

ANALYSIS OF THE INDONESIAN GOVERNMENT'S DECISION TO BUY RAFALE DASSAULT AIRCRAFT FROM FRANCE

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ABSTRACT. This research aims to explain and analyze Indonesia's decision to buy the Dassault Rafale fighter aircraft from France in 2022. It is known that Indonesia will retire its old F-5 Tiger fighter aircraft and its outdated technology. Indonesia's purchase of Dassault Rafale fighter aircraft to increase air defense capabilities, strengthen bilateral cooperation and increase national military capabilities. Several options for Indonesia to choose which fighter aircraft to buy, namely Gripen from Sweden, Eurofighter from Austria, Dassault Rafale from France, and Sukhoi Su-35 from Russia. The theory used in this research is Rational Choice. This study used descriptive qualitative method. In this research, data collection techniques were carried out by collecting data through available literature and library materials, mass media, print media, electronic media, books, journals and related articles, as well as other open sources. The results of this research show that Indonesia's decision to buy the Dassault Rafale fighter aircraft from France was based on two considerations, namely economic considerations where maintenance costs are low, technology transfer, and the potential to increase the national defense industry, increasing independence in the production and maintenance of military defense equipment and political considerations, namely diplomatic relations, regional security and national strategic interests. This choice reflects efforts to strengthen defense and build close military collaboration with partner countries.

Keywords: Decision; Indonesia; Vote; Dassault Rafale; France

INTRODUCTION

In today's modern era, with the increasingly sophisticated and rapid development of science and technology, of course, it demands that we also participate so that we are not left behind. That is what makes us inevitably have to adapt and keep up with these developments. Especially when we talk about an increasingly modern state defense system. This is what makes Indonesia have to strengthen its national defense so that it is not left behind and Indonesia can align itself with other nations that have advanced in the field of national defense systems (Indrawan and Ridho 2022).

Strengthening the national defense system has become one of the concerns of the administration of President Joko Widodo and Vice President Ma'ruf Amin. In the past two years, President Joko Widodo has given a mandate to defense minister Prabowo Subianto to immediately modernize the main weaponry system to strengthen the TNI's function. There are two schemes carried out by Prabowo. First, through diplomacy to establish and strengthen defense cooperation. Prabowo often visits several countries, from the United States to European countries. Second, through strengthening the domestic defense industry. Various defense equipment has been created and referred to as the work of the nation's children. In his first year as defense minister, Prabowo focused on strengthening defense diplomacy with friendly countries. It was noted that in the first six months, Prabowo visited abroad. Diplomacy was carried out by Prabowo to several major countries, especially those with great influence in the defense sector.

These countries include the United States, Russia, China, England, France, to Turkey (Indrawan and Ridho 2022)

Indonesia is a country that cooperates a lot with other countries in the field of defense. President Joko Widodo at the 2021 defense industry policy committee meeting stated four priority policies in the defense sector. One of its policies is to guarantee the fulfillment of defense needs both related to the welfare of soldiers and the provision of defense equipment and procurement of defense equipment which will be converted into long-term investments for the independence of the domestic defense industry to help improve the national economy. The defense equipment that Indonesia needs right now is fighter planes to protect the sovereignty of the Unitary State of the Republic of Indonesia. One of them is to replace the F-5 Tiger II fighter. This aircraft is more than 30 years old, that is, it has been operated in Indonesia since the 1980s and has now been retired due to the age factor. In addition, from a technological aspect, it is already behind, so it must be replaced with a new, more sophisticated generation. Indonesia's strategic geographical conditions make Indonesia often the target of many countries because of its enormous potential in various fields with abundant natural wealth (4)

Seeing that the Indonesian Air Force wants to replace its fighter jets, the world's fighter jet manufacturers are competing to offer their products, including Saab JAS 39 Gripen made in Sweden Dassault Rafale made in France Eurofighter Typhoon made by a consortium of four Western European countries (Spain, England, Germany, Italy) F-16

Viper Block 72 made in the United States and the Su-35 Super Flanker made in Russia.

For Indonesia, strengthening the country's defense and security system to present a new defense system that will make Indonesia more taken into account and able to put pressure on other countries in the regional political context. Especially when talking about air defense systems, until now Indonesia's air power is still very limited in maintaining national airspace sovereignty, so air intrusions are often still rife. So that Defense Minister Prabowo Subianto has repeatedly made efforts to strengthen the state's defense and security system to anticipate potential threats to the state. (Hariyanto, Salim, and Palupi, 2022).

