

RSIS presents the following Policy Report, *Revitalizing Indonesia's Defence Industrial Base: Agenda for Future Action*, by the RSIS Indonesia Programme. It is also available online at this link. (Please click on the link for printable version).

Revitalizing Indonesia's Defence Industrial Base: Agenda for Future Action

Executive Summary

Despite robust official statements and foreseeable opportunities for Indonesia's defence modernization, the capacity of its defence industrial base capabilities remain low. The Indonesian government still has much to do to resolve a number of hindrances. To develop a viable defence industrial base, this report argues that Indonesia needs a well-defined defence policy and broad industrial development strategy. It should concentrate on developing dual-use technologies, adopt an industrial clusters model, and reinforce defence-related R&D capacity through technological offsets or international arms collaboration. The paper concludes with seven policy recommendations. First, Indonesia's defence spending must be increased significantly. Second, it must adopt a well-defined and coherent defence policy. Third, Indonesia needs to establish a broad industrial development strategy. Fourth, for a viable defence industrial base, the Indonesian government should consider the adoption of an industrial and technological clusters model. Fifth, Indonesia should work out a flexible rather than a rigid bureaucratic offset policy. Sixth, the Indonesian government must commit adequate resources to reinforce its defence-related R&D capacity. Seventh, Indonesia needs to engage in international arms collaboration.

Background

Indonesia has been attempting to modernize its armed forces. Under its “Minimum Essential Forces” planning strategy, the Indonesian government aims to upgrade the TNI’s current force structure and operational readiness to a level enabling it to rapidly deploy military forces for a wide array of national contingencies. The plan specifies a defence acquisition roadmap, which is expected to focus on the provision of modern capabilities across land, sea and air forces, with emphasis on air and sea-lift platforms.

Whilst modernising its defence capabilities, the Indonesian government also seeks to revitalize its indigenous strategic industries. Of particular importance is the expectation of regulatory frameworks — including a formal offset policy targeted to resolve Indonesia’s defence industrial malaise. However, the question remains: what are the challenges for Indonesia to develop a viable defence industrial base? What should be done to address their technological shortcomings?

Strategic Trends in Indonesia’s Defence Acquisitions

Indonesia’s defence sector has been perennially underfunded (see Figure 1). Despite annual increases in the defence budget over the past decade, the Indonesian government continues to rely heavily on export credits or foreign loans to fund Indonesia’s major defence imports (see Figure 2). Past arms acquisitions also involved counter-trade mechanisms with arms supplying states. Indonesia’s acquisition of Russian Su-27/30 fighters in 2003 is an example of military acquisitions funded through counter-trade of non-military commodities—including palm oil, rubber and coffee.

Indonesia’s defence sector has been perennially underfunded. Nevertheless, the national economy has improved in recent years and should enable the Indonesian government to commit more resources for defence purposes. Following his re-election in 2009, President Susilo Bambang Yudhoyono pledged to boost the country’s defence spending up to 1.5 percent of GDP by the end of his second administration. This corresponds well to the Ministry of Defence’s strategic planning objective to achieve its “Minimum Essential Force” (MEF) posture by 2024. It remains to be seen however whether Indonesia is able to commit adequate resources to sustain its military modernisation plans.

