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Indonesia's defense acquisition strategy

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ABSTRACT

Indonesia is a huge archipelagic state, whose maritime security faces a growing strategic challenge from China. Jakarta's ability to respond, however, is hampered by its low share of military expenditure in national income. The resultant unaffordability means that military capability is dependent on loans from overseas' contractors and banks to fund weapons acquisition. Consequently, Indonesia's acquisition strategy has been focused on closing the gap between capability aspirations and budgetary reality. It represents a case study of unorthodox funding options, comprising export credits, countertrade and institutional loans. In turn, Indonesia's acquisition pathways have been shaped by budgetary inadequacy, and include 2nd hand equipment markets, barter and international technology-sharing programs. Future acquisition policy reform is essential to remove the inefficiencies associated with the present cost-minimization approach.

Introduction

Indonesia's Armed Forces, known locally as the TNI (*Tentara Nasional Indonesia*), possess a total strength of 395,500 (with 75 percent of personnel attached to the army).[1] The numbers are impressive, but the TNI's military assets are rapidly aging and the sovereign territory requiring protection is immense, comprising five main islands, 30 smaller archipelagoes, and around 18,110 islands and islets.[2] Indonesia possesses the world's 4th biggest population, at around 280mn people, has huge mineral resources, and its economy is predicted to become the world's seventh biggest by 2030, and in the top five by 2050.[3] Yet, while the imperative for military security is urgent, efforts are constrained by the extremely low level of defense expenditure as a proportion of national income. In 2022, the proportion had reportedly reached a low of 0.7 percent, and was set to decline still further to 0.6 percent in the coming years.[4] This is the lowest defense spend per Gross Domestic Product (GDP) over the past decade among Southeast Asia's six emerging market economies, and for 2022, the shared third lowest in the G20, after Argentina (0.4 percent), Mexico (0.6 percent) and South Africa (also on 0.7 percent) – all countries which do not share the same heightened level of threat as Indonesia.[5] Additionally, Indonesia has a long maritime border to guard, with a regional security outlook that is volatile. China represents the biggest strategic challenge, given its formidable military capability and expansive territorial claims in the South China Sea, even reaching the archipelago and overlapping areas such as the Natuna Sea. To defuse the tensions, President Subianto signed a landmark agreement with President Xi in November 2024, whereby Indonesia agreed to joint development in areas of the South China Sea where the two countries have overlapping claims. Although the agreement marks a "tilt" in Indonesia's stance toward China, some international law experts have criticized the move as "falling into China's nine dash line trap."[6]

Historically, Jakarta's defense acquisition ambitions have focused on self-reliance, which resonate with Indonesia's leading role in the nonaligned movement. In the absence of local defense-industrial capacity, there has nevertheless been continued reliance on foreign supply

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of a broad range of military systems. The 1991–2005 US arms embargo strengthened Jakarta's resolve to reduce dependence on overseas suppliers, but the slow progress towards military modernization has heightened the sense of strategic vulnerability. The root problem was, and is, unaffordability, leading to inadequate Research and Development (R&D) funding, creating related innovation weaknesses. The institutional focus on R&D is critically important in the present milieu, because it represents the core element of military innovation. The nature of warfare is changing, and new disruptive technologies characterize the development of modern weapons systems. Acquisition will continue to include traditional platforms but must also necessarily embrace emerging technologies, such as Artificial Intelligence (AI), space, autonomous systems and cyber. Thus, although the biggest obstacle Indonesia faces in improving its acquisition performance is the sparsity of Ministry of Defence (MoD) funding, there are other considerations that will impact on the pace and efficacy of military modernization, such as the lack of a defense technology strategy.[7]

Hence, the purpose of this paper is to evaluate the performance of Indonesia's defense acquisition model, highlighting especially the weaknesses requiring remedial policy action. Figure 1 outlines the paper's structural approach, profiling firstly the principal drivers of defense acquisition, comprising Indonesia's push for international recognition, positive economic spin-offs, nationalistic fervor, as well as the TNI's responses, including the evolution of a contemporary and essentially maritime doctrine in an increasingly threatening strategic environment. The paper's focus then turns to acquisition funding sources, a topic of particular significance for Indonesia, given that 85 percent of its defense procurement is funded through overseas loans.[8] An assessment of the acquisition pathways is undertaken, embracing off-the-shelf procurement, offset-directed manufacture, 2nd hand acquisition and finally international cooperation efforts. A penultimate section offers a critical analysis of Indonesia's defense acquisition strategy by highlighting seven revealed deficiency domains, including the essentiality of raising defense funding to ensure progress toward local defense industrialization. A conclusions section brings the study to a close.

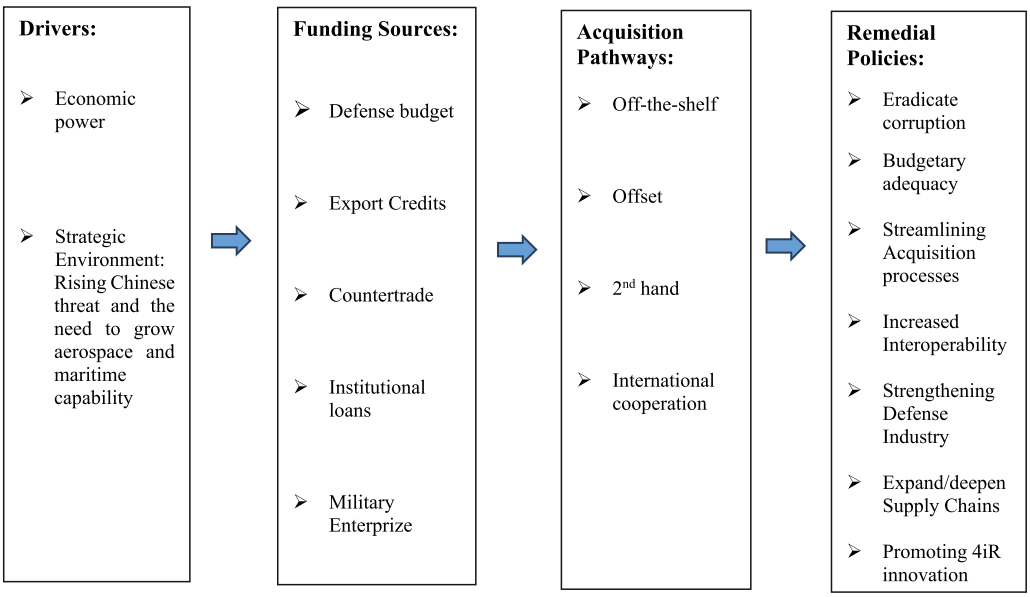

Figure 1. Framing of Indonesia's defense acquisition strategy.

Acquisition Drivers

Before analyzing Indonesia's acquisition strategy there is a need to rationalize why military modernization is increasingly been viewed as an imperative, and whether the country can break-out from the confines of nonalignment and defense isolationism. Two environmental drivers are coalescing to pressure modernization of Indonesian military capability – a yardstick of major power status. The first is the attainment of economic power. Although the World Bank[9] classifies Indonesia as a middle-income country, its GDP per capita reached only around US $5,000 in 2025, ranking it 121st out of 184 countries.[10] This highlights the challenge Indonesia faces in allocating sufficient funds for defense. Yet, contrastingly, if GDP is measured on a purchasing power parity basis, then Indonesia would be ranked 9th, placing it just behind Brazil and France, and ahead of Italy and the UK, and twice the rank of Australia.[11] By 2050, Indonesia is predicted to be the world's 4th biggest economy behind China, the US and India.[12] Of course, attaining elevated levels of GDP will depend on economic growth, and already Indonesia is slipping below 5 percent, down from its estimated long-term growth trend of 5.7 percent.[13] To maintain the required growth momentum will require investment into infrastructure, the streamlining of regulatory institutions to overcome the economic dead-hand of bureaucracy, and a committed push to reduce corruption.

The second, and arguably most important consideration driving defense modernization is strategic vulnerability. For most of Indonesia's history, its key threats have been defined as internal, arising from ideological, racial and religious conflict. It is only recently that external threats have begun to emerge. These includes unresolved land and maritime boundaries in the South China Sea, ongoing territorial disputes with Malaysia and Singapore, Flight Information Region (FIR) issues with Singapore, and other contentious issues, such as piracy, insurgency and terrorism.[14] The major threat, however, is unquestionably from China. The strategic frictions are long-standing, but Beijing's 2009 publication of its 9-dash line, making clear its claim on Indonesian waters, acted to exacerbate tensions.[15] The heightened military competition between the US and China potentially positions Indonesia in the line of fire, whereby any regional conflict involving these major powers and their allies, would likely impact on Indonesia's sea lanes of communication and airspace.[16]

Although direct Chinese military engagement against Indonesia is a long-term concern, in the short-term, there have been a variety of sovereignty violations, including illegal fishing near the disputed Natuna Islands, limitations of Indonesia's Air Defense Identification Zones (ADIZ), alleged Chinese research underwater drones caught by fishermen in Kepulauan Riau and several violations of airspace in Papua province.[17] Adding to these pressures are China's repeated incursions into Indonesian territory.[18] Indonesia's response has been to modernize the TNI through a strategy termed "Minimum Essential Force" (MEF). It was introduced in 2010 to define the nature and size of Indonesia's military capabilities, which at a minimum is the ability to deploy in response to two flashpoints at the same time. Necessarily, the MEF is "balanced" to ensure a dual-dimensional approach, designed to modernize the military's aging hardware, but avoiding excessive financial commitments that would threaten economic recovery. The MEF was scheduled to be completed by 2024, but due to financial stress, the Indonesian Air Force (TNI-AU), Army (TNI-AD), and Navy (TNI-AL) had only, respectively, met 51, 60, and 76 percent of the plan by the year 2023.[19]

Policy emphasis is on maritime capability, especially the new concept of "Large Island Defense."[20] Launched in 2021, it is based on the National Defense General Policy concept of in-depth defense, which requires that large islands – and the small islands around them – can defend themselves independently from threats.[21] The strategy preconditions self-sufficiency in logistics, from food to ammunition, and also greater inter-island connectivity enabled by the Navy and Air Force.[22] The strategy oversees the prioritization of the Papua and Kalimantan Islands before those of Jawa, Sumatra, and Sulawesi.[23] Papua Island faces insurgency and shares a border with Papua New Guinea, while Kalimantan is where the new capital city will be built, sharing a land border with Malaysia. In addition, Jakarta also plans to strengthen the Natuna Islands by constructing an integrative three-service base.

These actions are in response to China's continued incursions into Indonesia's territorial waters as well as confrontations with Indonesian maritime defense forces over rights to disputed waters, often involving Chinese fishing vessels. Such incidents forced Jakarta in 2020 to deploy four fighter jets to protect the country's Economic Exclusive Zone (EEZ).[24] Such violations form part of China's gray zone operations, aimed at controlling the Natuna waters and claiming sovereign rights to resources without engaging in open conflict. Importantly, then, China's claim is for part of Indonesia's EEZ, not its islands. Due to the Natuna Islands' location at the southern end of the South China Sea, along with its complicated geostrategic environment, it is not easy for Beijing to concentrate forces in this area, and thus Jakarta can maintain a balanced capability through improved force deployment. Chinese incursions are likely to continue, however, unless Jakarta substantially increases its external military capability. Indonesia's defense acquisition strategy is thus critical, and adequate levels of funding are essential.

Funding Sources

Defense planning and budgeting amid rising weapons cost is a challenge for every country, irrespective of GDP value and defense economy size and capability. The challenges of affordability are universal, albeit at different levels of magnitude. While Indonesia is a member of the G20, it nevertheless carries the label of a developing country obliging it to prioritize the objectives of both defense and development. Consequently, there is no doubt that defense spending has suffered.