Of the several choices for countries that offer their military products to Indonesia, especially combat aircraft, Prabowo Subianto who represents Indonesia and is also the Indonesian defense minister has received a mandate from President Joko Widodo to choose which fighter aircraft is suitable for strengthening Indonesia's air defense, Prabowo is very wanted 4 options for fighter aircraft, namely the first Gripen E from Sweden, the second Eurotyphoon used by Austria, the third Dassault Rafale from France and the fourth Sukhoi Su-35 flanker. Why doesn't Prabowo Subianto want Eurotyphoons directly from the manufacturing country, instead he only wants used Austrian ones. All of this happened from Prabowo's considerations.

So from a series of choices, Prabowo Subianto as the Indonesian defense minister representing the Indonesian government decided to buy a Dassault Rafale fighter from France. The defense cooperation agreement between Indonesia and France regarding the purchase of Dassault Rafale fighter aircraft was officially signed on 10 February 2022. Indonesia will buy 42 units of Dassault Rafale with the initial contract namely the purchase of 6 units. The signing of the agreement was witnessed directly by the Indonesian defense minister, Prabowo Subianto, and the French armed forces minister, Florence Parly. The signing of the purchase contract for the Indonesian side was represented by Marshal Yusuf Jauhar, Head of the Defense Facilities Agency, and Eric Trappier, CEO of Dassault Aviation. (Pertiwi and Sari 2022).

In the treasury of the latest combat aircraft that are increasingly demanding high technology, the Dassault Rafale is included in the 4.5 generation group and this is a milestone in military progress. Until now, the backbone of Indonesia's air power still relies on generation 4 fighter aircraft. So, the Minister of Defense of Indonesia, Prabowo Subianto, is also exploring several options to find a replacement, with the note that the fighter aircraft purchased by Indonesia must come from a more recent generation.

In the end, the choice was the Dassault Rafale fighter from Generation 4.5. (Saputro, 2022)

The researcher embarks on an exploration of literature concerning Indonesia's defense collaborations with other nations, particularly in the realm of air defense. The initial findings encompass ten articles, each delving into various aspects of Indonesia's strategic partnerships. The first article dissects Indonesia's collaboration with Russia in procuring Sukhoi Su-35 fighter aircraft, emphasizing the benefits such as a trade exchange involving Indonesian commodities and Transfer of Technology (ToT) for Sukhoi aircraft maintenance, repair, and overhaul. The second article focuses on defense industry cooperation with South Korea, particularly in developing the Changbogo submarine and the KFX/IFX fighter. It highlights the need for a comprehensive strategy involving human resources, infrastructure, and national defense companies.

The third article scrutinizes Indonesia's interests in purchasing Sukhoi Su-35, linking the decision to trade-off agreements on plantation commodities and aligning with the Republic of Indonesia law. The fourth article utilizes neorealism theory to elucidate the dynamics of Indonesia-Russia defense cooperation in the Sukhoi Su-35 purchase plan. The fifth article delves into the decision-making process behind choosing French-produced Rafale fighter jets, employing Graham T. Allison's National Actor Model Decision Making Theory. The sixth article explores strategies for mastering advanced composite technology to support the independence of combat aircraft development. The seventh article employs the ladder of production concept to analyze defense industry cooperation with South Korea in the Chang Bogo submarine project and KFX/IFX combat aircraft development. The eighth article evaluates the effectiveness of Indonesian diplomacy, specifically in the Indonesian-Dutch bilateral cooperation for defense interests.

The ninth article, using descriptive analysis, outlines Indonesia's collaboration with South Korea in developing KFX/IFX fighter aircraft, emphasizing cost-sharing and the transfer of technology. Finally, the tenth article discusses the Ministry of Defense's policy in strengthening the main tools of the air defense system, considering global dynamics, cooperation, budget constraints, and innovation as key factors in meeting defense equipment requirements. (Sazrhi, 020).

Analysis of the Indonesian government's decision to purchase Rafale Dassault aircraft from France is an important research subject because the decision reflects complex strategic and economic considerations. The selection of these fighter aircraft by the Indonesian government is the focus of research

because it involves various factors, including national defense needs, the reliability of military technology, bilateral diplomatic relations between Indonesia and France, as well as economic coercion related to arms purchase contracts. An in-depth analysis of this decision can provide insight into Indonesia's national security priorities, regional geopolitical dynamics, and its impact on industrial protection and international cooperation.

METHOD

This research is qualitative research using the concepts and theory used in this research is the theory of Rational Choice. This research uses a descriptive qualitative method. In this study, data collection techniques were carried out by collecting data through literature and available library materials, mass media, print media, electronic media, books, journals and related articles, and other open sources.

