

Optimizing National Security: The Importance of Private Sector Involvement in The Indonesia Defense Industry

Ratu Syra Quirinno¹⁾, Suwito²⁾, Lukman Yudho Prakoso³⁾
^{1,2,3)} Defense Economy/ Defense Management Faculty, Indonesia Defense University

*Corresponding Author
Email: ratusyraquirinno@gmail.com

Abstract

This journal discusses about the current condition of Defense Industry in Indonesia, the strategic role of the private sector in enhancing Indonesia's national security through its participation in the defense industry. The main focus of the research using this literature study is to analyze the positive impact of private sector involvement in optimizing resources, technology and innovation to strengthen national defense resilience. Private defense companies can also be a source of raising funds both from abroad and domestically to build production infrastructure, finance research and development, which is able to develop domestic defense industry capabilities and have a positive impact on national resilience. The development of private companies in the defense sector can have other positive effects, namely giving rise to competition in procurement contracts which are usually dominated by state-owned companies and large international defense companies, so that the contract process can run with more options but still be produced. domestically. Based on defensenews data, the majority of the top one hundred defense companies are private companies, this is one of the considerations in building Indonesian national resilience, especially in developing defense technology that has global competitiveness. By highlighting the benefits of collaboration between government and the private sector, this journal contributes to designing policies that support effective integration between the two. The results of this research can serve as a basis for strengthening strategic partnerships and achieving more resilient national security goals.

Keywords: National Resilience, National Security, Private Sector and Defense Industry

INTRODUCTION

The defense sector in Indonesia has historically been dominated by state-owned companies such as PT. Pindad on the land system, PT. Dirgantara Indonesia in the aviation, PT. PAL on naval system, PT. LEN on electronic communications equipment and PT. Dahana on ammunition/ordnance. Apart from state-owned companies, the defense sector in Indonesia is also dominated by global defense companies such as General Dynamics and KnAAPO for aviation, BAE Systems and Demen naval system and Rheinmetal and Nexter for land system. The lack of participation from domestic private defense companies in Indonesia occurs due to the strict regulations in which at that time only allowed private defense companies to participate in non-major defense procurement programs or become subcontractors for the main weapons procurement program with state-owned defense companies as lead integrators. Another reason is the limited experience and technological/production mastery of private defense companies in which the State Owned Company have advantage due to Transfer of Technology (ToT) arrangement from major global defense company.

The dominance of state-owned companies and global defense companies in the Indonesian defense sector due to previous regulations (Indonesia Regulation Number 16 of 2012 regarding defense industry) has made it difficult for domestic defense companies to compete in procurement programs, especially the main equipment for the defense system. The defense industry then tends to rely on state-owned companies and global defense companies in procuring major defense equipment and developing defense technology which should be able to utilize domestic private innovation capabilities. This reliance on state owned companies and global

defense companies impacted on the lack of competition and indigenous technology innovation from defense equipment procurement programs carried out in Indonesia. This then also hinders the multiplying effect of the defense industry which should be able to provide positive effects such as absorbing human resources, increasing regional development and increasing state income.

In research entitled Analysis of The Different Role of State-Owned Enterprises (BUMN) and Private-Owned Enterprises (BUMS) in the The Indonesian Defense Industry Sector, discussed the role of the private sector after changes in regulations. The lack of private owned defense company contribution due to regulation limitation addressed by the government by changing law number 16 of 2012 concerning the defense industry and issuing the new law number 23 of 2016 regarding omnibus law to provide greater opportunities for private defense companies by allowing private defense companies to participate in procurement of the development of the main defense system equipment. The new omnibus law allowing the private owned companies to develop a major defense equipment or technology, became a lead integrator on major defense equipment, and compete in a government contracts for major defense equipment. Previously, this role was exclusively permitted by law to be carried out by state-owned companies or if the state-owned company did not control it, it could be given to foreign defense companies.

Nevertheless the private defense industry in Indonesia is still considered to have a relatively minimal contribution due to government policy which placed priorities to state owned companies especially in major weapons procurement programs whether it's land system, naval system or air system. In the Maintenance, Repair and Overhaul (MRO) roles, private companies involvement in the engineering and manufacturing sectors is still limited, including major procurement of weapons systems tends to be given to state-owned companies or major foreign defense companies leaving a small portion for the domestic private companies in defense industry. Although in general, State Owned Company (SOC) does not always have a better level of technological mastery than the private sector, the limitation of private sector involvement in defense industry due to previous regulation hinder the possibility of advancement through innovation and capital potential from private defense industry companies. This journal are focusing on the current situation of defense industry with the lack of domestic private sector and the potential uses of the domestic private sector can benefit the national security situation in Indonesia.