Budgetary Funding and Constraints

In 2023, Indonesia's defense budget stood at around US$8.6bn, which in relation to GDP meant it was ranked 144th out of 167 countries worldwide.[25] Indonesia's defense spending has been low for several decades, with the "defense burden" continuously below 1 percent of GDP.[26] Despite the Government's MEF roadmap stating the need to increase defense spending to 1.5 percent, and former President Widodo's 2021 Presidential regulation providing an additional US$2.06bn of defense spending, the ratio declined in 2023 to 0.6 percent of GDP.[27] Although a measured surge of defense spending occurred in 2023 with several major procurements, the low percent of defense to GDP remained.[28] The responsibility for determining the defense budget falls to the First Commission of the Parliament. It has unlimited powers to change, reduce or increase the budget, reject budget proposals and propose new allocations until a new law on the state budget is issued. In the past decade, the defense budget has consistently been among the top state expenditures. This is likely to continue in the future, given that the Members of the new October 2024 Parliament expressed support for increased defense spending to finance military modernization and welfare.[29] Yet, while the MoD still accounted for the largest share of government spending in 2025, it is anticipated that in 2026, the National Nutrition Agency (Badan Gizi Nasional) will be the largest recipient of the state budget with the MoD second, equal to less than 1 percent GDP.[30] The slide in the share of defense in government spending is down to changed government priorities. While President Prabowo has pledged spending 1.5 percent of GDP on military modernization in the election manifesto,[31] his signature program of US$4.3 bn on free nutritious student lunches has taken most of the fiscal space in the state budget.[32]

Indonesia's defense acquisition system operates according to Five-Year Medium-Term plans called *Renstra*. The MEF has spanned three *Renstra*, running from 2010 until 2024, and failed to meet the MEF military buildup target by the end of the planning period, which based on MoD averaging across the services had reached just 70 percent by end 2024.[33] The major problem is the lack of funding, which has been squeezed by global inflation of commodity prices due to the impact of COVID-19 and the enduring Ukrainian conflict. Additionally, there are diplomatic obstacles, including Jakarta's decision to axe the Su-35 fighter deal with Russia because of the Countering America's Adversaries Through Sanctions Act (CAATSA).[34] The third and final phase of the MEF (2020–24), will link into four new *Renstra* to reflect the Long-Term acquisition plan up to 2044. As part of this plan, in 2021,

the then Defense Minister Prabowo Subianto announced thelaunch of a modernization concept called the Archipelagic Trident Shield (*Perisai Trisula Nusantara*). For a country like Indonesia, possessing only limited capabilities and resources, and required to defend a huge archipelago, the only feasible approach is through anti-access/area denial (A2/AD) systems which focus on neutralizing an enemy's surface vessels and other related capabilities – representing the indispensable means to invade the archipelago.

Based on the archipelagic theory, the Trident Shield highlights the need to shift the TNI's strategic center of gravity away from army-centered operations to a more balanced distribution of Armed Force. Since independence, Indonesia's military has focused primarily on internal threats, such as separatism and domestic security, resulting in a land-heavy TNI posture dominated by the Army – whose personnel outnumber the Navy and Air Force nearly threefold – with resource constraints further limiting the development of modern naval and air capabilities.[35] This balancing of forces aimed at maintaining the integrity and unity of Indonesia's islands and maritime territories and will cost up to US$125bn over the next 25 years.[36] The plan is both ambitious and controversial, comprising expenditure of US$79.1bn on military equipment, US$32.5bn on contingencies and maintenance and US$13.4bn on interest charges to service the 25-year foreign loans.[37] The Finance Ministry has approved roughly US$25bn in foreign loans since 2020 as a means of financing this plan.[38]

In August 2023, however, the Minister of Finance reportedly refused further funding for the Archipelagic Trident Shield, albeit there would be consideration of a generous compensatory budget to expedite the modernization program at the end of the 2020–24 strategic planning period.[39] An additional major structural issue weakening Indonesia's defense budgetary model is that acquisition only accounted for less than 20 percent of the total budget through 2015–2020.[40] Among the three services, the army and the TNI headquarters have more than half of the defense budget, suggesting the navy and air force face challenges in financing asset acquisition and maintenance.[41] Under the strategy of Large Island Defense, the current process of budgetary allocation is reasonable for the short-term, but creates obstacles for longer-term transformation. Potential invaders reaching the archipelago would have formidable air and naval power, and it is unlikely that the TNI-AL and TNI-AU can be rapidly strengthened to an equivalent level.

However, Indonesia harboring the goal of becoming a regional power will require the expansion of TNI-AU and TNI-AL main combat capabilities, including aerial combat, aerial early warning (AEW), refueling, submarines, and major surface combatants. Yet, this will not be feasible with the present land-centered allocation of defense resources. Significant personnel spending means the army, with the highest number of personnel, is allocated the bulk of funding, followed by the Operational and Maintenance (O&M) budget, amounting to half of personnel spending, and what is left is essentially discretionary budgeting for acquisition.[42] The O&M and acquisition budget in 2016 showed a trend of widening divergence, in which O&M was prioritized over acquisition, with the latter remaining stagnant.[43]

Inevitably, defense budgetary shortfalls affect structural issues, which in turn hamper military performance. In 2021, the MoD listed numerous additional non-funding problems, including limited personnel and knowledge, hardware, lack of standardization, and institutional arrangements.[44] There is also a lack of cohesive defense acquisition planning, leading to over-ambitious pronouncements on the scope of requirements, and funding availability.[45] Invariably, adequate funding is not obtained, as evidenced by the Renstra 2020–2024, where only 33 percent of the defense budget requirement plan could be covered by state funding.[46]

Institutional Loans

The six defense funding sources are regulated by Permenhan No. 3, 2020 – The National Defence Program and Budgeting System, and comprise: 1) funding from national sources (*Rupiah Murni*, RM); 2) non-taxation state revenue (*Penerimaan Negara Bukan* Pajak, PNBP); 3) grants (*Hibah*); 4) foreign loans (*Pinjaman Luar Negeri*, PLN); 5) domestic loans (*Pinjaman Dalam Negeri*, PDN); and,

finally, 6) public service agency (*Badan Layanan Umum*, BLU).[47] The Ministry of Defence has been classified as a state ministry experiencing high dependence on foreign loans.[48] For individual projects, foreign loans can be as much as 85 percent of the budget, with the remaining 15 percent representing the government's Rupiah share.[49] An additional, insignificant – and thus unclassified – source of government revenue is Islamic securities (*Surat Berharga Syariah Negara*, SBSN), which across 2021–23 amounted to just one percent of the overall defense budget.[50] Notwithstanding the plethora of funding sources, the gap between Indonesian funding and weapons acquisitions has necessitated the use of alternative, sometimes unconventional, means to accommodate overseas purchases.

Export Credits

Since the early 2000s, foreign suppliers, such as Russia, have provided Jakarta with export credits to acquire expensive defense equipment.[51] Indonesia has tried to wean itself off this finance mechanism, but due to funding inadequacies the practice has continued. Consequently, unlike most other countries' defense budgetary models, Indonesia's acquisition funding primarily derives from external sources, not tax revenue.[52] There are two downsides to this approach, however: firstly, it is an expensive way of procuring already costly weapons platforms, because interest has to be paid on loans, and, secondly, there is uncertainty as to the actuality of loan provision. Thus, while the original 2020–24 Strategic Planning document envisaged that the MoD would receive US$20.7bn in external loans, the reality was that by September 2023 only US$7.8bn had been received.[53] Of course, from the foreign contractor's perspective, the ability to offer export credits provides a competitive advantage in the bidding process.

Countertrade

Indonesia's countertrade and offset regulations allow payments to be conducted via barter rather than cash.[54] Hence, Jakarta can discharge its acquisition liabilities via a mix of supplier export credits, payments in kind (primarily through palm oil and other commodities), and, if available, convertible foreign currency. Countertrade is employed as a mode of payment for foreign weapons acquisition to overcome budgetary shortfalls. The practice not only facilitates acquisitions from non-convertible currency states, such as Russia and its former Eastern European partner countries but also those from Asia, such as Thailand and South Korea. In 2002, Jakarta acquired US$193mn worth of weapon systems from Moscow, but only 12.5 percent of this value was paid in cash, with the rest paid in crude palm oil, rubber, and derivative products.[55] Countertrade, including offset, later became mandatory in arms imports through Law 16 Article 43, 2012. In 2017, the MoD for the first time imposed a mandatory countertrade requirement on the acquisition of 11 Su-35 aircraft worth US$1.14bn, whereby 50 percent would be payable via commodities.[56] In 2022, Indonesia and South Korea agreed to renegotiate Jakarta's Korea Fighter Aircraft (KF-21) cost-sharing payments, whereby 30 percent or around US$300mn of the outstanding cost share would be paid via commodities.[57] Interestingly, countertrade has also been used to facilitate Indonesia's arms exports, such as when in 2001 Indonesia imported seven South Korean KT-1 Wong Bee training aircraft worth US$60mn, with Jakarta paying via the export of locally produced CN-235 aircraft.[58]

Military "Enterprize"

Up until the 2000s, off-budget revenue from military business was used for defense spending, and it was claimed that military businesses contributed to soldiers' welfare and defense budgets.[59] The management of significant assets and profits within military foundations and cooperatives had been allowed to operate unchecked on the pretext that the state could not fund the military's needs.[60] For example, in 2005, an Inter-Agency team tasked with transformation of TNI businesses reported that 1,500 business units, worth around US$108mn, were in the military inventory, but this figure was

criticized by Parliamentarians as too low to be credible.[61] Following reforms, particularly Article 25 of Law No. 3/2002 - National Defense, and Article 66 of Law No. 34/2004 - Indonesian National Defence Forces, it was made explicit that TNI funding must be sourced exclusively from the state budget.[62] Henceforth, the TNI was prohibited from participating in business and all existing military enterprises were to be transferred to the state. Presidential Regulation No. 43/2009 outlined the takeover process, placing the ownership of military businesses under legal cooperatives. The government's position is that due to defense budgetary reform, the concept of "off-budget" no longer exists because all defense budgets must be administered and accountable. Yet research conducted in 2019, a decade after military enterprises should have ceased trading, suggests that military-owned cooperatives remain in business.[63]

Defense Acquisition Pathways

Indonesia's acquisition approach comprises an amalgam of pathways that appear to be based more on the grounds of financial feasibility than operational prudence. The enduring MoD objective is to acquire military capability for effective defense, but because of Indonesia's historic vulnerability to arms embargoes, a growing proportion of this capability was always expected to be sourced from indigenous defense industry. The architect of Indonesia's technological transformation process in the pursuit of self-reliance was Dr Habibie, who assumed the role of State Minister for Science and Technology from 1978. Although focused on the industrial deepening of the wider economy, he recognized that defense systems lay on the technology frontier and accordingly must be embroidered into the industrial planning fabric. Dr Habibie's development strategy was unique, centered on the dynamics of fostering both development and defense. In the 1980s, Dr Habibie established 10 state-owned "strategic industries" to construct the civil-military foundations of Indonesia's industrial and technological transformation. The list included the so-called "spearhead" aerospace and shipbuilding industries, comprising, respectively, PT IPTN, Bandung, and PT Pal, Surabaya.[64]

The strategic industries would act as prime contractors and systems integrators, with their aggregated demand cultivating the development of specialized high value supply chains aimed at promoting local technological innovation. Moreover, the strategic prime contractors would be structured according to a development-driven paradigm, such that in peacetime some 80 percent of production would be focused on civil technology outputs, with the proportion reversed to 20 percent during periods of conflict.[65] While policy emphasis on civil-military integration was intended to defray the high social costs of defense, the ambitious indigenization project became still-borne amidst the late 1990's Asian economic crisis. The conditions attached to an IMF US$43bn loan demanded the removal of all central subsidies essential for development of the fledgling strategic industries, leading directly to their economic paralysis over ensuing decades.[66] Furthermore, the central role that the strategic industries were expected to play was undermined by budgetary constraints and foreign contractors' unwillingness to share technology. The resulting divergence of energy and investment led to incoherent acquisition choices, budgetary inconsistency, logistical inefficiency and operational stretch.

Off-the-Shelf

Indonesia's weapons acquisition has primarily focused on foreign ready-made products, influenced by perceived threats, changing economic conditions and shifts in foreign policy. Early postwar acquisition of military assets from the Netherlands was a prerequisite for the transfer of sovereignty from Indonesia's former colonial power.[67] The military buildup was bolstered in the early 1960s when Indonesia secured a soft loan of US$450mn from the Soviets to buy weapons from the Eastern Bloc.[68] This acquisition pattern aligned with Indonesia's foreign policy under President Sukarno (1945–66), who leaned toward the Eastern Bloc on the grounds of ideology and the opportunity of obtaining favorable financing terms. During this period, the TNI relied heavily on

Soviet technology for a wide range of major conventional arms, encompassing items such as the Project-68/Sverdlov cruiser and the Project-613/Whiskey class submarine.[69] Indeed, Jakarta's Armed Forces during this period benefitted from Soviet supplies of many sophisticated weapon systems, such as MiG-21 fighters, Tu-16 and Il-28 bombers, Project 641 submarines, Project 50 destroyers, and Project 68bis cruisers. Notwithstanding this dependence on Soviet weapons systems, by 1967, Indonesia possessed around 40 types of weapons sourced from 12 countries, with a significant portion being 2nd hand.[70]

The foreign policy changes brought about by Suharto prioritized stability in Southeast Asia through the establishment of the Association of Southeast Asia Nations (ASEAN) and good relations with Western countries. The absence of external threat allowed Indonesia to put a temporary halt to defense development.[71] From 1967, separatism took the political center-stage in Indonesia, forcing the military to focus on internal threats. Nevertheless, Cold War concerns remained, and ensured continued acquisition of conventional off-the-shelf military platforms, such as F-5E/F fighters, following the US withdrawal from Vietnam in 1975 and integration of East Timor to Indonesia in 1979.[72] Investment into defense modernization was also encouraged by the boost to Indonesia's fiscal capacity following the 1973 and 1979 surges in global oil prices. This was accompanied by a shift in foreign policy favoring the Western Bloc, with the US emerging since 1978 as the primary arms supplier due primarily to the attractiveness of its Foreign Military Sales (FMS) program. Between the mid-1960s and 1990s, relations with the West stabilized and Indonesia's acquisition approach became more eclectic, procuring air force and naval assets from a variety of sources, including US F-5E/F, F-16A/B fighters, B-737 and F-27 maritime patrol aircraft, German 57 m patrol craft and type-209 submarines, and former Dutch frigates and corvettes.[73] However, their numbers were small, especially when contrasted with the size of Indonesia's territory.