RESULT AND DISCUSSION

Indonesia's Dynamics Want To Buy New Fighter Aircraft And Retire Obsolete F-5 Tiger Fighters

Indonesia is a country that has the largest military power in Southeast Asia. To maintain and increase its military strength, Indonesia continues to strive to modernize military equipment including combat aircraft. As part of the modernization, Indonesia has decided to replace its aging F-5 Tiger fighters with new fighters. The F-5 Tiger is a fighter aircraft made in the United States that has been used by the Indonesian Air Force since 1980. Even though the F-5 Tiger can still be used, its technology is outdated. Especially if you look at the age of the F-5 Tiger, it has reached 30-40 years, so it is no longer relevant for the Indonesian Air Force today. (Marwanto, Darmawan, and Pandjaitan 2023)

In 2020, the Government of Indonesia announced that they will purchase 36 new fighter aircraft to replace the F-5 Tiger. The fighter aircraft that will be purchased initially is the F-16 Block 72 Viper variant produced by the United States. The decision to purchase F-16 Block 72 Viper was chosen because this aircraft has more advanced technology than the F-5 Tiger. Apart from that, the F-16 Block 72 Viper is also a combat aircraft that has been tested and has been used by many countries. However, the plan to purchase this new fighter also raises various pros and cons among the public. Then the Indonesian government through the minister of defense, Prabowo Subianto, also wanted to buy fighter planes from other countries. As for the options, there are 4 types of fighter aircraft that Prabowo wants, namely Gripen e/f from Sweden, Dassault Rafale from France, used

Eurotyphoon from Austria, and Sukhoi Su-35 from Russia. However, several considerations must be seen by the Indonesian government regarding these combat aircraft. Some people think that the purchase of new fighter aircraft is very important to improve the country's defense. However, some consider that the costs incurred to purchase new fighter aircraft can be used for more important purposes such as health and education. (Utomo et al. 2023)

Apart from that, the decision to buy a new fighter aircraft also raises questions about the Indonesian Air Force's ability to maintain and operate the new fighter aircraft. This is because the operation of modern combat aircraft requires enormous costs and special expertise in maintenance and operation. However, with the decision to buy this new fighter, it is hoped that the Indonesian Air Force can improve its military capabilities and better maintain the security and sovereignty of the State.

In addition, the purchase of new fighter aircraft by Indonesia can also strengthen diplomatic relations with the countries that supply these fighter aircraft. This is because the purchase of military equipment is often considered a factor in diplomatic relations between countries. However, keep in mind that purchasing new combat aircraft is not the only solution to strengthen national defense. Various other aspects must also be considered, such as increasing the capabilities of military personnel, modernizing other military equipment, and improving defense infrastructure. In addition, the purchase of new fighter aircraft must also be considered from a budget perspective. The purchase of expensive military equipment can burden the state budget and reduce the allocation of funds for other sectors such as education, health, and infrastructure (Saputra, Darmawan, and Darmawan 2022).

Therefore, the purchase of new combat aircraft must be carefully considered and directed at the larger national interest. In addition, the Indonesian Air Force must also ensure that the operation of the new combat aircraft can be carried out effectively and efficiently. In the end, Indonesia's efforts to replace the F-5 Tiger fighter aircraft with new fighter aircraft is an important step in strengthening national defense. However, this decision must be carefully considered from various aspects so that it can provide maximum benefits for the state and people of Indonesia.

Indonesia-France Relation in Defense

Good relations between the two countries are usually based on mutual visits between officials from the two countries, on a bilateral or multilateral basis. France is one of the most modern countries in the world and is located in the western part of Europe along with the Netherlands, Germany, and Spain.

France has an official name that is La Republique Francaise or the French Republic. The French Revolution which took place in 1780 was marked by a shift in the French system from an absolute monarchy to a republic that aimed to uphold sovereignty and human rights. Relations between the two countries between Indonesia and France have been established since September 1950 at the beginning of the 19th century during the Dutch East Indies colonial period. This bilateral relationship tends to be harmonious without problems that interfere with bilateral relations between the two countries because there are similarities between the policy principles and foreign policy adopted by Indonesia-France, one of which is "Indonesia's free and active politics" if in France it is referred to as "Politique French Independence". This principle is the basis for establishing good bilateral relations between these countries.