RESEARCH METHODS

According to Sugiyono (2019:2), research methods are a scientific way to obtain data for certain purposes and uses. This journal uses literature study research method approach by collecting and analyzing information about the importance of private owned defense company to optimizing national security. Data and information are gathered from existing literature sources, such as books, journal articles, research reports and other documents related to the research. This method does not involve collecting primary data through experiments or surveys, but rather focuses on the synthesis and analysis of existing information. This literature study can provide a strong theoretical foundation for further research and help researchers understand the context and framework of thought that already exists in the scientific literature related to their research topic. Information and data gathered than discussed through description, figures, tabel and charts in this journal.

RESULT AND DISCUSSION

A. The Role of Private Owned Defense Company

The private sector has a very significant role in advancing the defense technology and advancement around the world. Based on defense news data of Top 100 Defense Company of 2023 shows that only around fifteen from the top one hundred list are state owned company with the majority of the list are private owned company. The private owned defense company can contribute through research activities, technological development leveraging private owned resources instead of government resources. Private defense companies generally also have commercial industries so they have income and technological and production capabilities that can be leveraged in defense research and development activities. Other income from the defense sector owned by private defense companies can also leveraged to fund Research & Development (R&D) needed for defense technology innovation (Ryseff et al., 2024), for example the global defense company Raytheon which has revenues of 59% from defense and 41% from the commercial sector especially aviation, the overall revenues from the company can be used to fund the defense technology R&D programs that Raytheon undertake. Raytheon's expertise in the commercial sector, such as the aircraft engine production capabilities of the Pratt & Whitney company which is owned by Raytheon, can also be used for dual use in defense/military use.

Table 1. List of Top Ten Defense Companies

Rank 2023	Rank 2022	Company	Country	Defense Sector Revenue 2022	Defense Sector Revenue 2021	Changes from previous year	Defense Sector Revenue %
1	1	Lockheed Martin	U.S.	\$63,334.00	\$64,458.00	-2%	96%
2	2	RTX	U.S.	\$39,600.00	\$41,852.20	-5%	59%
3	4	Northrop Grumman	U.S.	\$32,435.00	\$31,429.00	3%	89%
4	6	Aviation Industry Corporation of China	China	\$30,971.31	\$30,155.22	3%	37%
5	3	Boeing	U.S.	\$30,843.00	\$35,093.00	-12%	46%
6	5	General Dynamics	U.S.	\$30,400.00	\$30,800.00	-1%	77%
7	7	BAE Systems	U.K.	\$25,238.85	\$25,775.20	-2%	96%
8	9	China North Industries Group Corporation Limited	China	\$17,963.66	\$17,711.93	1%	22%
9	10	L3Harris Technologies	U.S.	\$13,927.00	\$14,924.00	-7%	82%
10	13	China South Industries	China	\$13,483.91	\$13,744.95	-2%	31%

		Group Corporation					
--	--	----------------------	--	--	--	--	--

Source : Top 100 Defense Companies (defensenews.com, 2023)

Private owned companies also play a pivotal role to reduce the burden of government expenditure to fund state owned company in building the necessary component supply network to produce defense equipments, private owned companies with commercial industry experienced and resources able to utilized it's production know how to create more streamline production line to accomodate the defense sector requirements. The commercial innovation of private owned companies in some sectors such as shipbuildings, aviation, engine manufactur also can cut corners on research and development programs conducted by defense branch of the said private companies.

B. Military Innovation and Defense Entrepreneurship

Defense Entrepreneurship concept underscores the significance of innovation within the military and defense industry to ensure continued superiority and address emerging threats. Defense Entrepreneurship emphasizes the need for entrepreneurship approach to identified opportunities, make decisions under uncertainty, and drive change through innovative approaches. This concept try to avoid bureaucratic hurdles commonly encountered in government institution and state owned companies (Hasik, 2016). Defense Entrepreneurship concept to innovate and addresses emerging threats utilized in United States “Defense Innovation Innitiatives” launched by US Department of Defense (DoD) in 2014. According to this concept the private owned companies have advantages both on business process conducted by private owned companies unlike the government bodies and state owned companies that requires bureaucratic administration in which fundamentally exercise control of knowledge and wane the innovation progress. However this concept not only applicable to private owned but also to government bodies and state owned companies, James Hasik in its reports highlight some succes innovation from the Naval Air Weapon Station that initiated the invention of AIM-9 Sidewinder missile and how the Eglin Air Force Base initiated the prototypes of Joint Dirrect Attacks Munition (JDAM).

