International Journal of Arts and Social Science **www.ijassjournal.com**
ISSN: 2581-7922,
Volume 5 Issue 1, January 2022

The Role of Strategic Industries in Improving the National Economy to Support National Defense

Asti Siswanti[1], Sri Sundari[2], Ariffudin Uksan[3]

[1]*(Student in Defense Economics Department, The Republic of Indonesia Defense University, Indonesia)*
[2]*(Lecturer in Economics Department, The Republic of Indonesia Defense University, Indonesia)*
[3]*(Lecturer in Economics Department, The Republic of Indonesia Defense University, Indonesia)*

ABSTRACT: *Globalization makes changes very quickly and has a broad impact on the national economy. on the one hand, the most felt influence is the occurrence of increasingly fierce industrial competition and has a strategic function for the Indonesian nation and state. The defense industry is expected to be one of the pillars of the national economy, but it requires a long-term synergy and commitment from all parties. Departing from its strategic role and distinctive character, the defense industry continues to strive to be developed from upstream to downstream both for industry players state-owned enterprises (BUMN) and privately-owned industries (BUMS). This research was carried out with a qualitative approach with descriptive analysis methods through data collection described in detail and regularly through Focus Group Discussions (FGD) with experts. The results of this study indicate that the Development of the Defense Industry includes the implementation of the KLO, International Cooperation, Promotion of the Defense Industry, Licensing of the Defense Industry, and BU Handak, the Defense Technology and Industry Development Program, and 7 (seven) National Priority Programs; Sritex's Strategic Industry Role to Improve the National Economy to Support National Defense managed to dominate about 20% of all textile products in Indonesia. Then, for the sales portion, domestic sales tend to be 60% while exports are 40%; Innovations that Drive Strategic Industry Progress in the Defense Sector have innovation models that can encourage the development of strategic defense industries.*

Keywords: *Strategic Industry, National Economy, Defense.*

I. INTRODUCTION

Globalization and liberalization have opened up very fast dynamics of change and have a broad impact on the national economy. On the one hand, the most felt influence is the increasingly fierce competition and on the other, it opens up opportunities for a new business climate. It is common knowledge that the industrial sector plays a very important role in the national economy, especially in its role as a driver of the national economy, especially in encouraging economic growth.. More specifically, the industrial sector is able to make a very large contribution in providing employment for the community and in obtaining foreign exchange for the country through the export of various industrial products.

Of the many branches of industry, there are a number of industries which because of their industrial characteristics have a strategic function for the Indonesian nation and state. Strategic understanding, in this case, is very dynamic in accordance with the development of the strategic environment that occurs, both within the territory of the Republic of Indonesia, regionally and internationally. Therefore, the strategic definition is very likely to be debated. However, in this case, there needs to be a mutual agreement among all components of national stakeholders in determining strategic industries for the national economy.

The defense industry is one of the strategic industrial sectors in Indonesia which has the main characteristics, namely the presence of high technology and innovation inherent in every stage of the production process. The existence of the defense industry, in this case is not only useful in order to maintain state sovereignty in terms of the military but the existence of the defense industry in Indonesia as one of the strategic industries that can support the rate of national economic growth.

The defense industry is expected to be able to become one of the pillars of the national economy, but it requires a long-term synergy and commitment from all parties. If you look at the import data on Indonesian defense equipment as released by the World Bank in 2021, in the last five years, the trend in the value of Indonesia's defense equipment imports tends to fluctuate. The value of imports of Indonesian defense equipment year on year (YoY) has increased in 2020 which reached US$ 270 million or 24.42%. The highest import value of Indonesian defense equipment occurred in 2017 which reached US$ 1,171 million. Meanwhile, the export value of Indonesian defense equipment also fluctuated wherein 2021 the export value of weapons and ammunition reached US$ 61 thousand, in 2020 it was US$ 656, in 2019 it was US$ 377, in 2018 it was US$ 689 thousand, and in 2017 it reached US$ 10.5 thousand (Indonesian Central Statistics Agency).

The import value of Indonesian defense equipment from other countries is still quite high and not comparable to the value of exports, but this does not prevent Indonesia from building the independence of the national industry. Through the transfer of technology method from the process of importing defense equipment, it is hoped that it will be able to meet the availability of applied technology in building domestic defense equipment.