For Indonesia, France is one of the important relations in the Western European region. Relations between Indonesia and France have not experienced many ups and downs, where Indonesia has long been a user of several types of defense equipment, especially for the production of tanks. Among these is the AMX 13 light tank, designed by Atelier de Construction d'Issy les Moulineaux (AMX) and manufactured by Groupement des Industries de l'Armée de Terre (GIAT Industries). In 1968, Indonesia also purchased AMX 10 tanks to strengthen the Indonesian Navy's Marine Corps. The Indonesian Navy has also operated three research vessels made in France, one of which is the Baruna Jaya 2 Ship. In a peace mission under the banner of the United Nations Security Council (UN) in Lebanon, the Indonesian National Armed Forces (TNI) also operates French-made armored vehicles. Vehicule l'Avant Blinde (VAB) 4x4, production of French Renault Trucks. In 2022, Indonesia will buy 2 Scorpene submarines and will also acquire 42 Rafale fighter aircraft, for the initial contract, Indonesia will get 6 units first after that the rest will be delivered in stages. If later the Rafale variant of the F-4 from France arrives in Indonesia, he will occupy the forefront of the ranks of the TNI's air power. With France being part of NATO and one of the holders of veto rights at the United Nations Security Council (UN), the crystallization of cooperation with France will certainly affect Indonesia's international diplomacy which adheres to the principle of the non-aligned movement. France certainly sees Indonesia as a friend in the global political arena (Amalia 2022).

Indonesia's Decision To Continue Cooperation With France Regarding The Purchase Of The Dassault Rafale Fighter Aircraft

In this meeting, Prabowo expressed his gratitude to Sébastien Lecornu who has played an important

and active role in the success of bilateral relations between the two countries. Indonesia and France have established strong defense cooperation, especially in the field of the main weaponry system. The two countries have also established defense cooperation through educational exchanges and seminars to increase the capacity of the two countries. Where both parties can share information and experience as learning. Therefore, Indonesia is interested in continuing cooperation with France, namely the procurement of 42 units of Dassault Rafale fighter aircraft. The following is Indonesia's decision to buy Dassault Rafale fighter aircraft from France which are categorized in terms of political considerations and economic considerations, namely:

a. Political Considerations

Indonesia has confirmed that it will bring in 6 of the total 42 French-made Rafale fighter jets that will be acquired after Defense Minister Prabowo announced that he would purchase Dassault Rafale fighter planes from Dassault Aviation. This also answers many questions regarding the conundrum of buying Indonesian fighter planes, because Prabowo has made visits to many countries. The reason for choosing Dassault Rafale France has a strong basis, one of which is the direction of Indonesia's politics in the international world. Geopolitical and geostrategic considerations are also factors to be considered in the procurement of defense equipment, in addition to technical considerations. Therefore, the selection of the Dassault Rafale has gone through careful consideration, including setting aside the procurement of defense equipment from other superpowers. The relationship between Indonesia and France, which has experienced relatively few ups and downs, is also a factor to be considered. France's bargaining position in the international arena and its foreign policy which is relatively more neutral compared to European countries and other countries in the world have made France a choice of source of defense equipment procurement for Indonesia.

Indonesia's free and active foreign policy requires Indonesia not to bind itself a priori to any world power. However, amid limited defense equipment and Indonesia's state defense budget, the current purchase of fighter aircraft is considered appropriate because it was carried out when Indonesia was trying to strengthen its defense posture to increase its bargaining position in the Asia Pacific region. The procurement of these fighter aircraft is an air defense subsystem, a subsystem of the national defense system. France is a country that has independence in terms of defense equipment production. France is willing to cooperate in an offset scheme (reciprocal trade in the manufacture of aircraft spare parts or other cooperation). Of course, this has a positive impact on

the development of Indonesia's defense equipment. Moreover, even though France is a member of NATO, France's foreign policy is neutral on sensitive issues such as rejecting the United States' invasion of Iraq.

Initially, in 2018, Indonesia carried out defense cooperation with Russia with a plan to purchase 11 SU-35 fighter aircraft to replace F-5 Tiger fighters that were no longer suitable for use, and it is hoped that in 2019 the initial stage 2 Sukhoi SU-35 fighters will be arrived in Indonesia and will be displayed at the TNI (Indonesian Armed Forces) 74th. But it turns out that the purchase plan received serious attention from the United States. Indonesia could be subject to CAATSA sanctions if the purchase is realized. CAATSA sanctions are laws that are used as a basis by the United States to be able to impose sanctions or embargoes on a country related to the activities of purchasing state military equipment related to Russia. CAATSA targets Russia for invading Ukraine, annexing Crimea, cyber infiltration and attacks, intervening in the 2016 United States election, and other destructive actions. Seeing this, Indonesia canceled the cooperation in purchasing Sukhoi SU-35 fighter aircraft from Russia because it did not want to take risks. Even if we trace that the United States has informed us that Indonesia and two other Asian countries are guaranteed to be free from sanctions even though they buy military equipment from Russia. The United States considers the three Asian countries, namely India, Vietnam, and Indonesia, as strategic allies of the United States in Asia. However, even though there is a CAATSA-free guarantee, Indonesia does not want to get big-headed because the geopolitics of the United States sometimes change so Indonesia chooses to be safe. Then Indonesia began to look for other options for conducting defense cooperation in this case buying fighter aircraft from fighter aircraft manufacturers from other countries. So Prabowo, as the minister of defense, made visits to several fighter-producing countries. Through a series of considerations, Indonesia officially chose the Dassault Rafale fighter, marked by the signing of an MoU between Indonesia and France, which was witnessed by the Minister of Defense, Prabowo Subianto, and the Minister of the French Armed Forces, Florence Parley. Speculation that the purchase of Dassault Rafale fighter aircraft from France is considered safe from potential sanctions from the United States has also colored the conversation about Indonesia buying Dassault Rafale fighter aircraft. France is an allied member of the United States which is a member of NATO (North Atlantic Treaty Organization) so it is automatically safe from the US CAATSA sanctions.