Innovation in military or defense sector are the core of Defense Entrepreneurship concept by James Hasik to maintain advantage and addressed potential threats in the future. Innovation itself are commonly triggered by necessity, threats, competition or economic incentives. In situation where lack of competition is accepted, will have less innovation and initiatives to accomodate the necessity required. To avoid this situation, military procurement programs in most countries embraces participation or bid from multiple defense companies to compete in the procurement programs. This competition between defense companies either private owned or state owned will incite innovation and the product selected will be product that best meets the technical specification criteria required by the country's armed forces. One of the example are the US Joint Light Tactical Vehicle (JLTV) programs in 2011 to partially replace the High Mobility Multi-purpose Wheeled Vehicle (HMMWV) or commonly known as humvee with Mine Resistance Ambush Protected (MRAP) level of protection but more compact design. The JLTV programs selected three defense companies (AM General, Lockheed Martin System, Oshkosh Defense) to create concept demonstrator to compete for the program (Army Programs, 2011). The three concept demonstrator then tested by the Test and Evaluation team to decide the winner of the programs. This elaborate process of trial and competition will enhance the final products selected is the most fit with technical specification required by the US Military.



Figure 1. Three JLTV Programs contenders
Source: (Army Programs, 2012)

C. Utilizing Stocks, Investment and Collaboration

Defense industry is a capital intensive sector that needs resources and investment in order to become a descent defense companies, this capital intensive needs is the reason why the majority of global defense companies raise funds in various ways namely : selling company stocks in stocks market, recieved investment from larger companies, and collaborate with other companies such as joint ventures or consortium. This funds gathering process then can be utilized to various purposes like expanding operations, investing in research and development, acquiring new technologies and overall support their strategic initiatives. Seven from the top ten defense companies listed by defense news are openly selling their stocks in stocks markets as a fund gathering efforts through public investment. By utilizing stocks markets, investments and collaboration with other companies, the private owned companies doesn't have to relied on government funding to do research and development efforts, which means more innovation can brought to military and civilian used (Prihandoko et al., 2023).

The increased geopolitical tensions in Ukraine – Russia, Middle East and Indo Pasific creates uncertainty in global security, with many countries involved with active conflicts and territorial disputes the defense industry also experiencing growth in revenue. The Reuters noted that in November 2023 investors invested in various defense companies as much as 600 million dollars on the American stock market anticipating US Military Supports to Israel after the October 7th Hamas attack to Israel (Kamdar, 2023). Defense companies shares experienced another increase in April as the US Congress voted on 60 billion USD in aid for Ukraine. This ability to gather capital by utilizing stocks is also possible to implemented in state owned company by releasing some percentage of it's stocks through Initial Public Offering Process (IPO).