During this period, Jakarta also procured counter insurgency (COIN-oriented) arms, such as *M*-101 howitzers, C-130 transport aircraft, AMX-13 light tanks, and V-150 armored personnel carriers.[74] Then, in 1991, in what called the Santa Cruz massacre, in which the Indonesian military allegedly opened fire on mourners at a pro-independence funeral, the US responded by promptly terminating its International Military Education and Training (IMET) program with Indonesia.[75] In 1999, the pressure on Jakarta increased, when following East Timor's independence referendum and Indonesia's involvement in the subsequent destruction of Dili, the US and its allies imposed an arms embargo on Indonesia – lasting until 2005.[76] This obliged Indonesia to turn East once again, with off-the-shelf fighter acquisitions from Russia, but the deals were stymied due to the prevailing economic crisis.[77] By the late 1990s, Indonesia possessed an inventory of 122 types of weapons from 20 countries, with NATO members dominating supply, representing over 97 percent of total imports, valued at US $6.61bn.[78] Although Indonesia continued to import arms from Eastern Bloc states, especially Ukraine and Slovakia, the numbers were minimal.

After the 1998 democratization reforms, Indonesia's arms acquisition was focused on addressing capability gaps caused by the earlier US embargo and the pursuit of systems maintenance and defense modernization. The period from 1999 to 2003 was punctuated by *ad hoc* and controversial acquisitions lacking alignment with strategic needs, such as President Megawati's controversial acquisition of four Russian SU fighters.[79] The official arms modernization process began in earnest in 2010 under the MEF policy during President Yudhoyono's second term in office. The arms acquisition diversification process, post-US embargo, increased supplier countries from 12 to 26, with South Korea dominating imports, followed by Russia, the Netherlands, the UK and the United States.[80] As the largest weapons import source, South Korea supplied all types of primary weapons systems except for battle tanks and helicopters.[81] Fighter planes and warships continued to dominate off-the-shelf acquisition, with the modernization process driving the introduction of new technologies, such as network-centric warfare, Medium Altitude Long Endurance (MALE) drones and cyber defense. Area access and denial systems (A2/AD) also became increasingly important through a balanced approach that included sophisticated aircraft and maritime platforms as well as missiles. Such capabilities are essential for Jakarta to protect the archipelago's sovereignty.

In the contemporary period, Indonesia has revealed plans to field 24 Lockheed Martin S-70 M *Black Hawk* helicopters, two Airbus A400M *Atlas* airlifters and 12 Turkish Aerospace Industries *Anka* medium-altitude long-endurance unmanned aerial vehicles (UAVs).[82] These are on top of the three recently delivered C-130J *Hercules* transport aircraft (out of five ordered), two *Fani*-class minesweepers, and keel-laying of the first of two *Red White* frigates (based on Babcock's *Arrowhead* 140 design).[83] Adding to the procurement of 24 Boeing F-15EX fighters, Indonesia also signed a September 2022 contract for six French *Rafale* fighters that are scheduled to be delivered in 2026, with an option for a further 36 aircraft (confirmed early 2024),[84] with the total order costing US $8.1bn.[85] Importantly, Jakarta "paid" for the initial six aircraft, but as with all recent major foreign acquisitions (save when US FMS arrangements apply) the funding for the remaining 36 will be sourced via export credits.[86] Other major items in the pipeline, include six European FREMM multi-purpose frigates, and possibly two or three submarines (relating to the three *Nagapasa*-class submarines commissioned between 2017 and 2021).[87] Acquisition of the major surface combatants will advance the TNI-AL's air defense and anti-submarine capabilities, which, due to cost concerns, were neglected in previous acquisitions.[88] Yet, funding shortfalls will constrain acquisition of essential related munitions, sensors and other auxiliaries to support these high profile platforms. For example, there were only two sonars acquired for the 11 AS-565 anti-submarine helicopters.[89] Similarly, Jakarta has acquired only 14 AIM-9X air-to-air missiles for more than 30 F-16 fighters.[90]

Offset: Catalyst for Local Defense Industrialization[91]

Indonesia's use of defense offsets began in the 1960s. There was no formal policy in place, and so offset negotiations linked to major arms programs were *ad hoc* and uncoordinated.[92] As a result, while there were isolated cases of technology transfer success, such as BAE Systems' creation of composite manufacturing capacity in what was then PT IPTN, offset performance overall proved to be patchy.[93] Across the period, 1976–2010, few jobs were created, but this was in line with other countries' offset experiences.[94] The informal offset approach also failed to positively impact supply chain, export and R&D capacities.[95] A renewed commitment to indigenization through defense offset was thus required, and this occurred in 2010 when the KKIP was established (The Committee of Defence Industries Policies – Komite Kebijakan Industri Pertahanan) to formulate, coordinate and monitor defense industrial strategy, with the aim of enhancing self-reliance in defense acquisition and reducing the heavy dependence on foreign suppliers.[96] Henceforth, all overseas arms acquisitions would be expected to incorporate offset arrangements, not least because Jakarta viewed these as a principal vehicle for creating an indigenous defense economy, including the creation of manufacturing capacity, skill-intensive jobs, supply chains, R&D and ultimately exports.[97]

This process of industrial revitalization was intended to encourage not only the development of existing state-owned strategic industries, but also the growth of an incipient defense economy. Progress in the latter has been made, as it now employs about 10,000 people,[98] across 206 defense companies, including nine state-owned enterprises and 197 private companies.[99] Yet, the state-owned companies while nearly always acting as the prime contractors on indigenous programs have continued to be highly dependent on technologies, components and subsystems provided by foreign suppliers.[100] This has resulted in Indonesia's defense industrial base remaining capable only in low-technology areas, such as the production of small arms, ammunition, explosives, and propellants, lacking the capability for design, development and even production of sophisticated military technologies.[101]

The policy regulations pertaining to Law No. 16, 2012 on Defence Industry require foreign engagement through three channels, countertrade (barter), local content, and/or offset with an emphasis on technology transfer. The legislation stipulates that the combined value of these three channels should not be worth less than 85 percent of the main contract and offset must have a value of not less than 35 percent. In addition, offset value must increase by 10 percentage points every five years to promote gradual expansion of local industrial participation.[102] Countertrade includes either

commercial or defense products, but is not mandatory.[103] Since 2014, numerous arms acquisitions have been linked to offset deals carrying local work obligations. While technology transfer is a priority, barter arrangements are acceptable as a means of reducing pressure on Indonesia's limited budgetary resources.

At the commencement of the new offset policy, Airbus signed a contract with PT DI to supply nine C295 aircraft to the Indonesian Air Force.[104] The program included the transfer of technologies to enable PT DI to manufacture the C295 tail empennage, rear fuselage, fuselage panels, and provide packages for the development of computer-based training systems as well as the creation of a C295 service center and a final assembly line in Indonesia.[105] Law No. 16, 2012 on Defence Industry was also intended to be applied to Indonesia's aborted US$1.1bn acquisition of 11 Russian Su-35 fighters, including half the contractual value "paid" through the transfer of locally produced commodities, such as palm oil, rubber, machinery, coffee, cocoa, textiles, tea, footwear, processed fish, furniture, copra, paper, and spices.[106] In the naval area, budgetary problems, as well as technical difficulties stemming from offset programs linked to the earlier acquisition of South Korean submarines, were the major reasons why Jakarta hesitated in proceeding with the *Scorpene* submarine acquisition.[107]

In cognizance of the dangers of over-reliance on offset, Jakarta launched the Omnibus Law in 2021.[108] There are numerous offset dangers, including the unwillingness of the offset provider to share core technology and the susceptibility of project failure, especially when local absorption capacity is low, as in the case of South Korean submarine-related technology transfer. Omnibus Law 2021, however, specifically sought to address aspects of Law No. 16, 2012 on Defence Industry that act to impede defense-industrial growth, including removal of the prohibition on foreign investment and allowing private sector companies to become lead integrators rather than being the exclusive preserve of state-owned enterprises. There are nevertheless concerns that private enterprise will lack the capital resources for technological upgrading and the Omnibus law will pave the way for liberalization of the defense sector in Indonesia at the expense of State Owned Enterprizes.[109] Two derivative regulations created to implement the Law on Defence Industry were government regulation no. 5 of 2021 and Minister of Defence regulation no. 5 of 2021. The first regulation monitors and controls lead integrators across five fields, namely, weapons and ammunition industry, aircraft industry, industry war vehicles, warship industry, and the defense radar industry. The government, through the KKIP and the Ministry of Defence, has the authority to appoint a lead integrator for each field. To date, no private company has been granted the status of lead integrator.

Search for Interim Capability through 2nd hand Weapons Systems

Since its foundation, the TNI has continuously acquired "used" assets to build up its capability and capacity, but the acquisition of used equipment is now slackening due to gradual increases in local production. Nevertheless, 2nd hand equipment reflects TNI's fundamental trade-off between maintaining a broad territorial defense capability and limited financial capacity. Indonesia is a large archipelagic country which demands substantial numbers of TNI units and associated deployable assets, but this breadth of capability is unaffordable, particularly new weapons systems, and accordingly secondhand equipment presents a viable "economic" alternative. Although used assets possess reduced lifespans, the aging impact is uneven. Moreover, used land systems face a low risk of malfunction, because they do not sink or fall, compared to vessels and aircraft facing higher risks of losing power or other essential functions. During the Cold War, Jakarta did not have the financial capacity to acquire new assets from external or indigenous sources, and was therefore obliged to accept used systems, regardless of whether they were land, vessels or aircraft. After several decades of effort, Indonesia has now expanded weapons acquisition from foreign and indigenous sources, and secondhand equipment plays a less prominent, albeit still important, role in the country's acquisition strategy. Table 1 illustrates that in the post-Suharto era, acquisition of used military assets, especially land systems, was employed to both sustain and expand existing capabilities.

Table 1. Indonesia's acquisition of major used-equipment during the Post-Suharto era (1998–2022).

Time[2]	Name	Number	Sources	Modernization	Service
1997–1999	BTR-50 armored personnel carrier	34	Ukraine	N.A.	TNI-AU Marine
1999	TA-4J trainer	2	USA	Before delivered	TNI-AU
2002	SF-260 Trainer	19	Singapore	N.A.	TNI-AU
2002	Jupiter training craft	1	Singapore	N.A.	TNI-AL
2003	N-24 Maritime Patrol Aircraft	2	Australia	N.A.	TNI-AL
2003–2004, 2008	RM-70 multi-rocket launcher	3+6	Czech	Followed by licensed production	TNI-AL Marine
2004	Casspir	2(+)	South Africa	N.A.	TNI-AD
2006	F-5E fighter	1	USA	Before delivered	TNI-AU
2009	LVTP-7A1	10	South Korea	N.A.	TNI-AL Marine
2011	Waspada attack craft	2	Brunei	N.A.	TNI-AL
2013–2015	Marder I-A3 Infantry Fighting Vehicles	42	Germany	Before delivery	TNI-AD
2013–2017	Leopard II-A4 Main Battle Tanks plus ARV, AVLB and AEV versions	103+5 +3+3	Germany	Before delivery	TNI-AD
2014–2017	F-16C/D fighters	24	USA	Before delivery	TNI-AU
2014–2018	M-113 Armor Personnel Carrier	150	Belgium		TNI-AD
2015–2017	C-130H Transport Aircraft	9	Australia	Before delivery	TNI-AU
2017–2018	M-108 command vehicle + *M*-109A4 Self-Propelled Howitzer	4+36	Belgium	Before delivery	TNI-AD
2017–2018	M-113 amphibious armor personnel carrier	10	Italy	Before delivery	TNI-AL Marine
2021	Bushmaster Armor Personnel Carrier	15	Australia	N.A.	TNI-AD

Source: SIPRI Arms Transfers Database.