Departing from its strategic role and distinctive character, the defense industry continues to be pursued to be developed from upstream to downstream for both government-owned industry players (BUMN) and privately owned industry (BUMS). Through Law Number 16 of 2012 concerning the Defense Industry, the government provides a clear description of the objectives, functions, and scope of the Defense Industry. This arrangement is an effort by the government to develop and utilize the Defense Industry towards independence in meeting the needs and maintenance services for domestic defense-security equipment.

II. THEORETICAL BASIS

2.1 Strategic Industry

Strategic industry according to Government Regulation of the Republic of Indonesia Number 28 of 2021 concerning Implementation of the Industrial Sector states that strategic industry is an industry that is important for the state and which controls the livelihood of many people, increases or produces added value of strategic natural resources, or has links with defense and defense interests. state security in the context of fulfilling the duties of the state government.

Strategic Industries are controlled by the state where control of Strategic Industries by the state is carried out through (1) ownership arrangements; (2) policy determination; (3) licensing arrangements; (4) production, distribution, and price arrangements; and (5) supervision. Strategic Industry ownership arrangements are carried out through:

a. Full equity participation by the Government;
b. Establishment of a joint venture between the Government and the private sector; or
c. Restrictions on ownership by foreign investors.

The strategic industry in the past was synonymous with the Defense and Security Industry. Based on Law Number 16 of 2012 concerning the Defense Industry, it is stated that the defense industry is a national industry consisting of state-owned enterprises and privately-owned enterprises, either individually or in groups, which are determined by the government to partially or wholly produce defense and security equipment. maintenance services to fulfill strategic interests in the field of defense and security located in the territory of the Unitary State of the Republic of Indonesia.

2.2 National Economy

A state is a place that overshadows all community and government activities, including the regulation and activities of development, economy, transportation, trade, politics, and so on (Asshiddiqie, 2004). The purpose of the Indonesian state is stated in the fourth paragraph of the preamble to the 1945 Constitution, namely *"Kemudian daripada itu untuk membentuk suatu Pemerintah Negara Indonesia yang melindungi segenap bangsa Indonesia dan seluruh tumpah darah Indonesia dan untuk memajukan kesejahteraan umum, mencerdaskan kehidupan bangsa, dan ikut melaksanakan ketertiban dunia yang berdasarkan kemerdekaan,*

perdamaian abadi dan keabilan sosial, maka disusunlah Kemerdekaan bangsa Indonesia itu dalam suatu susunan Negara Republik Indonesia yang berkedaulatan rakyat dengan berdasar kepada Ketuhanan Yang Maha Esa, Kemanusiaan yang adil dan beradap, Persatuan Indonesia, dan Kerakyatan yang dipimpin oleh hikmat kebijksanaan dalam Permusyawaratan Perwakilan, serta dengan mewujudkan suatu keadilan sosial bagi seluruh rakyat Indonesia".

The State of Indonesia wrote one of its goals, namely "promoting general welfare" which means that it became one of the basic goals of the Indonesian state being founded. Therefore, general welfare is closely related to the economic sector, so the Government of the Republic of Indonesia is responsible for programs that are planned and implemented in the economic field for the greatest prosperity of the people, which is nothing but to achieve general welfare (Gunadi, 1990).

2.3 National Defense

National defense is the obligation of every Indonesian citizen in maintaining the territorial integrity and sovereignty of the Unitary State of the Republic of Indonesia. The 1945 Constitution, article 27 paragraph 3 stipulates that every citizen has the right and is obliged to participate in efforts to defend the state. Article 30 paragraph 1 stipulates that every citizen has the right and is obliged to participate in national defense and security efforts.

State Defense following the Decree of the Minister of Defense Number: KEP/1255/M/XII/2015 concerning National Defense Policy Year 2016 that State Defense is essentially all defense efforts that are universal characterized by populist, universal and territorial. National Defense according to the Law of the Republic of Indonesia Number 3 of 2002 concerning National Defense states that National Defense states that National Defense is all efforts to defend the sovereignty of the state, the territorial integrity of the Unitary State of the Republic of Indonesia, and the safety of the entire nation from threats and disturbances to the integrity of the nation and state. . The state defense system is a universal defense system that involves all citizens, territories and other national resources, as well as being prepared early by the government and carried out in a total, integrated, directed, and continuous manner to uphold state sovereignty, territorial integrity, and the safety of the entire nation from all threats. The implementation of national defense is all activities to implement the national defense policy.

III. METHODOLOGY

This research was conducted using a qualitative approach with descriptive analysis method through data collection which is described in detail and regularly. The data and information were collected through a Focus Group Discussion (FGD). Focus Group Discussion (FGD) is a data collection technique that is generally carried out in qualitative research to find the meaning of a theme according to a group's understanding (Bugin, 2005).