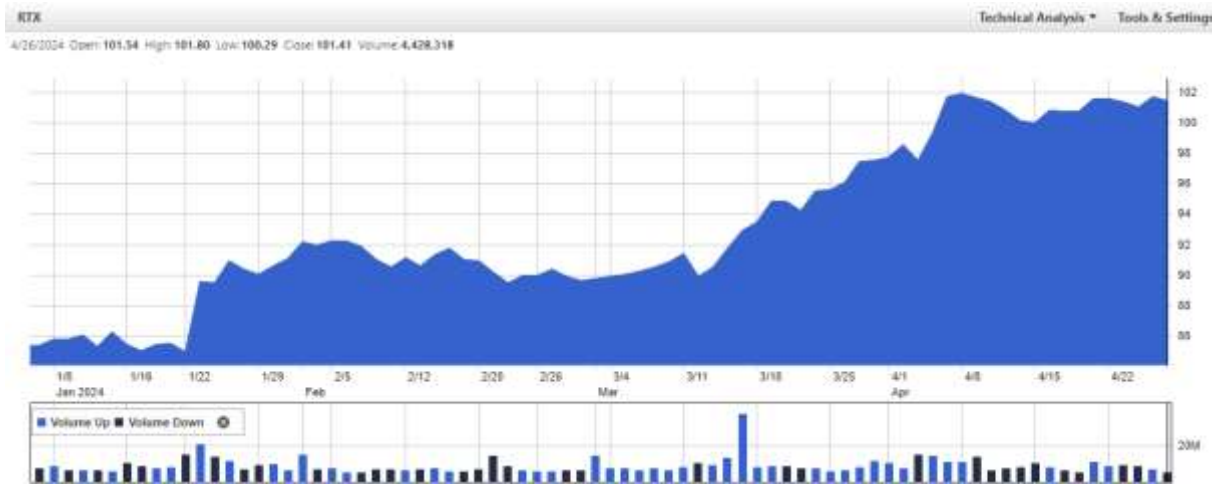


Figure 2. Raytheon Stock Price January - April 2024
Source: (Raytheon Technologies Company, 2024)

D. Industrial Espionage Threats

Privately owned defense companies as previously described have an important role that has a positive impact, especially in terms of innovation, competitiveness, efficiency and the ability to raise additional funds. However, privately owned defense companies also have weaknesses, one of which is the vulnerability of espionage infiltration attacks to leak important company data, known as Industrial Espionage, which targets defense companies and related state institutions. In this modern era where production activities rely on technology, espionage activities are starting to rely on cyber penetration into networks and devices related to companies and defense institutions. An example of Industrial Espionage that has occurred is on major defense companies in the United States, most of which are private owned, experienced many cyber attacks and seditious attempt to high security clearance personnels from competing countries. China is one of the rival countries of the United States which often carries out Industrial Espionage attacks on private defense companies and related state institutions in the United States, based on data from the Center for Strategic and International Studies (CSIS) report, there were 224 Industrial Espionage attacks reported in 2000 until 2023 specifically came from China (Center of Strategic and International Studies, 2023). US based private owned defense companies play integral role as partner to US Armed Forces most certainly operated within a secured system and conducting security background check to it's personnels to avoid security breach on classified information, yet some instances security breach of classified information still ocured. Complexity to detect and defend companies data and personnels from Industrial Espionage attack requires seamless collaboration with Intelligence bureau and defense companies. This collaborative efforts are an obstacle that state owned companies and other governmental bodies not experienced due to close relation between state owned companies and the government (Farley, 2016).

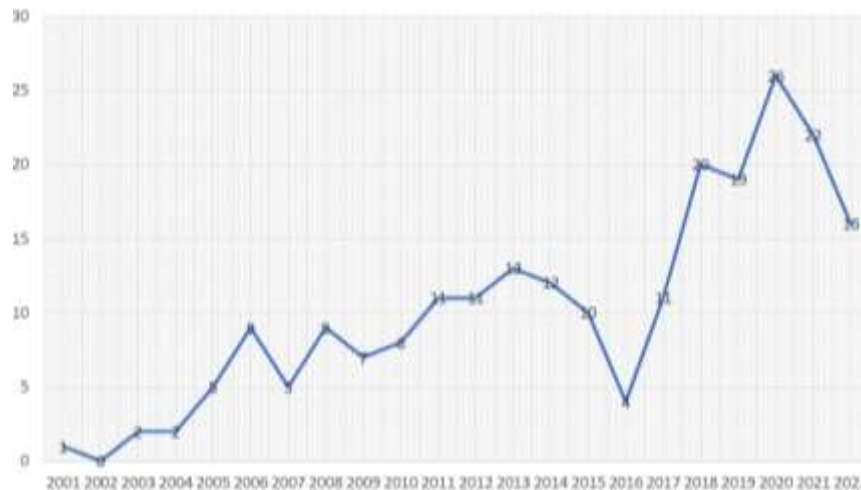


Figure 3. List of China Industrial Espionage January 2001 - March 2023

Source: (Center of Strategic and International Studies, 2023)