The Rational Choice Theory describes Indonesia making decisions based on profit and loss in choosing

a Dassault Rafale fighter because by buying a Dassault Rafale fighter there are advantages, namely the ease of supply of spare parts and without an embargo guaranteed by France, and losses when viewed from this concept, namely not any losses incurred. So that in the future Indonesia does not have to worry about using the Dassault Rafale fighter to maintain national sovereignty for the sake of Indonesia's national interests. (Rinayuhani, 2017)

The Dassault Rafale fighter is not a new aircraft in the world of international aerospace and is already well-known as a Battle Proven fighter in the sense that it has been tested in all combat fields. The Dassault Rafale fighter is known to have been involved in many missions since it was used by the French armed forces. According to Dassault Aviation, the French Air and Navy involved the Rafale in a series of missions in Afghanistan from 2006 to 2011. In that mission, the Dassault Rafale demonstrated its ability as a reliable fighter jet. The Dassault Rafale is claimed to be on target when shooting targets using the HAMMER air-to-ground modular rocket. The HAMMER, is a new generation medium-range air-to-ground weapon designed and manufactured for the Air Force and Navy. HAMMER was first launched at the 2007 Paris Air Show. HAMMER itself is a smart bomb that is Modular and consists of a guidance kit and range extension kit, PAVEWAY laser-guided bombs, and up to a 30-millimeter cannon. Besides HAMMER, Dassault Rafale also has air-to-air missiles called METEOR missiles and anti-ship missiles called AM39 EXOCET. In addition, Dassault Rafale also performs reconnaissance, surveillance, Tactical Acquisition and Reconnaissance (ISTAR), Strike Coordination and Reconnaissance (SCAR). During the Libyan conflict, hundreds of targets such as tanks, armored vehicles, artillery emplacements, storage areas, command centers, and air defense systems (SA-3 Goa and SA-8 Gecko Launcher fixed and mobile SAMs) were hit with devastating accuracy by Dassault aircrews. Rafale. The Dassault Rafale is known as a multifunctional fighter because it can be based on land or aircraft carriers. The price of one aircraft reaches USD 115 million or the equivalent of 1.6 trillion rupiahs. As for weapons, this aircraft has a GIAT 30/719B cannon with 125 spheres to ASMP-A a nuclear.

Dassault Rafale is designed as a fighter aircraft based on land or aircraft carriers. The Dassault Rafale is designed with a delta wing combined with an integrated active (aeronautical) canard to maximize zero gravity or G (+9 G or -3 G) maneuverability for flight stability. Even the Dassault Rafale (Squall) can also maneuver up to 11 G in an emergency, with a landing speed of up to 115 knots. The Dassault Rafale fighter jet is said to have a length of 15 meters/

height of 5 meters and flew for the first time in 1986 and has a maximum speed of 2,390 km per hour. The Rafale is also equipped with an integrated defense-assist system called SPECTRA, which can protect aircraft from air and ground attacks using software-based virtual stealth technology. This capability was demonstrated in a battle in Libya, where the Rafale could independently carry out missions to destroy Enemy Air Defense (SEAD) equipment. The Dassault Rafale can use multiple passive sensor systems. The Optronique Secteur Frontal (OSF) optical-electric system, was developed by the Thales Group company. The SPECTRA electronic self-protection system gives the aircraft the ability to defend against both air and ground threats. So far the countries that have purchased Rafale aircraft are India, Libya, Britain, and Switzerland. From an electronic perspective, the aircraft is equipped with the Thales RBE2 system, a passive electronically scanned array (PESA). By its manufacturer, Thales, this tool can increase awareness of other fighter jets and can detect quickly and be able to track various targets in close combat. As a complement, the radar system is also equipped with RBE2 AA, in the form of an active electronically scanned array (AESA). This tool can detect enemies up to 200 km. This radar is claimed to be very reliable in detecting opponents and reducing maintenance compared to previous types (Ismail, Mulyaman, and Sarudin 2020)