IV. RESULTS AND DISCUSSION

4.1 Strategic Industry Development in the Defense Sector in Facing Global Competition

President of the Republic of Indonesia Ir. H. Joko Widodo in several of his policies gave directions that creating the independence of the Defense Industry and changing the paradigm from defense spending to defense investment is very important because this is related to how to build the Defense Industry in Indonesia, so there must be a change from defense spending to defense investment. This indicates that there is an urgent need to improve transfer of technology.

The vision in the field of Defense Industry is the realization of an advanced Indonesia that is sovereign, independent, and personable, based on mutual cooperation. Meanwhile, its mission is the realization of an advanced Indonesia that is sovereign, independent, and personable, based on mutual cooperation. Meanwhile, the national priorities are as follows:

a. The realization of an advanced Indonesia that is sovereign, independent, and has a personality based on mutual cooperation.

b. Develop areas to reduce inequality and ensure equity.
c. Improving quality and competitive human resources.
d. Mental revolution and cultural development.
e. Strengthen infrastructure to support economic development and basic services.
f. Building the environment, increasing disaster resilience, and climate change.
g. Strengthening political stability, law, defense and security, and transforming public services.

The legal basis for its implementation is Law no. 03 of 2002 concerning National Defense and Law no. 16 of 2012 concerning the Defense Industry. Furthermore, the legal basis related to the Defense Industry is regulated in Government Regulations and Presidential Regulations. The direction of the development of defense technology in the Defense Industry based on user needs and the dynamics of the threat is strategic, high technology, long term, aspects of economic feasibility, technology transfer, across government, and across ministries/agencies.

In implementing the development direction of the Defense Industry, a strategy for mastering defense technology is formulated which includes:

a. Defense Industry Participation: Technology mastery through the implementation of trade balance, local content and offset (IDKLO) in the procurement of defense equipment from abroad.
b. Overseas Cooperation: Mastery of technology through cooperation with foreign countries in the form of joint development, joint production, and joint ventures.
c. NASIONAL LITBANGYASA: Mastery of technology through an R&D program for users and the main tool industry coordinated by KKIP.

The development of the Defense Industry includes the implementation of the KLO, International Cooperation, Promotion of the Defense Industry, Licensing of the Defense Industry, and BU Handak, the Defense Technology and Industry Development Program, and 7 (seven) National Priority Programs. The Defense Industry includes the main equipment industry, the main and/or supporting component industry, the component and/or supporting (supplies) industry, and the raw material industry.

4.2 Sritex's Strategic Industry Role to Improve the National Economy to Support National Defense

Sritex is a labor-intensive textile industry. Sritex is also an integrated company whose industry is integrated from upstream to downstream which is done or produced by Sritex. Starting from raw materials to become products, everything is done in one company. Sritex is able to make international-class products that can be used domestically. To suppress imports and develop local products so that they can give pride to the Indonesian people while still prioritizing product quality.

Sritex is an integrated producer from the initial process of raw materials to finished materials. Therefore the company can control and ensure material quality standards. Based on the overall contribution data, both the domestic portion and the export portion, it shows that Sritex's contribution as the textile industry in Indonesia has managed to dominate around 20% of all textile products in Indonesia. Then, for the sales portion, domestic sales tend to be as much as 60% while exports are 40%.

Sritex has 50,000 employees, both female and male, spread across various cities and regencies in Central Java such as Solo, Sukoharjo, Boyolali, Karang Anyar, Magelang, Semarang, Kudus and so on. In addition, Sritex also supports and collaborates with more than 100 MSMEs (Micro, Small and Medium Enterprises) such as convection MSMEs, MSMEs providing accessories, MSME spare parts, MSME packaging, etc. Data for the last four years Sritex's contribution to national income explains that the company's revenue has reached USD 1 billion since 2018 and has grown by 8.52% in the 2020 pandemic year.

Sritex is also one of the world's leading partners in supplying military uniforms, public authorities and professionals to more than 30 countries. Eight of them are European countries such as Germany, England, Austria, Norway, Sweden, and three other European countries. Sritex is also the official partner outside Europe to manufacture military uniforms for The North Atlantic Treaty Organization (NATO).