E. Optimizing Indonesia National Security Through Private Owned Defense Company

The National Resilience Institute of the Republic of Indonesia (Lemhanas RI) held an Urgent and Rapid Focus Group Discussion (FGD) on 20th September 2022 with the title: "Building an Advanced, Strong, Independent and Competitive Defense Industry" the FGD discussed about the current condition of the domestic Defense Industry, obstacles and strategic plan in the future to better develop the domestic defense industry in Indonesia. Through discussions in the FGD, it was concluded that there were four problems highlighted by the Governor of Lemhanas RI, namely the stagnation of the defense budget allocation which was always only 0.8% of GDP, the dominance of BUMN in the Indonesian defense industry ecosystem which had not yet demonstrated the existence of a helix and supply chain in the Indonesian defense industry, the small allocation for research and development in the defense industry so that it does not allow adoption or even technological leaps, and there are no economies of scale in some defense equipment which is Indonesia's main desire to develop (LEMHANAS RI, 2022). The highlighted problems such as low economies of scale and low research & development can be addressed by increasing the participation of private defense companies in major weapons systems procurement programs. By leveraging the private owned defense company capability on gathers additional fund through stocks market and investment the private owned defense companies can conduct research and development processes without counting on government funding.

The dominance of state-owned enterprises in the defense industry ecosystem in Indonesia was also highlighted in this FGD. This has been improved by regulation with the issuance of the Omnibus Law which increases the participation of private defense companies, especially as lead integrators and contributors to major defense equipment procurement programs. The regulation changes accomodated through Omnibus Law creates more oportunities for private owned defense companies to participate in major defense procurement program (Rusdiana, 2021). This increased oportunities also stimulated the private owned companies which now emerging in Indonesia. Based on data from the Indonesian Defense Industry Directory in 2019, there are currently 8 state-owned defense companies and 33 private defense companies in Indonesia. The emergence of private defense companies after this regulatory change can reduce the dominance of state-owned defense companies in the Indonesian defense industry ecosystem. Healthy competition between defense companies, both state-owned and private, in the weapons system procurement process can also produce final products that are competitive and best meet the technical specifications of the Ministry of Defense. For example, by carrying out an open procurement program for cross branch armored tactical vehicles like US Joint Light Tactical Vehicle (JLTV) program, Indonesian defense companies can submit their products that suits the

Indonesian Defense Ministry Technical Specification and then through rigorous trial and test of the submitted products the Indonesian Defense Ministry can choose the winner of the procurement program.



Figure 4. Indonesian Domestically Produced Armored Tactical Vehicles
Source: (KKIP Komite Kebijakan Industri Pertahanan, 2018), edited

The private owned defense companies also able to minimize the economics of scales issues by creating new production based in a region with lower labour cost, logistic cost and other operational expenses. Although the numbers of defense companies are currently growing in Indonesia, the location chosen by defense companies for their production base and headquarter are located in Java Island. By choosing a region with lower overall operational cost, the defense companies then can lower the production cost alongside more orders from Indonesian Arms Forces or foreign orders. The government can also provide incentives such as ease of permits, land searches, and infrastructure development assistance considering that building a production base and defense company headquarter outside Java can have a multiplying economic effect through employment, increasing community welfare, and increasing national/region incomes (Sukrisna & Prihantoro, 2022). The spread of production bases and headquarter of defense companies, both state-owned and private, can also increase national resilience considering that the location of the Indonesian



Figure 5. Indonesian Defense Companies HQ and Production Base Location
Source: (KKIP Komite Kebijakan Industri Pertahanan, 2018), edited

The last issues that can be adhered by increasing roles of private owned defense companies is the low percentage of defense budget. The increasing positive multiplying effect of defense industry to Indonesian revenues will incite a more positive response by general public or legislator to increase defense spending. Increasing the role of private defense companies must

still be carried out with government supervision to avoid monopolies, foreign government influence and the threat of Industrial Espionage to protect classified information regarding national security and companies closed information.

CONCLUSION

Based on data from the top 100 global defense companies dominated by privately owned defense companies. The advantages of privately owned defense companies are business process efficiency, innovation capabilities that are not limited by bureaucracy, the company's commercial role, the ability to obtain additional funds from share sales and investment. The advantages of privately owned defense companies are determining on the importance role of privately owned defense companies important for Indonesia's national security.

According to Focus Group Discussion held by The National Resilience Institute of the Republic of Indonesia (Lemhanas RI) there are four major issues on developing Indonesian defense industry capability which are : the stagnation of the defense budget allocation which was always only 0.8% of GDP, the dominance of BUMN in the Indonesian defense industry ecosystem which had not yet demonstrated the existence of a helix and supply chain in the Indonesian defense industry, the small allocation for research and development in the defense industry so that it does not allow adoption or even technological leaps, and there are no economies of scale in some defense equipment which is Indonesia's main desire to develop. Privately owned defense companies can minimize this problem by: using their ability to obtain funds from share sales and investment for Research & Development (R&D) activities, diminishing state owned companies domination in defense industry ecology and create more competitive condition on procurement programs, creating multiplying effects on state level or regional, and inciting more positive response from public & legislator to increase defense spending due to defense industry positive effect to the economy.