(1) Some other deals not listed in this table could be used assets but are not shown due to lack of confirmation.
(2) Delivery year(s).

To sustain existing capability, used assets are acquired similar to those types already in service, or different models with the same function. Jakarta received additional Ukrainian BTR-50 Armored Personnel Carriers (APCs), Australian *N*-24 maritime patrol aircraft and C-130 H transport aircraft, American F-5E fighter and TA-4J trainers to reinforce existing assets.[110] With relatively new designs and shorter services, American F-16C/D fighters, *M*-113 and Korean LVTP-7 amphibious APCs, and Australian Bushmaster APCs have contributed to the modernization of military capabilities. The TNI-AU Marine Corps also strengthened its multi-rocket launcher units through acquisition of small numbers of used Czech RM-70s, leading to local production.[111] Indonesia has also introduced used-assets to generate new capabilities, including, for instance, German Leopard II-A4s for Main Battle Tanks (MBTs), South African *Casspir* for landmine resistant vehicles, and Belgian *M*-109A4s for tracked self-propelled howitzers.[112]

Indonesia's acquisition of used assets primarily in the post-Suharto era was shaped by two factors, firstly, the promotion of indigenous defense industries through familiarity with maintenance, repair and overhaul capabilities, and secondly the ability to fill acquisition gaps. Jakarta's investment in shipbuilding, aviation and vehicle manufacturing has resulted in the supply of various types of assets, such as landing ships, corvettes, Fast Attack Craft, small and medium transport aircraft, utility helicopters and wheeled armed vehicles, which remove the necessity of acquiring used assets in these categories.[113] In addition, Indonesia's defense industries have developed proven expertise in extending the services of old assets, such as AMX-13 light tanks, PT-76 amphibious tanks, and S-60 anti-aircraft guns, and the logic of such improvement is that it reduces the demand for additional acquisition of used-assets to sustain specific capabilities.[114] Some types of equipment are not supplied by indigenous industry, such as tracked APCs, amphibious vehicles, Infantry Fighting Vehicles and MBTs, and thus used assets are acquired from overseas sources to sustain existing capabilities, or

introduce new ones. For example, the indigenous aviation industry currently does not produce transport aircraft larger than CN-235, and hence 2nd hand Australian C-130Hs possessing greater capacity, represent a sensible choice.

Under the policy approach termed "interim capability" or "interim deterrent," several used fighter and frigate deals in recent years have acted to fill capability gaps prior to new acquisition programs reaching fruition.[115] For instance, in the early 2010s, a deal to acquire 24 used F-16C/Ds was pursued to expand the capacity of air defense, prior to the anticipated arrival of Korean KF-21 fighters.[116] Yet, acquisition of used-assets can also create problems, including accelerated aging and obsolescence, higher costs of maintenance, poor readiness levels and operational inferiority. Due to the need for wide deployment across the archipelago, Indonesia's land forces, both the TNI-AD and TNI-AL Marine Corps, have perforce retained substantial Cold War assets. However, in land systems, Jakarta has plans to replace old assets with newer models, along with modernization or upgrade of those systems still in service.[117] It is hard to gauge actual levels of readiness of old land assets, but their engagement in exercises, training and parades, suggest that capability remains at an acceptable level.[118] As for technology, despite land borders with three neighboring countries, the archipelagic environment requires that land forces focus on anti-landing scenarios, rather than direct confrontation with an enemy's land assets. Accordingly, old tanks, howitzers and other heavy equipment are simply better than nothing. Since most combat aircraft and vessels are not Cold War legacies, aging does not pose a major challenge. Nevertheless, accidents such as the 2021 loss of the KRI Nanggala submarine may likely be due to aging.[119]

International Cooperation

During the closing years of his Presidency, Joko Widodo's political clarion call was "from spending to investment" (converting the defense budget into local industrial capability).[120] The President viewed defense investment as a catalyst for the creation of high-value employment, reinvigoration of domestic industry, positive military-to-civil technology spin-offs, and enhanced innovation. Yet, given the paucity of budgetary resources, a further pathway to achieving these goals was held to be foreign cooperation. Offset is one such mechanism, but so are joint development programs, such as those with Spain and South Korea (aerospace) and Turkey (Tanks).[121] International acquisition cooperation tends to focus on the higher value domains of design, development and systems integration of new weapons programs. An example of this approach is the Korean Aerospace Industries (KAI) KF-21/IFX *Boramae* 4.5 Generation South Korean-Indonesia fighter program, albeit that to this point its track record does not give cause for optimism.[122]

The KF-21 program was launched in 2015 and involved a 60:20 split in the US$6.2bn engineering and production development bill between, respectively, the South Korean and Indonesian governments, with KAI accounting for the remaining 20 percent cost share.[123] Indonesia's deteriorating economic position obliged Jakarta to obtain a payment suspension between January 2019 and November 2022, but since then has once again become an "active" partner, though continuing to suffer payment shortfalls, amounting to around US$1bn.[124] In fact, Indonesia had reportedly paid only around 21 percent of its cost share by June 2023, with the government ominously failing to officially announce the 2024–26 payment schedule.[125] While Indonesia's tardy payments are the principal problem plaguing the partnership, there are also disagreements over several other aspects of the deal, including the nature of the initial contractual arrangements, intellectual property rights and marketing issues.[126] Cash-strapped Indonesia has already terminated its submarine acquisition deal with the South Koreans, due to financial and technical difficulties,[127] and to compound matters, reports have surfaced that Seoul is looking to review the *Boramae* project.[128] This was speculatively linked to a separate September 2023 report that the UAE's Tawazun Acquisition Authority had expressed interest in not only covering Indonesia's cost-share shortfall but also taking over its 20 percent share of the program cost.[129] In the event, Indonesia successfully negotiated an extension

to its payment schedule, with the UAE engagement focusing solely on Phase Three production of the KF-21.[130]

Remedial Policy Actions

The new Indonesian government headed-up by Prabowo Subianto, a former Army Lieutenant-General, will clearly take a keen interest in promoting TNI capability. Given the change in administration, it is a propitious time to identify the weaknesses of the present defense acquisition strategy. First and foremost, there must be an attempt to eradicate the endemic problem of corruption infecting the country's defense acquisition system. According to Transparency International, arms procurement in Indonesia suffers a high risk of corruption. In 2015 and 2020, Indonesia received a grade D, meaning high risk, in its defense integrity assessment. Some of the main concerns include: *lex specialist* procurement regulations;[131] a lack of transparency concerning the nature and numbers of weapons systems; the bulk of defense procurement not being conducted through open tenders; excessive use of brokers; and nontransparent offset arrangements.[132] During 2014–2019 alone, there were several major corruption cases involving military and civilian officials, such as the procurement of AW-101 helicopters and F-16 fighters, as well as the sale of strategic sealift vessels to the Philippines.[133] While the military is among the most trusted institutions in Indonesia, this does not extend into the sensitive domain of procurement funding.[134] For example, in 2021 the government drafted a Presidential Regulation regarding defense equipment needs, but the plan was heavily criticized as not being sufficiently transparent and thus prone to corruption.[135] In December 2024, the Constitutional Court ruled that the Corruption Eradication Commission (KPK) has the authority to investigate corruption cases involving the civilian and military sectors. While the ruling marks a significant step toward anti-corruption practices in arms procurement, implementation of the rule will likely prove a challenge due to coordination difficulties between KPK, TNI, and other law enforcement agencies.[136]

The second remedial action is that the acquisition budget must increase in value. For this to happen, the government must furnish the MoD with sufficient funds not only to support maintenance and upgrade of the existing inventory but also to fund prospective acquisition programs. These should focus on aerospace and maritime platforms to support the Archipelagic Trident Shield in protecting Indonesia's maritime territory, particularly the strategic maritime choke points of the Sunda Straits (linking the Indian Ocean with East Asian waters) and Lombok Straits (Indian Ocean and the Pacific). Thus, in an attempt to push implementation of the MEF's roadmap, former President Joko Widodo signed a Presidential Regulation in 2021 for an additional US$2.06bn solely aimed at sponsoring defense acquisition.[137] The monies were intended to top up the 2022 US$8.6bn defense budget to finance the routine costs of salaries, fuel, arms and maintenance, the development of traditional capabilities, and also drone and cyber systems.[138] The ambitious acquisition of *Rafale* and F-15 jets demonstrates a commitment to strengthen military capability, but to obtain such modern and expensive systems, Jakarta has had to enter into long-term debt arrangements with the overseas suppliers.[139] The financial pain may be eased slightly if barter deals can be negotiated like those previously agreed with Russia, reducing cash transfer through payments in kind, including commodities such as palm oil and rubber.[140] Debt and barter, however, are simply "sticking plasters" representing partial short-term panaceas to Indonesia's defense acquisition woes. The long-term solution, as evidenced by a 2020 Rand Report, is the urgent need to "remedy historical and ongoing underfunding of basic military needs."[141]

The third acquisition deficiency, as highlighted by the same Rand Report, is the "sclerotic structure for [formulating] and implementing defense and security policy."[142] A noted observer on Indonesia's defense sector, Evan Laksmana, emphasizes that the complexity of decision-making poses profound challenges to the timely implementation of the modernization drive.[143] In particular, acquisition is subject to approval by at least six "veto players," the Defence Ministry, the military, the National Development Planning Agency, the Finance Ministry, the national legislature and the KKIP.[144] These

actors must not only regularly negotiate and balance annual budgetary appropriations, but also the Five-Year acquisition plans within the broader MEF framework.[145] The complexity of this process is exacerbated by onerous defense-acquisition processes, including the 51 different defense planning and budgeting systems regulations introduced between 1945 and 2020.[146]

Delays caused by this overly bureaucratic system represent a regular feature of Indonesia's defense acquisition process. A good example has regard to the submarine acquisition from South Korea's Daewoo Shipbuilding and Marine Engineering (DSME). Jakarta stalled the program in April 2019 over concerns regarding rising cost and performance of the three submarines delivered under an earlier 2011 contract.[147] The first two submarines were produced in South Korea, with only the third, the KRI *Alugoro*-405, partially assembled in Indonesia and launched in 2019.[148] In parallel, the 2022 MoU signed between Jakarta and Paris regarding the construction of two Scorpene-class submarines has also suffered from sluggish progress.[149] These tortuous drawn-out submarine acquisition experiences have damaged Indonesia's status as the only ASEAN member state capable of domestically building submarines. Such experiences are not isolated to submarines, however, with other programs suffering the same fate, including in 2019 when several contracts were signed to procure Canadian CL-515 and CL-415 SEAF seaplanes, and in 2021 for procurement of 10 British and Italian frigates.[150] Program cancellations also occur, such as the September 2022 termination of the Black Eagle UCAV development contract, which impacted on a consortium of stakeholders, including local R&D institutes as well as the Turkish Defense Industries R&D institute.[151]

The fourth acquisition deficiency is the logistical and interoperability problems caused by Jakarta's multiplicity of foreign suppliers. For example, in 2021, Indonesia appeared to be intent on procuring fighter aircraft from several different countries including Austria, the US, Russia and France. The driver for acquisition diversity was the historical Soviet and US/European arms embargoes, but supply diversity increases logistical costs, delays, bureaucratic complexity, lack of interoperability, doctrinal confusion and TNI's inability to undertake routine multiservice operations. While the three services do pursue combined operations, particularly in natural disaster response efforts, it is clear that routine joint service operations suffer from a lack of common doctrine, inter-service rivalry, chain of command difficulties, and communications problems.[152] The TNI is aware of the importance of interoperability and has started to work toward greater integration of weapons systems, but continuation of the diversification policy hampers progress.[153] Interoperability is further impeded by the acquisition of military systems from a wide range of Eastern and Western suppliers. Reportedly, some 33 countries have supplied arms and equipment to Indonesia since the end of the Cold War, making its military the most diversely supplied in Southeast Asia.[154] Diversification as a means of reducing dependence on dominant suppliers to avoid future embargoes makes strategic sense. Otherwise, the sovereignty of Jakarta's acquisition strategy will always be threatened by external forces. The previously mentioned US 2017 restrictive trade policy, CAATSA, is a case in point. The legislation imposes sanctions on states that procure arms from "evil axis" countries, such as Russia, North Korea and Iran. Yet, as has been emphasized, supply diversity comes at a cost, and Indonesia arguably needs to be more thoughtful about factoring cost and operational inefficiencies into the dependence-diversity calculus.