4.3 Innovation to Drive Strategic Industry Progress in the Defense Sector

In an effort to encourage the advancement of the strategic industry in the defense sector, there are several interesting issues regarding defense industry innovation which include: characteristics of the defense industry market, technological innovation, technological innovation success factors, and defense industry innovation. To realize this, serious principles are needed. As well as the principles for selecting the capabilities of the United Kingdom's defense industry, namely *Appropriate sovereignty over industrial skills, capacities, capabilities and technologies to ensure operational independence in military operations (security of supply); Through-life capability management based on support, sustainability and the incremental technical enhancement of existing capabilities; Maintaining key and rapid industrial capabilities and skills where UK and export markets no longer provide a sustainable production profile; Intelligent customers-intelligent suppliers; Value for defence reflected in an acquisition policy based on achieving long-term best value for money; and Change on both sides: value for money is scutinised, incentivised and protected.*

While the innovation models include: Product innovation: the introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses. This includes significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics; Process innovation: the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software; Marketing innovation: the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing; and Organizational innovation: the implementation of a new organizational method in the firm's business practices, workplace organization or external relations.

Technological innovation as described by Dr. H. Purushotham (Chairman & Managing Director National) in Presentation on theme: "Role of NRDC in Promoting IPRs and Technology Transfer from Public Funded R&D Labs to Industries" is outlined in several stages.

Technological innovation will achieve success if it has gone through factors such as: Market Readiness, Commercialization Readiness, Technology Readiness, and Management Readiness. According to sources from Heslop, LA McGregor, E. and Griffith, M., (2001) – Development of a Technology Readiness Assessment Measure: The Cloverleaf Model of Technology Transfer, it is explained that the success factors of technological innovation are explained as follows:

	Extent to which Condition is met	Level of Confidence	Wtd Score
Market Readiness			
The technology offers significant identifiable and quantifiable benefits	_____	_____	_____
The product has distinct advantages over competing products	_____	_____	_____
The technology has future uses	_____	_____	_____
There is a definable marketable product	_____	_____	_____
A defined market is accessible	_____	_____	_____
The market is a large one	_____	_____	_____
The market is a growing one	_____	_____	_____
The technology will be first-to-market	_____	_____	_____
Manufacturing is determined to be feasible	_____	_____	_____
Market Readiness Score (Max 81)		Subtotal	_____
Technology Readiness			
The technology is a new, non-obvious invention	_____	_____	_____
There are no other dominant patents or pending publications	_____	_____	_____
The technology is state-of-the-art or major breakthrough	_____	_____	_____
The technology is a core or platform technology	_____	_____	_____
The technology is safe for human use and the environment	_____	_____	_____
A prototype or technology demonstrator exist	_____	_____	_____
All raw materials are available for manufacturing	_____	_____	_____
Technology Readiness Score (Max 63)		Subtotal	_____
Commercial Readiness			
Prospective licensees are identified	_____	_____	_____
Inventor has industry backup for R&D and manufacturing	_____	_____	_____
Licensee financial support is available for further development/patenting	_____	_____	_____
There is access to venture capital	_____	_____	_____
A positive return on investment is expected	_____	_____	_____
Financial risk is low	_____	_____	_____
Distribution networks are available	_____	_____	_____
Commercial Readiness Score (Max 63)		Subtotal	_____
Management Readiness			
Inventor will champion as a team player	_____	_____	_____
The inventor has realistic expectations for success	_____	_____	_____
The inventor is recognized and established in the field	_____	_____	_____
Inventor holds patent	_____	_____	_____
Role and responsibilities of technology broker is clear	_____	_____	_____
Information network relevant market exists	_____	_____	_____
Management Readiness Score (Max 54)		Subtotal	_____
TOTAL SCORE (Max 261)			_____

Figure 2. The Improved Cloverleaf Model

An example of technological innovation is PTTA (unmanned aircraft). The technology system in PTTA includes the PTTA active sensor system which is able to provide precision control of modern weapon systems. Stephen Biddle said that "Victory and Defeat in Modern Battle redefined how the world explained military effectiveness by arguing that the way in which a nation uses its forces (force employment) is the best determinant for achieving a military victory in a battle. Contrast to the traditional theories of numerical preponderance (manpower, material, and economic might) or technological advantage.

In addition to unmanned aircraft, Indonesia through PT Dahana is developing energetic materials which are very important to support the most basic defense. The ones that are currently or have been developed are as follows:

a. Explosives: Dayagel Magnum, DayagelSivor, C-4 Users: TNI-AD, TNI-AL, POLRI, construction and training.
b. Blast Effect Bomb, developed with BPPT & TNI-AU for pilot training, anti-riot, anti-personnel.
c. Squib detonator, for rocket initiation; user: LAPAN.
d. Grenade Detonator, user: Pindad.
e. The Rhan 122 rocket, jointly developed by DI, Pindad, KS.
f. P100L bomb, in collaboration with the national private sector.

