These limitations hinder the evaluation of the progress of defense spending transformation and emphasize the importance of consistent data and indicators in drawing policy conclusions (Dunne & Uye, 2009).

Strategic Supply Chain Resilience Amid Geopolitical Turmoil

The resilience of strategic supply chains determines the significance of defense investments. Ivanov (2025) discusses the measurement of supply chain resilience so that resilience can be assessed with clear indicators. Aspeteg et al. (2026) analyze the development of supply chain resilience in the defense industry, and Hellberg et al. (2025) identify performance constraints in the defense industry supply chain through case studies. Gulf countries are adopting defense industry localization strategies to overcome import dependency (Bakir et al., 2025).

For Indonesia, defense dependency carries historical and structural risks, as demonstrated by the 1966 and 1999 embargo experiences that prompted defense industry independence and were reinforced by Law No. 16 of 2012 (Maharani & Matthews, 2023). However, the dependency of PT Pindad and PT PAL Indonesia on imported machinery, special materials, and subcomponents means that geopolitical upheavals can still disrupt the supply of critical components. Therefore, defense investment needs to include strengthening suppliers up to the second tier and beyond, not just final assembly.

Recommended Spend to Invest Model

Based on these findings and barriers, this study recommends a ‘spend to invest’ model consisting of five interconnected pillars. This model shifts policy focus from budget size to the quality, direction, and outcomes of spending. Table 5 summarizes the five pillars.

Table 5. The Five Pillars of the Spend to Invest Model

Pillar	Main Policy Actions	Performance indicator	Obstacle That Were Addressed
1. Budget recomposition	Setting a minimum allocation limit for research and domestic industry contracts within the modernization cap; directing part of the annual budget increase to these components; implementing a multi-year budget.	Research portion against the cap (1.00% by 2025); modernization to research ratio (41.99 times by 2025)	1 and 4
2. Local content-based procurement	Enforcing the obligation of local content, trade offsets, and offsets in accordance with Law No. 16 of 2012; gradually increasing local content; linking contract payments to technology transfer achievements.	local content for strategic products (41% as a basic condition); the value of domestic contracts compared to imports.	2
3. Research and technology transfer with measurable absorption capacity	Connecting the defense industry with universities and research institutions; assigning a technology absorption team from the contract negotiation stage.	Establishing auditable technology mastery stages. Achieved technology mastery stages; continuity of cross-year research funding.	2 and 4
4. Domestic supply chain resilience	Mapping suppliers down to the lowest level; identifying critical components; building alternative domestic suppliers and trusted foreign partners; preparing strategic reserves.	Involving national private sectors and SMEs. The number of critical components with alternative suppliers; the proportion of critical components from domestic suppliers.	3
5. Indicator-based governance	Measuring the ratio of investment spending, local content, domestic contracts, and contribution to PMTB periodically and transparently; implementing gradually through data and regulatory structuring, increasing local content and domestic contracts, and strengthening technology mastery.	Four success metrics are reported annually.	5

Source: author’s formulation based on research findings. The number in the last column refers to the obstacles in Defense Spending Transformation.

The first pillar is budget recomposition. The government sets a minimum allocation for research and development as well as domestic industry contracts within the modernization ceiling, and directs part of the annual budget increase to these components. The government also implements a multi-year budget scheme to give industrial projects certainty of funding across years. Aligning fiscal strategy with defense planning is crucial for long-term sustainability (Iura, 2025). The second pillar is local content-based procurement. The Ministry of Defense enforces obligations on local content levels, trade offsets, and other offsets in accordance with Law No. 16 of 2012, gradually raising local content from 41 percent toward a target of 60–70 percent, and linking contract payments to technology transfer achievements. The third pillar is strengthening research and technology transfer with measurable absorption capacity. The government connects the defense industry with universities and research institutions, assigns a technology absorption team from the contract negotiation stage, and sets auditable stages for technology mastery. Empirical evidence supports this step. Moretti et al. (2025) found that increases in private research driven by government defense research lead to higher productivity. The fourth pillar is the resilience of the domestic supply chain. The government and defense SOEs map suppliers down to the lower levels, identify critical components like machinery and specialized materials, build alternative domestic suppliers and trusted foreign partners, and prepare strategic reserves for components that are at risk of disruption (Hellberg et al., 2025);(Ivanov, 2025). The government also involves national private companies and SMEs as suppliers so that synergy between SOEs and the private sector is strengthened. The fifth pillar is indicator-based governance that measures the ratio of investment spending, local content, domestic contracts, and contribution to gross fixed capital formation regularly and transparently. Its implementation is carried out in stages through data and regulatory restructuring, increasing the domestic content level (TKDN) and domestic contracts, and strengthening technology mastery. The government maintains policy consistency across years so that the economic benefits of defense spending can outweigh the initial costs.

From the perspective of public value, the five pillars function as mechanisms that translate the values of sovereignty and independence into outcomes felt by the community (Zaki, 2026). Budget recomposition and indicator-based governance serve as rules and resources. Procurement based on local content and supply chain resilience serves as the implementation design. Research and technology transfer serve as organizational learning that maintains the state's ability to learn and adapt (Collington & Mazzucato, 2024).

Contribution to the Asta Cita

Model 'spend to invest' contributes directly to several Asta Cita missions (Eddy Cahyono Sugiarto, 2026) (ANTARA News, 2022), as follows.

1. This model supports the second mission, which is strengthening the country's defense and security system and national self-reliance, because controlling

domestic production and supply chains reduces vulnerability to embargoes and supply disruptions.