To increase air supremacy capabilities, the manufacturer has also installed several passive sensor systems, namely an electro-optical system in the form of Optronique Secteur Frontal (OSF), which is integrated with the aircraft. This OSF can detect and identify air targets. Meanwhile, to support flights, an Integrated Modular Avionics (IMA) or commonly known as MDPU (Modular Data Processing Unit) is installed. This IMA is claimed to be able to assist pilots during combat operations in the form of analyzing data from all sensor systems installed in the aircraft. Apart from attacking enemies in the air, the Rafale is also capable of targeting enemies on the ground with their equipment called Thales Optronics's Reco New Generation and Damocles electro-optical reconnaissance devices. Simultaneously, these two tools provide information on target positions, and open reconnaissance missions and have been integrated with the IMA system. However, Rafale has several weaknesses, one of which is the non-retractable probe. The BBM funnel is quite disturbing visually. Of course, the funnel interferes with the pilot's view in the cockpit of the aircraft. Meanwhile, those with a retractable muzzle are more expensive to maintain and prone to traffic jams. France itself applies this design to all types of front-line fighter jets such as the Rafale, Mirage 2000, and Mirage F1,

carrying the non-retractable probe model. (Yani and Montratama 2016)

So if it is related to the Rational Choice Theory which describes Indonesia making decisions based on profit and loss, there are only a few disadvantages, namely the refueling funnel which is visually disturbing for the pilot's view of the cockpit. and in terms of the advantages of choosing the Dassault Rafale fighter because of the sophistication of the Dassault Rafale fighter which is famous for being Battle Proven in all combat fields, Indonesia's decision to choose the Dassault Rafale fighter is very rational.

PT Dirgantara Indonesia (PTDI) and Dassault Aviation have signed a Memorandum of Understanding (MoU) regarding cooperation in the Offset and Transfer Technology (ToT) program for the Dassault Rafale fighter. The MoU document was signed by the Main Director of PT Dirgantara Indonesia, Gita Amperiawan, and Chairman & CEO of Dassault Aviation, Eric Trappier witnessed directly by the Minister of Defense of Indonesia, Prabowo Subianto, and Minister of the French Armed Forces, Florence Parly (Ministry of Defense 2023). The MoU which agreed on the activation of the purchase contract for 6 (six) out of a total of 42 (forty-two) Dassault Rafale fighter aircraft followed by an offset in the ToT (Transfer of Technology), carried out from Dassault Aviation to PT Dirgantara Indonesia (PT DI) certainly gives hope increasing the capacity and capability of human resources (HR) at PT Dirgantara Indonesia to be able to produce its fighter aircraft.

The purchase of Dassault Rafale fighter aircraft from France as a manufacturer will have an impact on the implementation and operational schemes of ground support equipment, calibration laboratories, as well as specific tactics and strategies for each aircraft. The development of human resources in supporting ecosystems is the basic capital because they are needed to deal with control, maintenance, and basic support systems in general. This means that defense cooperation with France will have a major impact on the education and training scheme for TNI personnel who handle the maintenance of Dassault Rafale fighter aircraft. This scheme can be said as part of the offset mechanism agreed with France. The target of this offset mechanism is to produce a greater number of technicians and instructors who understand fighter aircraft platforms such as the Dassault Rafale. The Ministry of Defense hopes that strategic cooperation in the field of defense with France will open up new opportunities for Indonesia in the development of anti-air missile and radar systems.

Assessing that the purchase of 42 Dassault Rafale fighter aircraft from Dassault Aviation, France, by Defense Minister Prabowo Subianto,