Development: Initiation of heavy munitions/mortars, Shaped Charges Anti Tank Nitric Acid derivative products as the basis for almost all military explosives (RDX, TNT, HMX, PETN, PYX etc.) and propellants.

V. CLOSING

5.1 Conclusion

a. Strategic Industry Development in the Defense Sector in Facing Global Competition, hasseveral policies that provide direction to create the independence of the Defense Industry and change the paradigm from defense spending to defense investment. Defense Industry Development includes the implementation of KLO, International Cooperation, Defense Industry Promotion, Defense Industry Licensing, and Handak BU, Defense Technology and Industry Development Program, and 7 (seven) National Priority Programs. The Defense Industry includes the main equipment industry, the main and/or supporting component industry, the component and/or supporting (supplies) industry, and the raw material industry.
b. Sritex's Strategic Industry Role to Improve the National Economy to Support National Defense. Sritex is a labor-intensive textile industry. Sritex is also an integrated company whose industry is integrated from upstream to downstream which is done or produced by Sritex. Sritex as a textile industry in Indonesia managed to dominate about 20% of all textile products in Indonesia. Then, for the sales portion, domestic sales tend to be as much as 60% while exports are 40%.
c. Innovations that Drive Strategic Industry Progress in the Defense Sector, there areIts innovation models include: Product innovation: the introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses. This includes significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics; Process innovation: the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software; Marketing innovation: the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing; and Organizational innovation: the implementation of a new organizational method in the firm's business practices, workplace organization or external relations.

5.2 Recommendation

a. The existence of sustainable development of Strategic Industry Development in the Defense Sector in Facing Global Competition in a focused and sustainable manner in order to produce Strategic Industry Independence in the Defense Sector.

b. The government must make a special policy in which every change of leadership must focus on using domestic defense industry products instead of always importing products from foreign countries every change of leadership.
c. Creating the latest defense innovation system that will be run by the country's children and synergizing with experts and experts as input to the government to get innovation results in the defense industry that can be used as well as create jobs.

REFERENCES

[1] Asshiddiqie, Jimly. 2004. *Konstitusi dan Konstitusionalisme Indonesia.* Jakarta: Rajawali.

[2] Bugin, Burhan. 2005. *Metodologi Penelitian Kuantitatif Komunikasi, Ekonomi dan Kebijakan Publik Serta Ilmu-Ilmu Sosial Lainnya*, Jakarta :Prenada Media.

[3] Gunadi, Tom. 1990. *Sistem Perekonomian Menurut Pancasila dan UUD 45.* Yogyakarta: Bandung Angkasa.

[4] Keputusan Menteri Pertahanan Nomor : KEP/1255/M/XII/2015 tentang Kebijakan Pertahanan Negara Tahun 2016.

[5] Material for the Development of Strategic Industries in the Defense Sector in Facing Global Competition by Laksma TNI Sri Yanto, ST (Director of Defense Industry Technology, Directorate General of Defense Potential, Ministry of Defense) in a Focus Group Discussion, Defense Economics Study Program at the Defense University of the Republic of Indonesia on 28 June 2021.

[6] Materials for PT Sritex's Business Strategy in Improving the National Economy through Defense and Security Equipment Products by Sony Sulaksono (Director of IMATAP, Directorate General of ILMATE, Ministry of Industry) in a Focus Group Discussion, Defense Economics Study Program at the Defense University of the Republic of Indonesia on 28 June 2021.

[7] Material for Innovation to Drive Strategic Industry Progress in the Defense Sector by Dr. Ir. Jupriyanto., ST, MT IPU (Lecturer), in a Focus Group Discussion, Defense Economics Study Program at the Defense University of the Republic of Indonesia on 28 June 2021.

[8] Peraturan Pemerintah Republik Indonesia Nomor 28 Tahun 2021 Tentang Penyelenggaraan Bidang Perindustrian.

[9] Undang-Undang Dasar Tahun 1945.

[10] Undang-Undang Republik Nomor 3 Tahun 2002 Tentang Pertahanan Negara.

[11] Undang-Undang Nomor 16 Tahun 2012 tentang Industri Pertahanan