2. This model supports the fifth mission regarding downstreaming and industrialization to increase domestic added value, because domestic contracts and higher local content extend the defense industry value chain.
3. This model is related to the third mission about quality jobs, because domestic production absorbs skilled workers.
4. Research and technology transfer support the fourth mission about strengthening human resources, science, and technology.
5. Governance based on indicators and procurement transparency aligns with the seventh mission on bureaucratic reform and corruption prevention.

That contribution is conditional. The benefits of the model depend on consistently implementing the five pillars, the industry's ability to absorb technology, and balancing defense spending with strengthening other parts of the economy, as highlighted by Brief Asia (2026) Syawfi (2025), without adjusting the budget, extra funding could just increase imports and strain the balance of payments without actually boosting national capacity (Matthews et al., 2025).

Overall, the discussion shows that the success of transforming defense spending into a strategic investment isn't just determined by increasing the budget, but also by changing the structure, direction, and composition of how it's used. The increase in the defense budget will not have an optimal economic impact if most of the funds are still used for consumptive spending and bureaucratic needs. On the contrary, the government needs to direct the increase in the budget to strengthen research and development, domestic industrial capacity, technology mastery, and the involvement of national entrepreneurs in the defense supply chain. This approach can turn defense spending into initial capital to strengthen the independence of the national industry while also creating a multiplier effect for more inclusive economic growth, thereby making the concept of defense as an investment substantively realized in supporting the achievement of Indonesia Emas 2045.

Research Limitations

The main findings of this research answer five research questions. Indonesia's military spending increased from Rp125.89 trillion in 2021 to Rp247.53 trillion in 2025. However, the composition of the Ministry of Defense's budget is still dominated by management support (50.83 percent in 2025), while research, industry, and higher defense education only receive 1.00 percent. The transformation toward new investment spending is only partially underway: the modernization allocation increased by 52.25 percent, but the domestic component is estimated at 41 percent, the research allocation decreased, and major procurement still relies on imports. The ratio of modernization to research widened from 26.07 times in 2024 to 41.99 times in 2025, so the budget increase has not shifted the composition toward research. The five main obstacles include a rigid budget structure, dependence on foreign suppliers with low technology absorption capacity, limitations in domestic industry and supply chains,

small research funding, and inconsistent measurement data. The recommended spend-to-invest model is based on five pillars: budget recomposition, local content-based procurement, strengthening research and technology transfer, domestic supply chain resilience, and indicator-based governance. This model supports Asta Cita through defense independence, downstreaming, job creation, human resource development, and governance improvement. The contribution is conditional and depends on the consistency of implementing the five pillars. The practical implication is that the government needs to set minimum limits for research allocation and domestic contracts, link contract payments to technology transfer, and publicly report four success indicators annually. An increase in the budget without a change in composition will only exacerbate import leaks. From a theoretical perspective, defense spending generates public value if the value of sovereignty is translated through rules, organization, and implementation design. This research has limitations because it relies on secondary data, has not quantitatively measured the impact, and only covers the period from 2021 to 2025. Future research needs to use a quantitative or mixed-methods approach with budget data, local content, domestic contracts, defense equipment imports, industrial investments, and gross fixed capital formation so that the effectiveness of this model can be empirically tested.

D. Conclusions

This study concludes that Indonesia's defense budget has grown substantially, rising from Rp154.88 trillion in 2021 to Rp264.35 trillion in 2025, yet spending remains structurally dominated by routine operational and management needs rather than productive investment. Using a descriptive qualitative design and document analysis of 2021–2025 defense spending data, the study finds that investment in research and development, local content (TKDN), technology mastery, and domestic defense industry involvement remains limited. Key obstacles include routine spending dominance, import-dependent procurement, weak technology transfer, and reliance on foreign components. This imbalance constrains the transformation of defense spending into strategic investment capable of supporting the Asta Cita national development agenda and Indonesia Emas 2045. The study recommends a five-pillar "spend-to-invest" model: (1) budget recomposition to shift the balance from routine consumption toward productive investment; (2) local-content-based procurement to strengthen domestic industry participation; (3) research and technology transfer to build strategic technological capabilities; (4) domestic supply chain resilience to reduce import dependence and supplier vulnerability; and (5) indicator-based governance to ensure accountability, transparency, and measurable outcomes. Practically, defense planners and policymakers should institutionalize these pillars within medium- and long-term defense planning cycles, aligning budget allocation with industrial self-reliance targets. Procurement reform should prioritize life-cycle value, technology transfer obligations, and TKDN requirements, while governance mechanisms should track investment outcomes rather than merely disbursement. Coordination across the Ministry of Defense, domestic defense industry, research institutions, and universities is essential to convert increased budgetary space into durable industrial and technological capacity. Future research should empirically test

the proposed five-pillar model through comparative studies of defense spending transformation in other developing countries, examining how budget recomposition and local-content procurement affect industrial self-reliance outcomes. Longitudinal analyses tracking defense investment indicators against industrial capacity metrics would strengthen causal inference. Additionally, research should explore governance mechanisms and institutional incentives that most effectively accelerate technology transfer and domestic supply chain development, as well as the fiscal and political conditions under which "spend-to-invest" reforms are feasible and sustainable.

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F. Author Contributions

Valentino Partogi Siagian contributed to the design concept and implementation of the research, analysis of the results, and writing of the final manuscript. Suwito and Muliahadi Tumanggor were involved in planning and supervising the work, processed the data, performed the analysis, drafted the manuscript, and designed the figures. Suwito developed the theory and verified the analytical method. Muliahadi Tumanggor investigates and supervises the findings of this study. All authors discussed the results and contributed to the final manuscript.

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H. Data availability

All data generated or analysed during this study are included in this published article.

I. Declarations

Ethics approval and consent to participate

The study was approved by the Ethics Committee of the Universitas Pertahanan, West Java, Indonesia. No participants in this study.

J. Competing Interests

The authors declare no competing interests

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