Indonesia's fifth acquisition weakness has regard to its rudimentary defense industrial base. In 2019, the Indonesian government outlined a series of priorities aimed at strengthening the country's defense industries.[155] The priorities included encouraging greater collaboration between companies and the armed forces, promoting greater investment in R&D, and fostering partnerships with foreign equipment manufacturers. The government reiterated the need to comply with Law No. 16, 2012 on Defence Industry as a vehicle for indigenous development. Such encouragement is necessary because foreign contractors have encountered difficulties in meeting the offset policy requirements, especially in relation to local content and technology transfer.[156] A particular challenge that foreign defense contractors face is the low level of domestic technical and engineering capability, and consequently they struggle to identify local partner firms that can absorb the high quality and precision technologies necessary to manufacture sophisticated defense systems. In turn, Indonesia has struggled to achieve

the percentage requirements of Law No.16 on Defence Industry.[157] This then results in actual offset quota targets being met through negotiation between foreign OEMs and the MoD, which is a sensible policy compromise, favoring flexibility over prescription, to ensure that some measure of viable offset investment is secured. If there was increased funding, however, the probability is that higher scales of acquisition would induce foreign contractors to offer more attractive offset solutions, especially regarding technology access, skill generation and the creation of supply chain and export opportunities.

A further defense industrial policy development occurred in 2022, when the government launched a radical strategy of rationalization and consolidation through "Defend ID."[158] This refers to the formation of a holding company from the merger of major state owned "Strategic" Enterprises, including IAe (PT Dirgantara Indonesia), PT Pindad, PT Pal, PT Dahana, with PT Len, becoming the "mother" of the holding. The consolidation was aimed at fostering indigenous defense-industrial capability through creating opportunities for increased private investment, economies of scope and scale, and dual-use technologies.[159] The consolidation's long-term objective is to accelerate Indonesia's entry into the world's top 50 defense companies.[160] By contrast, the short-run goal is to become one of the world's top 20 arms exporting countries, but for this to happen, the local arms industry must be able to annually generate export values greater than US$500mn.[161] The challenge is immense given that in 2021, Indonesia exported only one CN-235 maritime patrol aircraft to Senegal, worth just US$22.6mn.[162]

The sixth acquisition weakness arises from Indonesia's sparse indigenous defense-industrial supply chains. Presently, local content is estimated at 41 percent,[163] but whether the supply chains have evolved organically or via offset investment, they are invariably characterized by low skill and low value production.[164] Indonesia uses local content (TKND – *Tingkat Kandungan Dalam Negeri*) as the principal indicator of supply chain indigenization, but there can be wide variations in percentage values. For example, of the 12 BUMN (Badan Usaha Milik Negara – State Owned Enterprizes) defense equipment products subject to TKDN calculations, the highest is PT Len's tactical datalink communications system at 54 percent, while the lowest is PT PAL's Landing Platform Dock (LPD) ship at 13 percent.[165] The LPD technology was transferred by South Korea at the end of the 2000s, but its low TKDN demonstrates a stubbornly high dependence on foreign components.[166] The defense industry's attenuated supply chains are the result of inadequate demand and scale, requiring the forced acquisition of (sub)systems from an eclectic array of overseas suppliers, including the US, Russia, China, France, Germany, Britain, Spain, Italy, South Korea, Brazil, Poland, Turkey and Israel. The inevitable result is that the emergence of local suppliers has been suppressed. Moreover, offset has failed to remedy the problem due to "anaemic" technology transfer and the absence of meaningful work packages. Hence, without appropriate levels of budgetary financing, there is no option but to obtain foreign funding to maintain local defense capability.

The seventh and final Indonesian defense acquisition inadequacy derives from the paucity of investment in critically important fourth industrial revolution (4iR) technologies, which lie at the heart of defense transformation. The nature of warfare is unequivocally changing, and the process of technological transformation is already evident in the Russia-Ukraine war, through drones, gray zone conflict via Artificial Intelligence, misinformation and cyber-attacks on infrastructure. Yet, Jakarta's present planning focus is on the formulation of strategic plans to promote mostly conventional systems through its Ten National Priority Technology target fields. These were outlined in Presidential Regulation 8, 2021, and comprise: submarines; radar systems (through offset via foreign acquisition from South Korea, France and Czech); rockets (such as the R-HAN 122B technology that has been developed by the Indonesian Space Agency and a PT Pindad-led consortium, with the technology mature enough to gain patents); missile propellants (via an intended partnership with Austria); medium tanks and fighters (through joint development with Turkey and South Korea); missiles (indigenous development of RN01-SS anti-ship surface-to-surface missiles through an IAe-led consortium); and an additional three 4iR technologies for potential development,

namely – Unmanned Aerial Vehicles, underwater sensors and military satellites.[167] Among Indonesia's "indigenous" projects, foreign subsystems, such as turrets, radars, and engines, are indispensable, lowering TKND ratios. For example, Australian and Belgian turrets are respectively equipped on *Anoa* APCs and *Badak* fire support vehicles, and Danish and French diesel engines are integrated into locally built LPDs and frigates.[168] Notwithstanding the high reliance on foreign systems, there is evidence of local innovational capability. For example, the PT-Pindad Anoa APC was "reverse-engineered" after the UK embargoed delivery of Scorpion tanks during the 2004 Aceh conflict.[169] Most projects, such as LPD, anti-ship missile multi-launch rockets reflect maritime requirements, and the APCs are for both internal security and peacekeeping operations overseas.

The Indonesian government states that the National Research and Innovation Agency has around 10,000 research personnel and 12 research organizations in fields such as electronics, aviation, space and nuclear energy, along with 85 research centers, ready to support defense-industrial self-reliance.[170] Yet the reality is that defense R&D is not a priority.[171] Although the Ten National Priority Technologies will play an important role in defending Indonesia's territorial boundaries, 4iR technologies, such as cyber, 3D printing, machine learning, cryptology, quantum computing, big data analysis, robotics and other next-generation technologies must also attract policy attention. Investment in 4iR defense-related capability is a strategic imperative, and because they are also dual-use technologies, there is, importantly, the potential for contributions to economic prosperity.

For Indonesia to substantially raise its commitment to develop 4iR technologies, it will require significant increases in defense-related R&D, an endeavor characterized by historic neglect. National R&D (civil and military) has only averaged between 0.19 to 0.56 percent of GDP during President Soeharto's New Order era (1966–98), undermining the early policy goal of import-substitution.[172] The country's present R&D spending continues this disappointing trend, at just 0.24 per cent of GDP, as against Singapore's 1.9 per cent.[173] The revealed low level of R&D expenditure suggests that Indonesia is not committed to creating a research culture, exhibiting instead a preference to continue with trading, and, irrespective of policy pronouncements, continued dependence on overseas design. Defense R&D presently hovers at around one to three percent of the defense budget.[174] If future expansion of R&D funding does not materialize, then the additional 4iR acquisition pathway focusing on next-generation AI weapons systems may have to be pursued through international partnerships. Although the previously mentioned 2020 Omnibus Law has paved the way for foreign investment in the local defense industry, its actual impact is open to conjecture.

Impact of Defense Acquisition Reforms on the Regional Balance of Power

Indonesia's defense acquisition strategy impacts on Southeast Asia in two ways. Firstly, if Indonesia could overcome the various weaknesses highlighted above, then the resultant effective military acquisition approach would strengthen Jakarta's claim to regional power status enabling it to have credible geostrategic influence. Secondly, a strong, relatively self-sufficient and affordable Indonesian defense capability would allow it to assume a more robust diplomatic and military position on regional archipelagic issues. Despite various revealed acquisition and industrial weaknesses, it is now an imperative that Indonesia seeks to improve its military capability and capacity through committed acquisition reform along the lines of the remedial actions advocated in this article. While military confrontation with China in the South China Sea is unlikely in the near term, Jakarta needs to be mindful of Beijing's strategic regional agenda coupled with its relentless pursuit of maritime power. Indonesia's underperforming defense acquisition strategy is partly responsible for its "under-balancing" against external threats, in general, and against the looming strategic challenge from China, in particular. Reform is long-overdue and needs to be both effective and affordable.

Conclusion

This paper's opening statements suggest that Indonesia is about to come-of-age, poised on the verge of an economic take-off that will catapult it into becoming the world's fourth biggest economy by 2050. The country's latent economic strength provides the basis for Indonesia assuming regional power status. Yet, with maritime vulnerability continuing to increase, the notion of Indonesia as a regional power must reflect not only economic strength but also increased defense capacity and capability. While growth has recently become a feature of Indonesia's economy, defense spending is perversely falling as a ratio of GDP, continuing its trend of decline, from 0.7 (2022) to 0.6 (2023) to 0.57 percent (2024). Indeed, Indonesia's ratio represents the lowest proportion among all major states in Southeast Asia, and one of the lowest in the G20 group of major international countries.

The resulting paucity of defense dollars has major implications on Indonesia's push for self-reliance. Indigenous defense R&D suffers from limited funding to invest in local systems innovation, and the prevailing acquisition strategy is necessarily directed toward overseas solutions. To this point, ambition exceeds funding, with defense acquisition dominated by short-term procurement of inexpensive but aged 2nd hand equipment, carrying excessive longer-term through-life maintenance and repair costs. Offset linked to foreign acquisition happens, but the volume and value of technology transfer have been constrained because of low acquisition scale, and the resulting ambivalence of overseas contractors. The relatively high acquisition numbers of *Rafale* and F-15EX fighters may break the mold, but generous export credits granted by the respective suppliers act to restrain generosity on reciprocal investment. Enormous challenges lie ahead, and the historic lessons of Indonesian defense acquisition are that dependence is dangerous. Therefore, progress toward "selective" self-reliance should rightly be the principal acquisition policy goal, but its feasibility will be dependent on the development and implementation of a smart acquisition strategy and the availability of appropriate funding levels.

Notes

1. The International Institute for Strategic Studies. *The Military Balance: The Annual Assessment of Global Military Capabilities and Defence Economics* (Routledge: Taylor & Francis Group, 2022).
2. Consulate General of the Republic of Indonesia in Vancouver. (2015). *Indonesia at a Glance*. Kementerian Luar Negeri Republik Indonesia. https://kemlu.go.id/vancouver/en/pages/indonesia_at_a_glance/2016/etc-menu
3. Organisation for Economic Co-operation and Development. (2018). *Active with Indonesia*. https://www.oecd.org/indonesia/Active-with-Indonesia.pdf
4. The World Bank. (n.d.). Military expenditure (% of GDP) – Indonesia. https://data.worldbank.org/indicator/MS.MIL.XPND.GD.ZS?locations=ID
5. Stockholm International Peace Research Institute. (2022). *SIPRI Military Expenditure Database*. https://milex.sipri.org/sipri
6. A. R. Darmawan, *Has Indonesia fallen into China's nine-dash line trap*? The Interpreter. November 24, 2024. https://www.lowyinstitute.org/the-interpreter/has-indonesia-fallen-china-s-nine-dash-line-trap;
   A. F. Basundoro, *Indonesia-China Agreement and Jakarta's Inconsistency on the South China Sea Issue*. RSIS Commentaries. 2025. https://rsis.edu.sg/rsis-publication/rsis/indonesia-china-agreement-and-jakartas-inconsistency-on-the-south-china-sea-issue/
7. In 2024, Australia and the European Union published defense industrial strategies that highlighted the importance of innovation and the development of next-generation weapons systems, and the UK posted a Statement of Intent of launching a 2025 Defense Industrial Strategy. The most important of these strategies was the January 2024 *US National Defence Industrial Strategy*. See, "DoD Releases First National Defense Industrial Strategy," American Economic Association, u/d. https://www.aeaweb.org/forum/4253/dod-releases-first-national-defense-industrial-strategy-11
8. Kementerian Pertahanan Republik Indonesia. *Peraturan Direktur Jenderal Perencanaan Pertahanan Nomor 10 Tahun 2015 tentang Prosedur Penyelesaian Administrasi Pembiayaan Pengadaan Barang/Jasa melalui Pinjaman Luar Negeri di Lingkungan Kemhan dan TNI* (Jakarta: Ministry of Defense, 2015) ; Ali, A. H. (2022, September 16). *Menantikan penetapan sumber pembiayaan untuk belanja senjata*. CNBC Indonesia. https://www.cnbcindonesia.com/opini/20220916110134-14-372626/menantikan-penetapan-sumber-pembiayaan-untuk-belanja-senjata.