Figure 1
Indonesia's Defence-Economic Gap, 2000-2011

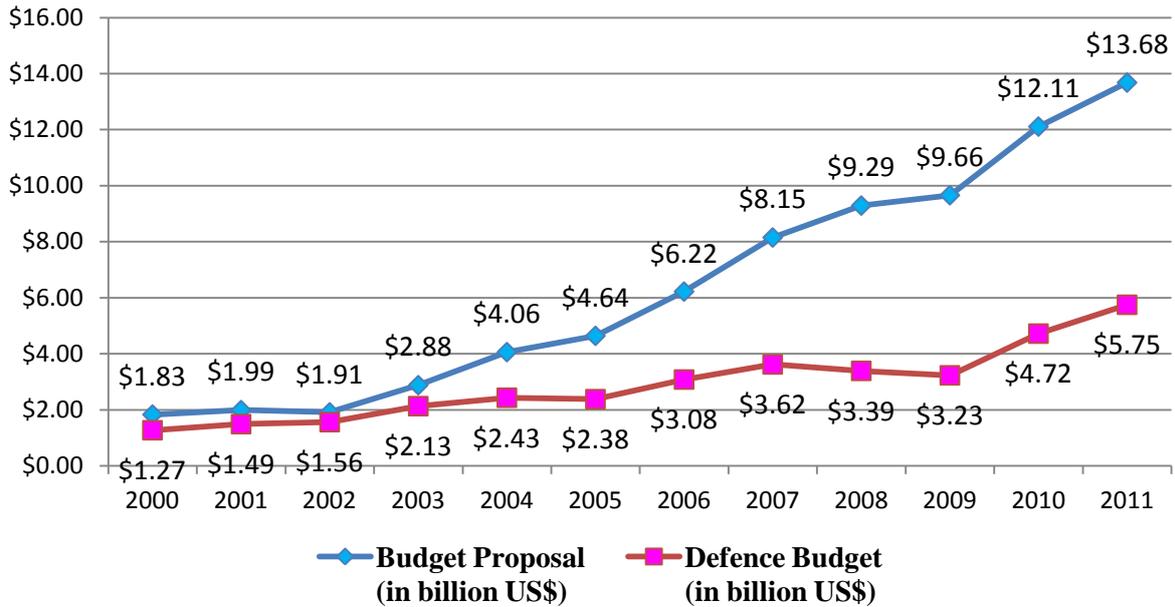
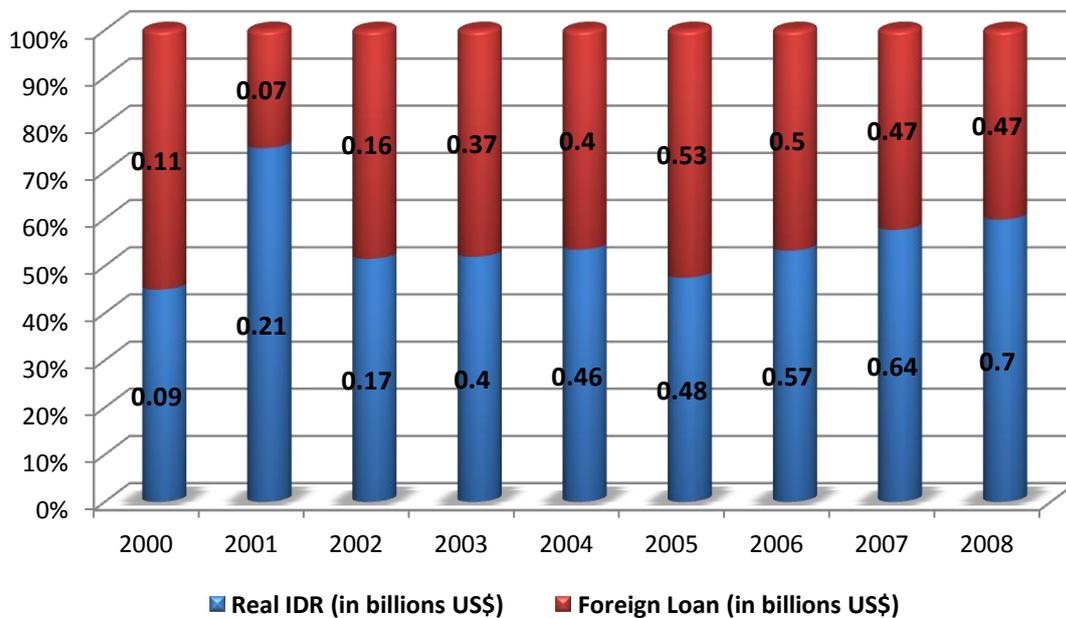


Figure 2
Indonesia's Budget Sources for Defense Procurements



As a result of financial constraints placed upon Indonesia during 1997 economic recession, funding options available for the government were very limited. The key priority was the need to strategize its defence procurement so as to maximize short-term economic benefits from specific arms imports. Due to insignificant scale of acquisitions, previous practices of

defence purchases have compromised the Indonesian government's ability to negotiate meaningful technological offsets for the development of indigenous defence industries.