was appropriate. One of them is because these manufacturers are willing to transfer technology to Indonesia according to the mandate of the defense industry, something that is not provided for in the purchase of the latest F-16 aircraft from the United States or Sukhoi from Russia or other producing countries. The purchase of the Dassault Rafale fighter aircraft is a long-term contract so that for the transfer of technology that will be obtained by Indonesia will be gradually provided by France. For the first step, Indonesia through PT. Pindad will cooperate with Safran Electronics & Defense, an optronic, avionics, and electronic systems company, as well as software for French civil and military applications to develop the HAMMER bomb, namely the MK-82 smart bomb type bomb. The HAMMER MK-82 smart bomb will later be used on the Dassault Rafale fighter. In this collaboration, Pindad has a role in producing bodies and contents of explosives for bombs. So that later Indonesia will get a license to make its own HAMMER MK-82 bomb and no longer need to buy from France. Previously, Indonesia already had a joint defense development cooperation with the KFX / IFX 21 Boramae 4.5 generation fighter aircraft, which required a Transfer of Technology with semi-stealth capabilities with South Korea, which was still in the prototype stage and had conducted flight tests twice. The KFX/ IFX 21 Boramae prototype aircraft will only be mass-produced in 2026. Indonesia and Korea plan to produce 168 combat aircraft in this collaboration. By the financing contribution, the part for Indonesia is 48 units, while the part for Korea is 120 units. For the first production, start for the Korean part first then after the part for Korea is finished, continue production for the Indonesian part. It is estimated that the production of fighter aircraft for Indonesia will begin in 2040. (Lamablawa and Aritonang 2023)

So it will take a very long time to wait for the KFX / IFX Boramae aircraft to join the Indonesian Air Force. Seeing the geopolitical situation in the South China Sea and the already fragile condition of Indonesia's air defense, Indonesia must immediately strengthen its air defense because if it waits for the KFX/IFX 21 Boramae to be completed, it requires a long process, Indonesia must have a new, capable defense system now. to maintain air sovereignty. The Dassault Rafale fighter cannot be equated with the KFX/IFX 21 Boramae fighter, because the Dassault Rafale fighter is a pure purchase while the KFX/ IFX 21 Boramae is a contract for the development and design of combat aircraft defense systems involving the Indonesian industry. So that the Transfer of Technology for Dassault Rafale fighter aircraft is not 100 percent when compared to the KFX / IFX 21 Boramae. Some requirements must

be met by Indonesia, one of which is the purchase of a minimum of 100 units of Dassault Rafale fighter aircraft. Because Indonesia has not yet reached the minimum purchase amount, the package provided has not been maximized in the form of joint production for joint ventures. Even so, even though it is not 100 percent Transfer of Technology, Indonesia should be grateful because there is a Transfer of Technology that was obtained from the purchase of the Dassault Rafale fighter and this is a good step towards the independence of the Indonesian fighter aircraft industry step by step.

By the Rational Choice theory which describes the consideration of profit and loss, Indonesia has made the right decision because it has purchased a Dassault Rafale fighter from France. France gave benefits to Indonesia with the Transfer of Technology, although not 100 percent, we should be grateful because, with the Transfer of Technology, especially the manufacture of the HAMMER MK-82 smart bomb, Indonesia could gain knowledge and licenses so that in the future Indonesia could make the bomb itself. and there's no need to buy it from France anymore, and as for the downside to this concept, there's no downside.

b. Economic Considerations

The contract for the purchase of six of the 42 Dassault Rafale fighter aircraft made by Dassault Aviation has become effective. Currently, Indonesia is waiting for the production of the Dassault Rafale fighter to be completed. Defense Minister Prabowo Subianto's spokesperson, Dahnil Anzar Simanjuntak said that Indonesia's contract with Dassault Aviation took effect on September 9, 2022. Even so, Indonesia could not get it directly because the six fighter jets for the initial contract ordered were still in the production process. For information, Indonesia through the Ministry of Defense and France agreed on a contract to purchase six of the 42 Rafale fighter jets made by Dassault Aviation. If the total is calculated, the contract is worth 68.8 trillion rupiahs. Of the total 68.8 trillion, the funds to buy Dassault Rafale fighter aircraft come from foreign loans and budget funds from the Ministry of Defense for the Indonesian Air Force. Approval was granted in September 2022, after consultation with the Ministry of Defense and the National Development Planning Agency.

The Dassault Rafale fighter is the third most expensive fighter in the world. For the price per unit, the Dassault Rafale fighter costs USD 115 million or the equivalent of 1.6 trillion rupiahs. The choice of the Dassault Rafale fighter drew a lot of controversy from various parties due to the cost being too expensive when compared to other types of fighter, for example, the price of the Chengdu J-20 fighter from China for

USD 100 million, the McDonnell Douglas F- 15 EX Strike Eagle from the United States for USD 87.7 million, Sukhoi SU-35 Flanker E fighter from Russia for USD 85 million, Saab JAS 39E/F Gripen fighter from Sweden for USD 85 million, Lockheed Martin F- 35 A from the United States for USD 77.9 million, the Boeing F/A-18E/F Super Hornet fighter from the United States for USD 67.4 million, the Lockheed Martin F-16 Block 70/72 fighter from the United States for USD 64 million . When viewed based on price, the Dassault Rafale fighter is very expensive and in terms of its capabilities in the air, other combat aircraft are not too different in quality in terms of specifications.(Rachmat 2014)