9. Antara. *Indonesia eyes upper middle-income reclassification: Bappenas*. March 14, 2024. https://en.antaranews.com/news/308487/indonesia-eyes-upper-middle-income-reclassification-bappenas
10. See, World Bank data. GDP per capita (current US$) – Indonesia. GDP per capita (current US$) – Indonesia | Data; Data Statistics Times.com. statisticstimes.com/economy/country/indonesia-gdp-per-capita.php
11. The World Bank. "Gross Domestic Product 2022." 2022. https://databankfiles.worldbank.org/public/ddpext_download/GDP_PPP.pdf
12. J. Hawksworth, H. Audino, & R. Clarry, *The Long View: How will the global economic order change by 2050?* PwC. 2017. https://www.pwc.com/gx/en/research-insights/economy/the-world-in-2050.html
13. E. Listiyanto, & A. M. Pulungan, *Indonesia's Macroeconomic and Finance Policy Framework for Structural Transformation*. United Nations Conference on Trade and Development. 2021. https://unctad.org/system/files/official-document/BRI-Project_RP08_en.pdf
14. I. Gindarsah, & A. 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.
15. Appreciation is expressed to an anonymous reviewer for highlighting this point.
16. E. A. Laksmana, "Indonesia and Anti-Access Warfare: Preliminary Policy Thought," *CSIS Indonesian Quarterly* 48, no. 4 (2024): 2020.
17. *Ibid*.,
18. Indonesia Ocean Justice Initiative. *Detection & analysis report maritime security in Indonesian waters and jurisdiction: April 2023 to January 2024 period*. Indonesia Ocean Justice Initiative. 2024. https://oceanjusticeinitiative.org/main/wp-content/uploads/2024/02/English-Version-of-Laporan-Deteksi-Marsec-IOJI_2023-2024-.pdf
19. E. A. Laksmana, "What Indonesia's Retail Approach to Defence Modernisation Means," *International Institute for Strategic Studies*, 2023. https://www.iiss.org/online-analysis/military-balance/2023/09/what-indonesias-retail-approach-to-defence-modernisation-means/
20. Pemerintah Indonesia. (2021). *Peraturan Presiden Republik Indonesia Nomor 8 Tahun 2021 tentang Kebijakan Umum Pertahanan Negara Tahun 2020–2024*. Lembaran Negara Republik Indonesia Tahun 2021 Nomor 10. Sekretariat Negara.
21. *Ibid*., https://peraturan.go.id/files/ps8-2021.pdf
22. Kementerian Pertahanan Republik Indonesia. (2024, July 23). Strategi Pertahanan Pulau-pulau Besar dalam Mendukung Kebijakan Indonesia sebagai Poros Maritim. https://www.kemhan.go.id/balitbang/2024/07/23/strategi-pertahanan-pulau-pulau-besar-dalam-mendukung-kebijakan-indonesia-sebagai-poros-maritim.html; Y. Margono, *Strategi Pertahanan Nusantara*. Opini Kompas. October 05, 2023. https://www.kompas.id/artikel/strategi-pertahanan-nusantara
23. *Ibid*., https://peraturan.go.id/files/ps8-2021.pdf
24. S. Widianto, & A. B. Da Costa, "Indonesia Deploys Fighter Jets in Stand-off with China," *Reuters*, January 7, 2020. https://www.reuters.com/article/us-indonesia-china/indonesia-deploys-fighter-jets-in-stand-off-with-china-idUSKBN1Z61AM/
25. G. Da Costa, "Indonesia Defense System Modernization Not a Threat to Region, Deputy Minister Says," *Indonesia Business Post*, February 24, 2023. Tersedia di https://indonesiabusinesspost.com/insider/indonesia-defense-system-modernization-not-a-threat-to-region-deputy-minister-says/
26. E. A. Laksmana, I. Gindarsah, & C. Maharani (2020). *The Indonesian Armed Forces at 75 (75 Tahun TNI): 1945–2020*. CSIS.
27. A. F. Sumarau, & M. F. Malufti, "How Indonesia Can Improve Its Defense Investment Climate," *The Diplomat*, November 11, 2022. https://thediplomat.com/2022/11/how-indonesia-can-improve-its-defense-investment-climate/
28. Channel News Asia. "Indonesia approves 20% rise in defense budget by 2024." November 30, 2023. https://www.channelnewsasia.com/asia/indonesia-approves-20-defence-spending-increase-2024-3955796
29. Rahmatul Fajri, "House of Representatives of the Republic of Indonesia Encourages Increasing Defense Budget and Soldiers' Welfare," *Media Indonesia*. October 25, 2024. House of Representatives of the Republic of Indonesia Encourages Increasing Defense Budget and Soldiers' Welfare
30. A. R. Kamalina, *10 Kementerian/Lembaga dengan Anggaran Terbesar 2026, Kemenhan-Polri Bukan lagi Nomor Satu*. Bisnis Indonesia. May 20, 2025. https://ekonomi.bisnis.com/read/20250520/10/1878536/10-kementerianlembaga-dengan-anggaran-terbesar-2026-kemenhan-polri-bukan-lagi-nomor-satu
31. (2024). Visi, Misi dan Program Calon Presiden dan Wakil Presiden 2024–2028 H Prabowo Subianto dan Gibran Rakabuming Raka. Tirto. https://mmc.tirto.id/documents/2023/10/26/1276-visi-misi-indonesia-maju-2024-final.pdf?x=2676.
32. The Jakarta Post. *Indonesia launches ambitious free-meal program to combat stunting*. January 6, 2025. https://www.thejakartapost.com/indonesia/2025/01/06/indonesia-launches-ambitious-free-meal-program-to-combat-stunting.html

33. S. Burgess, *The US – Indonesian Strategic Partnership and Air Force Relations*. Air University (AU). April 24, 2023. https://www.airuniversity.af.edu/JIPA/Display/Article/3371476/the-usindonesian-strategic-partnership-and-air-force-relations/
34. J. V. Parachini, R. Bauer, & P. A. Wilson, *Impact of the U.S. and Allied Sanction Regimes on Russian Arms Sales* (Santa Monica: RAND Corporation, 2021).
35. E. A. Laksmana, I. Gindarsah, & C. Maharani (2020). *The Indonesian Armed Forces at 75 (75 Tahun TNI): 1945–2020*. CSIS.
36. E. A. Laksmana, "What Indonesia's Retail Approach to Defence Modernisation Means," *International Institute for Strategic Studies*, (2023). https://www.iiss.org/online-analysis/military-balance/2023/09/what-indonesias-retail-approach-to-defence-modernisation-means/
37. R. Nirmala, "Indonesia: $25B Plan Seeks to Modernize Defense Arsenal," *Benar News*, 2022, March 5. https://www.benarnews.org/english/news/indonesian/military-modernization-06032021170504.html
38. *Ibid*., E. A. Laksmana, "What Indonesia's Retail Approach to Defence Modernisation Means," *International Institute for Strategic Studies*, 2023. https://www.iiss.org/online-analysis/military-balance/2023/09/what-indonesias-retail-approach-to-defence-modernisation-means/
39. Sri Mulyani refused to fund the new arms procurement plan because after the COVID-19 pandemic, the government's budget priority "refocused" away from defense to health. See, Muhammad Ridwan and Annasa Rizki Kamalina, "Alarm Sri Mulyani dan Lonjakan Utang di Kementerian Prabowo," *Bisnis.com*, December 19, 2023. https://plus.bisnis.com/read/alarm-sri-mulyani-dan-lonjakan-utang-di-kementerian-prabowo
40. Original Source: Jane's Defence Budget 2020 cited in: C. Maharani, W. A. Prajuli, & R. Prihandoko, "Assessing the Risk of Technological Disaster in Indonesian Armed Forces," *CSIS Indonesian Quarterly* 50, no. 1 (2022).
41. Komisi I DPR. "Komisi I Setujui Tambahan Anggaran Rp2,4 Triliun Kementerian Pertahanan." *Sekretariat Jenderal DPR RI*, September 27, 2022.
42. C. Maharani, W. A. Prajuli, and R. Prihandoko, "Assessing the Risk of Technological Disaster in Indonesian Armed Forces," *CSIS Indonesian Quarterly 50*, no.1, 2022.
43. *Ibid.*
44. *Ibid.*
45. Transparency International-Defence. (n.d.). *Indonesia*. https://ti-defence.org/gdi/countries/indonesia/
46. *Bappenas Report* (2023). Unpublished.
47. Kementerian Pertahanan Republik Indonesia. (2019). Peraturan Menteri Pertahanan Republik Indonesia Nomor 3 Tahun 2019 tentang Pengelolaan Program dan Anggaran di Lingkungan Kementerian Pertahanan dan Tentara Nasional Indonesia. Jakarta: Ministry of Defense.
48. Kumparan Bisnis. *Anggaran Kemhan paling besar di 2024, ada pinjaman asing Rp 61,58 T*. November 30, 2023. https://kumparan.com/kumparanbisnis/anggaran-kemhan-paling-besar-di-2024-ada-pinjaman-asing-rp-61-58-t-21fxxNR3mnN/3
49. Kementerian Pertahanan Republik Indonesia, *Peraturan Direktur Jenderal Perencanaan Pertahanan Nomor 10 Tahun 2015 tentang Prosedur Penyelesaian Administrasi Pembiayaan Pengadaan Barang/Jasa melalui Pinjaman Luar Negeri di Lingkungan Kemhan dan TNI*. (Jakarta: Ministry of Defense, 2015); A. H. Ali, *Menantikan penetapan sumber pembiayaan untuk belanja senjata*. CNBC Indonesia. September 16, 2022. https://www.cnbcindonesia.com/opini/20220916110134-14-372626/menantikan-penetapan-sumber-pembiayaan-untuk-belanja-senjata; Interview with a senior officer in charge with procurement in the Ministry of Defence, Jakarta, April 11, 2025.
50. Bisnis. *Peran strategis SBSN di balik layar pembangunan infrastruktur RI*. October 4, 2023. https://ekonomi.bisnis.com/read/20231004/9/1700868/peran-strategis-sbsn-di-balik-layar-pembangunan-infrastruktur-ri
51. S. Rajaratnam School of International Studies. "Revitalizing Indonesia's Defence Industrial Base: Agenda for Future Action," *RSIS Policy Report*. October 27, 2014. https://www.rsis.edu.sg/rsis-publication/idss/227-revitalizing-indonesias-def/
52. "Sri Mulyani's Alarm and Debt Surge in Prabowo's Ministry," (2023, December 19). *Bisnis Plus*. Sri Mulyani's Alarm and Debt Surge in Prabowo's Ministry
53. A. H. Ali, "Silang Sengkarut Rencana RI Akuisisi Jet Tempur Rafale Cs," *CNBC Indonesia*, August 9, 2022. https://www.cnbcindonesia.com/opini/20220809135830-14-362311/silang-sengkarut-rencana-ri-akuisisi-jet-tempur-rafale-cs
54. Countertrade is the umbrella term or rubric under which sits all forms of non-monetarised trade, including barter, where payment is undertaken via commodities, and offset, in which the buyer country demands offshore vendor reciprocal investment.
55. A. Muraviev, & C. Brown, (2008). Strategic Realignment or Déjà Vu? Russia-Indonesia Defence Cooperation in the Twenty-First Century. *SDEC Working Paper*, No. 411, p. 15.
56. Kementerian Pertahanan Republik Indonesia. Skema Imbal Beli SU-35 Indonesia-Rusia, Tingkatkan Pertahanan dan Ekspor Nasional. August 22, 2017. https://www.kemhan.go.id/2017/08/22/10557.html
57. J. Grevatt, I*ndonesia restarts KF-21 repayments to South Korea*. Jane's. November 3, 2022. https://www.janes.com/defence-news/news-detail/indonesia-restarts-kf-21-repayments-to-south-korea

58. Stockholm International Peace Research Institute (SIPRI). SIPRI Arms Transfer Database.
59. Y. Chrisnandi, & L. C. Sebastian, *Defence budgeting in Indonesia: Some policy options*. RSIS Commentary. 2007, November 21. https://www.rsis.edu.sg/rsis-publication/idss/1009-defence-budgeting-in-indonesia/
60. Human Rights Watch. *Indonesia: Reform of military business, A Human Rights Watch background briefing*. 2007, February 16. https://www.hrw.org/news/2007/02/16/indonesia-reform-military-business
61. "Human Rights Watch. *Indonesia: Reform of military business*. 2007, February 16. https://www.hrw.org/news/2007/02/16/indonesia-reform-military-business
62. Pemerintah Indonesia. (2002). *Undang-Undang Republik Indonesia Nomor 3 Tahun 2002 tentang Pertahanan Negara*. Lembaran Negara Republik Indonesia Tahun 2002 Nomor 3. Sekretariat Negara. https://peraturan.go.id/id/uu-no-3-tahun-2002, https://peraturan.go.id/id/uu-no-34-tahun-2004