In recent years, Indonesia's national economy has improved and was reasonably unaffected by the latest global financial crisis. In 2012, for instance, it achieved approximately 6.5 percent economic growth with relatively low inflation rates. Financial experts believe that Indonesia is entering a period of significant economic growth, with forecasts predicting that it will be among the world's fastest-growing economies over the foreseeable future. These are positive signals for foreign investors.

Such a positive economic outlook should enable the Indonesian government to commit more resources for defence purposes. Following his re-election in 2009, President Susilo Bambang Yudhoyono pledged to boost the country's defence spending up to 1.5 percent of GDP by the end of his second administration. This ambitious policy statement corresponds well to the Ministry of Defence's strategic planning objective to achieve its "Minimum Essential Force" (MEF) posture by 2024.

To this end, the Ministry of Defence has projected to spend a total of IDR 150 trillion (about US\$ 17 billion) for its five-year arms procurement and maintenance programmes. For the Fiscal Year 2012, for instance, the Ministry of Defence acquired approximately a US\$ 2.5 billion budget for military acquisitions. Indonesia's military "shopping wish-list" for 2012 includes diesel-electric submarines, main battle tanks, howitzers, surface-to-air missile systems and multi-role combat aircraft. Of this list, it has recently finalized agreements with Russian and South Korean contractors to purchase respectively 6 Su-30 MKK jet-fighters and 3 Chang Bogo-class tactical submarines.

Of critical importance remains whether Indonesia is able to commit adequate resources to sustain its military modernisation plans. The Indonesian government has reiterated its desire to gradually reduce its state of dependency on foreign suppliers and introduced regulatory restrictions on the use of overseas funding for defence procurement. Recent arms acquisition contracts—including the purchase of additional Sukhoi jet-fighters though demonstrate Indonesia's continued reliance on credit exports for the foreseeable future.

The Current State of Indonesia's Strategic Industries

The Indonesian government has begun to develop its defence industrial base, namely, its "strategic industries," since the early 1980s. The aerospace manufacturer PT DI, naval shipbuilder PT PAL and land system manufacturer PT Pindad are Indonesia's prime indigenous defence contractors.

To date, PT DI has developed capabilities to produce a wide array of fixed-wing and rotary aircraft with civilian-military applicability. From offset programmes launched during New-Order regime, it is capable of producing multi-purpose CN-235 aircraft, Super Puma and Bell-412 helicopters. Given its appropriate expertise and competitive output, PT DI has become a sub-contractor for Airbus' aircraft components and Eurocopter's EC-725 tail boom and fuselage.

The development of the Indonesian government's strategic industries began in the early 1980s. However, more than a decade of wasted resources and mismanagement has undermined state-owned defence companies. Manpower policy for Indonesia's arms industries remains neglected. In addition, the majority of research and production facilities in strategic industries are outdated. Other key problems include the high price of imported raw materials and poor funding for indigenous research and development (R&D) infrastructure. All of these challenges diminish Indonesia's capacity to catch up with fast-changing technological developments.

With its dockyard facilities in Surabaya, the scope of PT PAL's production capability is impressive. Its current list of naval products includes fast patrol boats of 57-metres, 28-metres, and 14-metres, and a landing platform dock of 125-metres. Future planning includes the design and production of a 117-metre landing ship tank, 1,200 ton tactical submarines and 2,500 ton missile-guided frigates. For civilian use, it is capable of building large tankers and utility vessels.

PT Pindad's efforts to develop land systems also have drawn some successes. Recently, it has developed and manufactured the 6x6 "Anoa" panzer families for the Indonesian Army. The panzer variants include armored personnel carrier, reconnaissance, logistics, plus recovery vehicles and a tank. PT Pindad also indigenously produces small arms and light weapons, including SS-2 assault rifle and large caliber munitions.

Nonetheless, more than a decade of wasted resources and mismanagement has undermined state-owned defence companies. Bandung based-aerospace manufacturer PT DI is on the verge of bankruptcy, while naval shipbuilder PT PAL has requested from the government the provision of bail-out funds to keep the company afloat. Furthermore, without sustainable government support, weapons manufacturer PT Pindad has been merely treading water.