Even though the growing role of privately owned defense companies in Indonesia has many positive effects, it also has potential threats namely Industry Espionage which often attacks global defense companies, most of which are privately owned. To avoid this, cooperation and supervision from the government bodies regarding Counterintelligence is needed to prevent the leaks of confidential company data and classified data regarding national security.

REFERENCES

- Arhan, M. R., Navalino, D. A., Ali, Y. (2022). Analysis of The Different Role of State-Owned Enterprises (Bumn) and Private-Owned Enterprises (Bums) in the Indonesian Defense Industry Sector. *International Journal of Arts and Social Science*. Volume 5 Issue 1.
- Army Programs. (2011). Joint Lightweight Tactical Vehicle (JLTV).
- Army Programs. (2012). Joint Light Tactical Vehicle (JLTV).
- Center of Strategic and International Studies. (2023). A Survey of Reported Chinese Espionage, 2000 to the Present March 2023.
- Farley, R. (2016). Intellectual Property, Cyber Espionage, and Military Diffusion. *Global Security and Intelligence Studies*, 1(2). <https://doi.org/10.18278/gsis.1.2.2>
- Foster, D (2010). Arms and Innovation: Entrepreneurship and Alliances in the Twenty-First-Century Defense Industry. Naval War College.
- Hasik, J. (2016). Defense Entrepreneurship How to Build Institutions for Innovation Inside the Military (pp. 112–117).

- Kamdar, B. M. (2023). Investors pump over 600 mln into defense funds as geopolitical tensions rise. In <https://www.reuters.com/business/aerospace-defense/investors-pump-over-600-mln-into-defense-funds-geopolitical-tensions-rise-2023-11-20/>.
- KKIP Komite Kebijakan Industri Pertahanan. (2018). Direktori Industri Pertahanan Indonesia.
- LEMHANAS RI. (2022). Kelemahan Industri Pertahanan Indonesia: Stagnasi Alokasi Anggaran, Ekosistem Industri, Penelitian dan Pengembangan, serta Skala Ekonomi. In <https://www.lemhannas.go.id/index.php/berita/berita-utama/1698-kelemahan-industri-pertahanan-indonesia-stagnasi-alokasi-anggaran-ekosistem-industri-penelitian-dan-pengembangan-serta-skala-ekonomi>.
- Prihandoko, R. T., Triantama, F., Wahyudi, A. H., Priamarizki, A., Dwileysia, K., Dan, H., & Hamadi, F. (2023). Optimasi Industri Pertahanan Nasional Guna Mendorong Transformasi Militer Indonesia Penulis Asisten Penulis. Laboratorium Indonesia 2045.
- Raytheon Technologies Company. (2024, April). RTX Stock Information. <https://investors.rtx.com/stock-information>.
- Rusdiana, D. (2021). The role of private-owned enterprises in the defense industry according to the Omnibus Law. *Journal of Economics and Business Letters*, 2(1), 54–59.
- Ryseff, J., Lin, C.-H. J., Barnett, D. S., Bohnert, M., Lucas, C., Wilson, B., & Mitre, J. (2024). Harnessing the Power of Private Sector Innovation to Defeat a Chinese Invasion of Taiwan: Relighting Vulcan's Forge. www.rand.org/about/research-integrity.
- Shiddiqy, M & Et al. (2019). The Development of the Indonesian Defence Industry as a Consequence of Security Dilemma and Arms Race in the Southeast Asian Region. *International Journal of Innovation, Creativity and Change*. www.ijicc.net Volume 10, Issue 5, 2019.
- Sukrisna, C., & Prihantoro, M. (2022). Civil and Military Integration in the Indonesian Defense Industry. *Budapest International Research and Critics Institute (BIRCI)*, 5(1), 394–402. <https://doi.org/10.33258/birci.v5i1.3617>
- Indonesia. Undang-Undang Nomor 16 Tahun 2012 Tentang Industri Pertahanan. Lembaran Negara RI. Sekretariat Negara. Jakarta.
- Indonesia. Peraturan Pemerintah Nomor 23 Tahun 2016 Tentang Omnibus Law. Lembaran Negara RI. Sekretariat Negara. Jakarta.