    Pemerintah Indonesia. (2004). *Undang-Undang Republik Indonesia Nomor 34 Tahun 2004 tentang Tentara Nasional Indonesia*. Lembaran Negara Republik Indonesia Tahun 2004 Nomor 127. Sekretariat Negara. https://peraturan.go.id/id/uu-no-34-tahun-2004
63. D. Angela, & M. Kosandi, "Military business in Indonesia: Army cooperative after acquisition policy 2009 and its impact on civil-military relations," *International Journal of Social Sciences and Economic Research* 4, no. 10 (2019). It should be noted that cooperatives are not the same as businesses. The former are limited to operating only in the vicinity of TNI establishment, and oriented to the wealth of solely their military members. Therefore, cooperatives have nothing to do with defense budget.
64. C. Maharani, & R. Matthews, "The role of offset in the enduring gestation of Indonesia's strategic industries," *Defence and Peace Economics* 34, no. 7 (2023): 981–1002. https://dspace.lib.cranfield.ac.uk/server/api/core/bitstreams/94107acd-7a77-4593-b5c2-e4e62d9f58f1/content
65. Ibid.
66. Soedradjad, D. J. (n.d.). Causes and implications of the Asian crisis: An Indonesian view. In *IMF eLibrary*. https://www.elibrary.imf.org/display/book/9781451965476/ch008.xml
67. *Ibid*., E. A. Laksmana, I. Gindarsah, & C. Maharani (2020). *The Indonesian Armed Forces at 75 (75 Tahun TNI): 1945–2020*. CSIS.
68. Ibid.
69. R. Lowry, *The Armed Forces of Indonesia* (Sydney: Allen & Unwin, 1996).
70. *Ibid*., E. A. Laksmana, I. Gindarsah, & C. Maharani, (2020). *The Indonesian Armed Forces at 75 (75 Tahun TNI): 1945–2020*. CSIS.
71. Ibid.
72. M. Kuntjoro-Jakti, & T. Simatupang, "Indonesia: Defence expenditures in the period of the New Order, 1967–85," in *Defense Spending in Southeast Asia*, ed. C. K. Wah, (Singapore: ISEAS, NUS, 1990).
73. *SIPRI Arms Transfer Database.*
74. *Ibid.*
75. F. W. Inkiriwang, "The dynamic of the US – Indonesia defense relations: the 'IMET ban' period," *Australian Journal of International Affairs* 74, no. 4 (2020): 377–393. https://doi.org/10.1080/10357718.2020.1712327
76. *Ibid*., E. A. Laksmana, I. Gindarsah, & C. Maharani (2020). *The Indonesian Armed Forces at 75 (75 Tahun TNI): 1945–2020*. CSIS.
77. Tempo. *Sukhoi berselimut kabut*. July 20, 2003. https://majalah.tempo.co/read/investigasi/89185/sukhoi-berselimut-kabut
78. *Ibid*., E. A. Laksmana, I. Gindarsah, & C. Maharani, (2020). *The Indonesian Armed Forces at 75 (75 Tahun TNI): 1945–2020*. CSIS.
79. ICH/Tim Liputan 6 SCTV. (2003, April 23). *Megawati menandatangani imbal beli Sukhoi*. Liputan 6. https://www.liputan6.com/news/read/53399/megawati-menandatangani-imbal-beli-sukhoi
80. *Ibid*., Evan Laksmana, Lisa Gindarsah and Curie Maharani, *The Indonesian Armed Forces at 75 (75 Tahun TNI): 1945–2020*, CSIS, Jakarta, Indonesia, 2020.
81. Ibid.
82. S. D'Urso, *Indonesia buys 42 Rafale fighter jets and F-15IDs might join them soon*. The Aviationist. February 13, 2022. https://theaviationist.com/2022/02/13/indonesia-buys-42-rafales/
83. *Ibid*., E. A. Laksmana, (2023). What Indonesia's Retail Approach to Defence Modernisation Means. *International Institute for Strategic Studies*. https://www.iiss.org/online-analysis/military-balance/2023/09/what-indonesias-retail-approach-to-defence-modernisation-means/
84. Shephard News. *Final batch of Indonesian Rafale fighters enters service*. January 9, 2024. https://www.shephardmedia.com/news/air-warfare/final-batch-of-indonesian-rafale-fighters-enter-service/
85. S. Ashar, *Indonesia completes contract for ordering 42 Rafale fighter jets, says Dassault CEO*. Kontan.co.id. January 9, 2024. https://english.kontan.co.id/news/indonesia-completes-contract-for-ordering-42-rafale-fighter-jets-says-dassault-ceo#:~:text=The%20contract%20activation%20took%20place,September%202022%20for%206%20units
86. *Ibid.*
87. *Ibid.*

88. International Institute for Strategic Studies. (2023). *The Military Balance 2023*. Routledge.
89. S. Hakim, *Indonesia to buy 11 anti-submarine Airbus helicopters*. Antara News. November 5, 2014. https://en.antaranews.com/news/96405/indonesia-to-buy-11-anti-submarine-airbus-helicopters
90. Stockholm International Peace Research Institute (SIPRI). SIPRI Arms Transfer Database.
91. Offset can be defined as reciprocal investment imposed on the offshore defense contractor in response by the arms procuring nation. It arises because of the buyers' leverage in a tight competitive arms market in which technology transfer and support packages are viewed by the procuring nation as key influencing variables almost as important as price and scale considerations. In this regard, developing countries view offset as a vehicle for accelerating local defense industrialization.
92. C. Maharani, & R. Matthews, "The role of offset in the enduring gestation of Indonesia's strategic industries," *Defence and Peace Economics* 34, no. 7 (2023): 981–1002. https://dspace.lib.cranfield.ac.uk/server/api/core/bitstreams/94107acd-7a77-4593-b5c2-e4e62d9f58f1/content
93. *Ibid*.,
94. *Ibid*.,
95. *Ibid*.
96. Komite Kebijakan Industri Pertahanan (KKIP). *Indonesia's Committee of Defence Industries Policy Part 1 – Organization*. 2023, March 16. https://www.kkip.go.id/2023/03/16/indonesias-committee-of-defence-industries-policy-part-1-organization/
97. C. Maharani, & R. Matthews, "The role of offset in the enduring gestation of Indonesia's strategic industries," *Defence and Peace Economics* 34, no. 7 (2023): 981–1002. https://dspace.lib.cranfield.ac.uk/server/api/core/bitstreams/94107acd-7a77-4593-b5c2-e4e62d9f58f1/content
98. A. H. Ali, *Tantangan membumikan industri pertahanan di Indonesia*. CNBC Indonesia. September 28, 2022. https://www.cnbcindonesia.com/opini/20220926105707-14-374915/tantangan-membumikan-industri-pertahanan-di-indonesia
99. Directorate General of Defence Potential, *Ministry of Defence's Defence Industry List*. Unpublished.
100. D. R. Sabana, C. Maharani, & I. Gindarsah, (2023). *Tren pasar senjata global dan pengembangan industri pertahanan Indonesia*. Laboratorium Indonesia 2045 (LAB 45). https://img.lab45.id/images/article/2023/11/28/259/7721tren-pasar-senjata-global-dan-pengembangan-industri-pertahanan-indonesia.pdf
101. *Ibid*., D. R. Sabana, C. Maharani, & I. Gindarsah, (2023). *Tren pasar senjata global dan pengembangan industri pertahanan Indonesia*.
102. C. Maharani, *Changing arms market and prospect of defence offset*. RSIS-Lab45 Joint Online Workshop on Indonesia Defence and Security Outlook. January 20, 2023. https://img.lab45.id/files/event_file/28/2952Slide-Presentasi-Curie-Maharani.pdf
103. *Ibid*., C. Maharani, *Changing arms market and prospect of defence offset*. 2023, January 20.
104. D. Safitri, *Defending the defense industry*. BBC News Indonesia. June 14, 2013. Updated July 16, 2013. https://www.bbc.com/indonesia/berita_indonesia/2013/07/130614_indonesiandefenceindustry
105. C. Maharani, & R. Matthews, The role of offset in the enduring gestation of Indonesia's strategic industries. *Defence and Peace Economics* 34, no. 7 (2023): 981–1002. https://dspace.lib.cranfield.ac.uk/server/api/core/bitstreams/94107acd-7a77-4593-b5c2-e4e62d9f58f1/content
106. H. Barus, & A. B. Putra, *Purchase of Sukhoi aircraft has potential for Indonesia-Russia exports*. Industry.co.id. August 23, 2017. https://en.industry.co.id/read/828/purchase-of-sukhoi-aircraft-has-potential-for-indonesia-russia-exports.
107. Y. Tinamal, *Indonesia's submarine procurement unlikely as deadline approaches*. The Jakarta Post. October 9, 2023. https://asianews.network/indonesias-submarine-procurement-unlikely-as-deadline-approaches/
108. Sabana, et al., "Daya Saing Industri Pertahanan Indonesia," 63.
109. Opposition in the parliament and civil society organization conveyed this concern. See Fraksi PKS. (2020). *Celah liberalisasi dalam UU OBL bidang Pertahanan: DPR: BUMN Militer Makin Sulit Berkembang*. https://fraksi.pks.id/2020/10/15/celah-liberalisasi-dalam-uu-obl-bidang-pertahanan-dpr-bumn-militer-makin-sulit-berkembang /The Government's initial decision to grant lead integrator status only to state-owned enterprise was due to its lack of trust in private sector capability and also to the absence of strong private sector players. This decision was subsequently reversed via the Omnibus Law
110. *SIPRI Arms Transfers Database*.
111. G. Dominguez, *IDEX 2021: Excalibur Army and PT. RDI to jointly produce RM-70 Vampire MRLs for Indonesian military*. Jane's. 2021, February 25. https://www.janes.com/defense-news/news-detail/idex-2021-excalibur-army-and-pt-rdi-to-jointly-produce-rm-70-vampire-mrls-for-indonesian-military.
112. "United Nations. (n.d.). *Indonesia*. United Nations Register of Conventional Arms. https://www.unroca.org/.
113. "PT PAL Indonesia. (n.d.). *Naval shipbuilding*. https://www.pal.co.id/naval-shipbuilding/.; Pindad. (n.d.). *Special vehicles*. https://pindad.com/special-vehicles.; PT Dirgantara Indonesia (Persero). (n.d.). *Aircraft*. https://www.indonesian-aerospace.com/aircraft/
114. D. Dahuri, *Modernisasi Tank AMX 13 - Harimau Turut Perkuat Kedaulatan Indonesia*. Media Indonesia. 2022, April 11. https://mediaindonesia.com/politik-dan-hukum/485082/modernisasi-tank-amx-13-harimau-turut-

perkuat-kedaulatan-indonesia.; Asia Pacific Defense Journal. (2020, May 29). *Indonesia continues improvement works on PT-76 light amphibious tanks*. https://www.asiapacificdefensejournal.com/2020/05/indonesia-continues-improvement-works.html PT. Respati Solusi Rekatama. *S60 57 mm artillery canon modernization*. https://rsr.co.id/en/s-60-57mm-artillery-canon-modernization