Manpower policy for Indonesia's arms industries remains neglected. Years of under-funding and dearth of contracts has led to the departure of top engineers with the essential design skills and technological expertise for product innovation. Currently, PT DI can only afford to employ less than half of the 2,000 skilled workers it had during the 1990s. Two years ago, the top management of PT PAL had to retrench 900 workers leaving the company with around 1,400 personnel. These numbers remain sufficient to sustain the companies' production line and maintenance services for the short-term. Yet such a situation remains untenable for the long-term as the majority of its workforce has reached the age of 40.

While operating under heavy financial constraints, majority of the research and production facilities in strategic industries are outdated, thereby further hampering their capacity to design and manufacture highly complex weapon systems. The other key problem is the high

price of imported raw materials which has ultimately increased production costs and weakened the competitiveness of local defence industry. To make matters worse, poor funding for indigenous research and development (R&D) infrastructure means a critical shortage of new talent able to develop cutting-edge research in defence-related areas, thereby diminishing Indonesia's capacity to catch up with fast-changing technological developments.

Governmental Initiatives for Developing an Indigenous Defence Industrial Base

Given to their strategic value, President Susilo Bambang Yudhoyono has made it his priority to revitalize the country's strategic industries. The plan is quite ambitious: indigenous defence companies must become the key weapons suppliers for the Indonesian Armed Forces and other security forces. To this end, two sets of policy initiatives have been adopted to lay the groundwork for rebuilding Indonesia's defence industrial base.

The Indonesian government's plan to revitalize the country's strategic industries is quite ambitious. To this end, two sets of policy initiatives have been adopted. First, to introduce restructuring programmes and the provision of financial assistance to indigenous strategic industries while prioritizing locally made military products for future defence procurement. Second, to work out a formal offset guideline to replace long-standing ad-hoc practices, which are ineffective for technological transfers.

First, through the state-asset management company PT PPA (*Perusahaan Pengelola Aset*), there has been the introduction restructuring programmes and the provision of financial assistance to indigenous strategic industries while prioritizing locally made military products for future defence procurement. In 2011, Parliament passed a law providing state capital investment and new governmental aid mechanisms for 42 state-owned enterprises, including three key defence firms. Under the law, PT DI, PT PAL and PT Pindad are expected to receive a financial injection totalling IDR 7.8 trillion or nearly US\$ 1 billion.

In earlier periods, Indonesia's defence sector was not expected to attract foreign investments. To compensate for such short-comings, government has issued legislation (Presidential Regulation No. 36/2010) permitting overseas investors to acquire up to 49 percent of stockholdings in domestic defence firms. Defence officials also have indicated that the government is planning to upgrade production facilities for defence companies with financial sources from state-owned banks.

Second, the Indonesian government is working out a formal offset guideline to replace long-standing ad-hoc practices, which are apparently ineffective for technological transfers. According to official statements, the future offset policy will oblige foreign suppliers to include specific offset requirements, while facilitating national defence companies to participate in overseas defence procurement through co-production arrangements. It also endorses the Indonesian government to provide fiscal incentives and add state capital for arms innovation developed by both state-owned and private defence firms.

To date, the Ministry of Defence has not released official details of its new offset policy. Observers and media reports, however, have indicated that at least 30-40 percent of a foreign procurement contract is expected to take place in Indonesia under licensed-production arrangements. Delays in the publication of a new offset policy are likely because a number of hindrances in formalising offset procedures, including bureaucratic red-tape. Amongst pending issues is the clustering of prime and sub-contractors, identification of potential overseas partners that could supply Indonesia with dual-use technologies, configuring a roadmap for inter-departmental priorities, and offset monitoring.

Recent defence procurement projects have indicated the emerging offset practice. The acquisitions of 7,300-ton Landing Platform Docks from South Korea-based Daesun Shipbuilding and Dutch-made Sigma corvettes have enabled PT PAL to acquire the knowledge to produce missile-guided frigates and amphibious assault ships for the Indonesian Navy. Having signed the procurement contract for a diesel-electric attack submarine, South Korea's Daewoo Shipbuilding and Marine Engineering will build the first two submarines while transferring technologies and know-how to PT PAL for manufacturing the third submarine at its shipyard in Surabaya. Likewise, PT DI will benefit from offset programmes linked to the procurement of C-295 transport aircraft.

An Agenda for Future Action

With the possibility of a positive economic outlook for the short to medium term, the Indonesian government should have an adequate opportunity to move forward its military modernisation plans and enhance its indigenous industrial capabilities. There is a substantial agenda now for the government to consider for the future. However, in the overall analysis, favourable governmental support will be essential for the development of Indonesia's indigenous defence industrial base.

With the possibility of a positive economic outlook for the short to medium term, the Indonesian government should now have an adequate opportunity to move forward its military modernisation plans and enhance its indigenous industrial capabilities.

First, Indonesia's defence spending must be significantly increased. Perhaps, the 2% ASEAN average ratio for 2012 is a less contentious military expenditure per Gross Domestic Product (GDP) reference for the Indonesian government.

Second, it must adopt a well-defined defence policy. Without policy coherence, arms acquisitions and offset measures will lose their linkage to overall defence industrial strategy.

Third, Indonesia needs to establish a broad industrial development strategy. The intention is to infuse the interplay between defence and civilian manufacturing sectors (through "spin-on/spin-off" effects). Developing an indigenous supply chain of "dual-use" technologies—

including microelectronics, telecommunication systems, avionic and optic components is critical for national defence contractors to produce highly complex weapon systems.

Fourth, for a viable defence industrial base, the Indonesian government should consider the adoption of an industrial and technological clusters model. The model will enable prime and sub-contractor companies of a specialized manufacturing sector to interconnect their production and R&D infrastructures within a specific geographical area. The intention is to reduce costs and increase the competitiveness of domestic military products, while fostering innovations within Indonesia's defence industrial complex.

Fifth, Indonesia should work out a flexible rather than a rigid bureaucratic offset policy. The aim is to nurture profitable and sustainable long-term industrial partnerships with offshore vendors rather than coercing them into contractual bondage.

Sixth, the Indonesian government must commit adequate resources to reinforce its defence-related R&D capacity. For any transfer of technology to be successful, indigenous industries should have sufficient human capital and infrastructural readiness to absorb foreign technologies.

Seventh, Indonesia needs to engage in international arms collaboration. This cooperative mechanism should not only provide access to new technologies, but also involve capacity-building programmes, including personnel training. The prime example of Indonesia's experience in arms collaboration projects is PT DI and Korean Aerospace Industries' joint development of 4.5th generation fighter jet (KFX/IFX programme). Under the memorandum of understanding, Indonesia has agreed to contribute 20 percent of the overall project development cost in return for technologies and licenses to procure the aircraft.

Overall, favourable governmental support is essential for the development of Indonesia's indigenous defence industrial base. The access of indigenous defence industries to the global arms supply chain offers structural incentives to expand their corporate capacity, including alternative sources of income through arms exports.

About RSIS and the Indonesia Programme

The *S. Rajaratnam School of International Studies (RSIS)* was officially inaugurated on 1 January 2007. Before that, it was known as the Institute of Defence and Strategic Studies (IDSS), which was established ten years earlier on 30 July 1996. Like its predecessor, RSIS was established as an autonomous entity within Nanyang Technological University (NTU). RSIS' aim is to be a leading research institution and professional graduate school in the Asia-Pacific. To accomplish this mission, RSIS provides a rigorous professional graduate education in international affairs with a strong practical and area emphasis; conducts policy relevant research in national security, defence and strategic studies, international political economy, diplomacy and international relations; and collaborates with like-minded schools of international affairs to form a global network of excellence.

The *Indonesia Programme* is one of nine active research programmes under the umbrella of IDSS. The Programme studies current developments and a wide range of key issues in the archipelago, including political Islam, military and security affairs, foreign policy and regional relations, as well as national and local politics – especially in the Riau region. Through various research, networking, and teaching activities, the Programme has not only provided a platform for networking between the Singapore policy community and the emerging political elites in Indonesia, but it has also tried to further deepen mutual understanding and closer friendship between the two neighbours.