115. Rahayu, K. Y. (2023, June 15). *Kemenhan Klaim Pembelian 12 Pesawat Tempur Bekas Langkah Realistis*. Kompas. https://www.kompas.id/baca/english/2023/06/15/en-kementerian-pertahanan-klaim-pembelian-12-pesawat-tempur-bekas-langkah-realistis.
116. BBC News Indonesia. *Biaya modernisasi pesawat F16 dari AS $460 juta*. November 14, 2011. https://www.bbc.com/indonesia/berita_indonesia/2011/11/111122_f16upgrade
117. C. Arifin, *Modernisasi alutsista TNI, pengamat dukung kombinasi tank harimau dengan AMX 13*. Tribun News. April 12, 2022. https://www.tribunnews.com/nasional/2022/04/12/modernisasi-alutsista-tni-pengamat-dukung-kombinasikan-tank-harimau-dengan-amx-13
118. Puspen TNI. *Ranpur KAPA K61 Korps Marinir TNI AL siap tempur laut*. TNI. 2022, February 7, 2022. https://tni.mil.id/view-209953-ranpur-kapa-k61-korps-marinir-tni-al-siap-tempur-laut.html; K. B. Arjawinangun, *Ini jajaran kendaraan tempur andalan kavaleri di Indonesia*. Sindo News. March 28, 2021. https://nasional.sindonews.com/read/379318/14/ini-jajaran-kendaraan-tempur-andalan-kavaleri-di-indonesia-1616947438
119. L. Chia, & L. Pardomuan, *Can Indonesia rule the seas, or has its dream of maritime power sunk?* Channel News Asia. August 5, 2021. https://www.channelnewsasia.com/cna-insider/can-indonesia-rule-seas-or-has-its-dream-maritime-power-sunk-2092821.
120. Antara News. *President seeks systematic defense investment policy*. October 5, 2020. https://en.antaranews.com/news/158229/president-seeks-systematic-defense-investment-policy
121. Thales Group. *PT Len and Thales sign JV agreement to strengthen Indonesian defence*. June 3, 2024. https://www.thalesgroup.com/en/worldwide/defence-and-security/press_release/pt-len-and-thales-sign-jv-agreement-strengthen
122. E. Kim, *(LEAD) Indonesian engineers at KAI probed for alleged tech theft of KF-21*. February 2, 2024. https://en.yna.co.kr/view/AEN20240202002751315?section=national/defense
123. "Defense Industry Daily. *KF-X fighter: Korea's future homegrown jet*. 2021, November 8. https://www.defenseindustrydaily.com/kf-x-paper-pushing-or-peer-fighter-program-010647/
124. S. Tiwari, *The Asian F-35! South Korea could review Indonesia's role in KF-21 program after funding defaults*. EurAsian Times. 2023, October 18. https://www.eurasiantimes.com/the-asian-f-35-south-korea-could-review-indonesias-role-in-kf-21-program-after-funding-defaults/.
125. *Ibid*.,
126. *Ibid*.,
127. BBC News Indonesia. *Proyek pesawat tempur Korsel-Indonesia "mandek" di tengah pembangunan IKN, bagaimana kelanjutannya?* March 19, 2024. https://www.bbc.com/indonesia/articles/c3g7p7z09z9o
128. Sakshi Tiwari, "The Asian F-35! South Korea could review Indonesia's role in KF-21 program after funding defaults. Latest Asian, Middle-East, EurAsian," *Indian News*. October 18, 2023. https://www.eurasiantimes.com/the-asian-f-35-south-korea-could-review-indonesias-role-in-kf-21-program-after-funding-defaults/
129. N. Riso, *UAE akan membayar komitmen Indonesia pada proyek pesawat tempur KF-21*. Kumparan. September 15, 2023. https://kumparan.com/kumparannews/uae-akan-membayar-komitmen-indonesia-pada-proyek-pesawat-tempur-kf-21-21Bi9vgNEcj
130. S. Trimble, & C. Chuanren, *KF-21 keeps making progress, but hard tasks await*. Aviation Week. October 25, 2023. https://aviationweek.com/defense-space/aircraft-propulsion/kf-21-keeps-making-progress-hard-tasks-await
131. *Lex specialist* is a regulation that is excluded from general regulations. For example, military procurement regulations are not regulated in presidential regulations governing the procurement of goods and services but are regulated separately in defense minister regulations; this being because they are considered a state secret. As a consequence, *Lex Specialist* regulations are spared from the obligation of full transparency and competitive procurement.
132. Ady. *5 Kondisi Penyebab Pengadaan Alutsista Rawan Korupsi*. April 5, 2017. https://www.hukumonline.com/berita/a/5-kondisi-penyebab-pengadaan-alutsista-rawan-korupsi-lt58e49a5793bb3/
133. Antara News. *TNI announces 3 suspects in aw 101 helicopters corruption case*. May 27, 2017. https://en.antaranews.com/news/111110/tni-announces-3-suspects-in-aw-101-helicopters-corruption-case; J. Ramdhani, *Kasus Korupsi F-16, Kemhan: 40 Orang Dapat Pinjaman Duit dari Brigjen Teddy*. December 1, 2016. https://news.detik.com/berita/d-3359297/kasus-korupsi-f-16-kemhan-40-orang-dapat-pinjaman-duit-dari-brigjen-teddy; Antara News. *PT PAL president director sacked over corruption scandal*. April 1, 2017. https://en.antaranews.com/news/110253/pt-pal-president-director-sacked-over-corruption-scandal
134. Z. Putri, *Survei CSIS: TNI Lembaga Paling Dipercaya Publik*. December 27, 2023. https://news.detik.com/berita/d-7111465/survei-csis-tni-lembaga-paling-dipercaya-publik-kpk-nomor-2-dari-bawah
135. D. Nurita, *Beredar Anggaran Rp 1.760 Triliun untuk Alutsista, Prabowo Sebut Masih Digodok*. Tempo. June 2, 2021. https://www.tempo.co/politik/beredar-anggaran-rp-1-760-triliun-untuk-alutsista-prabowo-sebut-masih-digodok-507927

136. (2021, December 9). *TNI Dituntut Lebih Terbuka dan Akuntabel*. Media Indonesia.
137. F. B. Timur, & J. Komala, *Indonesia's Defence Shopping Spree*. East Asia Forum. May 4, 2022. https://www.eastasiaforum.org/2022/05/04/indonesias-defence-shopping-spree/
138. F. B. Timur, & J. Komala, *Indonesia's defence shopping spree*. East Asia Forum. May 4, 2022. https://eastasiaforum.org/2022/05/04/indonesias-defence-shopping-spree/.
139. D. Oktara, *Utang dadakan tambah beban anggaran*. June 4, 2021. https://www.tempo.co/arsip/utang-luar-negeri-untuk-memborong-alutsista-menambah-beban-anggaran-negara–849911
140. *Ibid*.,
141. M. J. Mazarr, (2022). *Case studies examining the emerging security cooperation competition in select countries: Indonesia*. RAND Corporation. https://doi.org/10.7249/rr-a650-1
142. S. Burgess, *The US – Indonesian strategic partnership and air force relations*. Air University (AU). https://www.airuniversity.af.edu/JIPA/Display/Article/3371476/the-usindonesian-strategic-partnership-and-air-force-relations/
143. E. A. Laksmana, (2023). *What Indonesia's Retail Approach to Defence Modernisation Means*. International Institute for Strategic Studies. https://www.iiss.org/online-analysis/military-balance/2023/09/what-indonesias-retail-approach-to-defence-modernisation-means/
144. *Ibid.*
145. *Ibid.*
146. *Ibid.*
147. R. Rahmat, *Indonesia re-thinks USD900 million submarine contract with South Korea*. Janes.com. April 2, 2020. https://www.janes.com/defence-news/news-detail/indonesia-re-thinks-usd900-million-submarine-contract-with-south-korea
148. "PT PAL Indonesia. (2020). *Alugoro submarine works by the people of the race to have a nominal diving depth test (NDD)*. PT PAL Indonesia. https://www.pal.co.id/ship-submarine-alugoro-works-child-nation-successful-go-test-nominal-diving-depth-ndd/
149. J. Grevatt, *Indonesia, France line-up collaboration on Scorpène submarines*. Janes.com. February 11, 2022. https://www.janes.com/defence-news/news-detail/indonesia-france-line-up-collaboration-on-scorpene-submarines
150. Indomiliter. *Viking Air umumkan penjualan 7 unit pesawat amfibi CL-515/415 series untuk Indonesia*. Indomiliter.com. June 19, 2019. https://www.indomiliter.com/viking-air-umumkan-penjualan-7-unit-pesawat-amfibi-cl-515-415-series-untuk-indonesia/; Kington, T. (2021, June 10). *Indonesia orders six FREMM frigates from Fincantieri*. Defense News. https://www.defensenews.com/global/europe/2021/06/10/indonesia-orders-six-fremm-frigates-from-fincantieri/
151. G. Arthur, *Indonesia suspends Black Eagle MALE UAV programme*. Shephard Media. September 19, 2022. https://www.shephardmedia.com/news/air-warfare/indonesia-suspends-black-eagle-male-uav-programme/
152. A. Widjajanto, Komando Gabungan Wilayah Pertahanan, October 3, 2019. https://www.kompas.id/baca/utama/2019/10/03/komando-gabungan-wilayah-pertahanan
153. G. T. Mawangi, *Ahli: TNI butuh standardisasi datalink untuk interoperabilitas 3 matra*. October 7, 2024. https://www.antaranews.com/berita/4382078/ahli-tni-butuh-standardisasi-datalink-untuk-interoperabilitas-3-matra#google_vignette
154. E. A. Laksmana, (2023). *What Indonesia's Retail Approach to Defence Modernisation Means*. International Institute for Strategic Studies. https://www.iiss.org/online-analysis/military-balance/2023/09/what-indonesias-retail-approach-to-defence-modernisation-means/
155. R. T. Prihandoko, F. Triantama, A. H. Wahyudi, & A. Priamarizki, (2023). *Optimasi industri pertahanan nasional guna mendorong transformasi militer Indonesia*. Laboratorium Indonesia 2045 (LAB 45).
156. N. Huda, I. Pawennei, A. Ratri, & V. L. Taylor, (2020). *Making Indonesia's research and development better: Stakeholder ideas and international best practices*. Knowledge Sector Initiative (KSI). https://www.ksi-indonesia.org
157. *Indonesia Market Report* – 2022, Internal *Jane's* Report. Received via e-mail, dated September 6, 2022.
158. E. Maulia, *Indonesia launches new state holding entity for defense sector*, April 20, 2022. https://asia.nikkei.com/Business/Aerospace-Defense-Industries/Indonesia-launches-new-state-holding-entity-for-defense-sector
159. Prihandoko, R. T., Triantama, F., Wahyudi, A. H., & Priamarizki, A. (2023). *Optimasi industri pertahanan nasional guna mendorong transformasi militer Indonesia*. Laboratorium Indonesia 2045 (LAB 45).
160. Len Industri. *DEFEND ID: Transformasi tingkatkan kontribusi industri pertahanan kepada negara*, November 22, 2022. https://www.len.co.id/defend-id-transformasi-tingkatkan-kontribusi-industri-pertahanan-kepada-negara//
161. *Ibid*., Sabana, et al., "Daya Saing Industri Pertahanan Indonesia."
162. "PT Dirgantara Indonesia. (2021). *PT Dirgantara Indonesia ekspor CN235–220 ke Senegal*. Sekretariat Kabinet Republik Indonesia. (https://setkab.go.id/pt-dirgantara-indonesia-ekspor-cn235–220-ke-senegal/#:~:text=PT%20Dirgantara%20Indonesia%20(PT%20DI,%2C%20Jawa%20Barat%20(Jabar)
163. R. T. Prihandoko, F. Triantama, A. H. Wahyudi, & A. Priamarizki, (2023). *Optimasi industri pertahanan nasional guna mendorong transformasi militer Indonesia*. Laboratorium Indonesia 2045 (LAB 45).

164. Ibid.
165. M. Sarmuji, (2023). *Risalah rapat dengan Dirut PT Len Industri, Dirut PT Pindad, Dirut PT Di, Dirut PT Pal Indonesia, dan Dirkeu PT Dahana (p. 11)*. Dewan Perwakilan Rakyat Republik Indonesia.
166. SIPRI Arms Transfers Database. *Video: PT Pal launched the 6th LPD for Indonesian Navy (TNI AL)*. Navy Recognition, August 12, 2018. https://navyrecognition.com/index.php/naval-news/naval-news-archive/2018/august-2018-navy-naval-defense-news/6410-video-pt-pal-launched-the-6th-lpd-for-indonesian-navy-tni-al.html
167. PT. SAS Aero Sishan. *Defence projects/contracts*. https://sas-aero.id/projects-contracts/
168. SIPRI Arms Transfers Database.
169. C. Maharani, & R. Matthews, *The role of offset in the enduring gestation of Indonesia's strategic industries*. *Defence and Peace Economics* 34, no. 7 (2023): 995–996. https://dspace.lib.cranfield.ac.uk/server/api/core/bitstreams/94107acd-7a77-4593-b5c2-e4e62d9f58f1/content
170. Nastitie, D. P. *Jalan terjal kemandirian alat-alat pertahanan nasional*. Kompas.id. September 13, 2023, https://www.kompas.id/baca/polhuk/2023/09/12/jalan-terjal-kemandirian-alat-alat-pertahanan-nasional; Komisi VII DPRRI & Kepala Badan Riset dan Inovasi Nasional (BRIN). (2022). *Risalah rapat dengar pendapat Komisi VII DPRRI dengan Kepala Badan Riset dan Inovasi Nasional (BRIN)*. https://berkas.dpr.go.id/akd/dokumen/K7-23-f202ca3c31e0b633d71b634c71682d5b.pdf
171. Jane's. (2022). *Indonesia market report – 2022*. Internal Jane's Report. Received via e-mail, dated September 6, 2022.
172. C. Maharani, & R. Matthews, The role of offset in the enduring gestation of Indonesia's strategic industries. *Defence and Peace Economics* 34, no. 7 (2023): p.984. https://dspace.lib.cranfield.ac.uk/server/api/core/bitstreams/94107acd-7a77-4593-b5c2-e4e62d9f58f1/content
173. "Statista. *R&D investment share from GDP Indonesia 2020–2022*. May 2, 2023. https://www.statista.com/statistics/1352919/indonesia-randd-investment-from-gdp/
174. D. R. Sabana, C. Maharani, & I. Gindarsah, (2023). *Daya saing industri pertahanan Indonesia. Tren Pasar Senjata Global dan Pengembangan Industri Pertahanan Indonesia (pp. 55–63)*. Laboratorium Indonesia 2045. https://www.lab45.id/detail/259/tren-pasar-senjata-global-dan-pengembangan-industri-pertahanan-indonesia

Disclosure Statement

No potential conflict of interest was reported by the author(s).

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