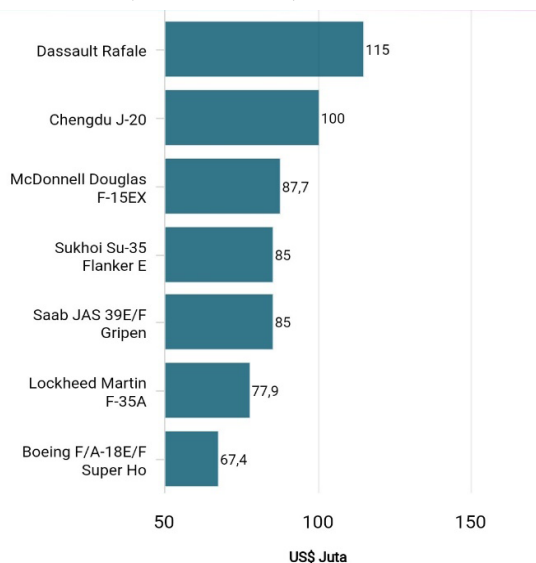


Figure 1. List of Fighter Aircraft Pricer in The World (Novria 2020)

However, even though the price of the Dassault Rafale aircraft is relatively expensive when compared to other fighter aircraft, the purchase of this Dassault Rafale fighter has a long-term investment which is one of its attractions compared to buying other fighter aircraft. The long-term investment offered by Dassault Rafale is offset and transfer of technology for the Indonesian defense industry. Similarly, SAAB Gripen also offers similar things, but the consideration is from the supply side of Gripen spare parts which are still under the control of the United States. As for the Dassault Rafale, this is purely French control. Therefore, with the offset offered by Dassault, Indonesia will greatly benefit in the long term so that in the future it can revive the domestic defense industry which will ultimately increase the country's economy.

The Rational Choice Theory describes Indonesia's considerations in making a profit-and-loss decision to choose the Dassault Rafale fighter because the Dassault Rafale fighter offers long-term investment in the form of offsets and transfer of technology so that in the future Indonesia can

be independent in the field of combat aircraft defense equipment, however, when viewed of the disadvantages of choosing the Dassault Rafale fighter, the price is more expensive but the price is not comparable to the benefits that Indonesia gets. So if it is linked to the theory of national interest, Indonesia, which has received long-term investments in the form of offsets and transfers of technology, Indonesia will be more independent in the field of defense, especially fighter aircraft spare parts so that Indonesia is not completely dependent on other countries. (Basundoro 2023)

The purchase of Dassault Rafale fighter aircraft by Indonesia is a consideration, especially regarding the operational costs of fighter aircraft. The operational costs of fighter aircraft are not only in the form of fuel costs but include the cost of replacing spare parts, routine maintenance, and overhaul costs after the aircraft has passed several thousand flying hours. The operational cost of flying a Dassault Rafale fighter is that one flight costs USD 16,500 per hour or 253.4 million rupiah.

Table 1. Aircraft Operational Costs/Hour

No	Fighter Plane Name	Operational cost/hour
1	Eurofighter typhoon	USD 83,305 or 1.3 billion rupiah
2	Sukhoi Su-35	USD 30,000 or 420 million rupiah
3	Gripen E/F	USD 5000 or 78 million rupiah
4	Dassault Rafales	USD 16,500 or 253.4 million rupiah

The operational costs of the Dassault Rafale fighter are very cheap when compared to the operational costs of other combat aircraft such as the Eurofighter typhoon, and Sukhoi Su-35, except for the Gripen E/F which is cheaper when compared to the operational costs of the Dassault Rafale. However, what the Indonesian government considers regarding the Gripen E/F fighter is the supply of spare parts, which still depends on the United States. So the Indonesian government is reluctant to acquire Gripen aircraft. Then, the operational costs for the Eurofighter typhoon fighter aircraft per hour are USD 83,305 or IDR 1.3 billion. The operational costs for the Sukhoi Su-35 fighter aircraft per hour are USD 30,000 or 420 million rupiah. The operational cost of the Gripen E/F fighter aircraft per hour is USD 5,000 or 78 million rupiahs . Of all the combat aircraft that the Indonesian government is interested in, the most expensive combat aircraft in terms of operational costs for combat aircraft is the Eurofighter Typhoon Fighter.

By the theory of Rational Choice, it can be concluded that the choice is for the Dassault Rafale fighter by considering the advantages and disadvantages when viewed from the operational costs of combat aircraft, the advantage that can be

obtained by choosing the Dassault Rafale is that its operational costs are cheap when compared to fighter aircraft. except for the Gripen E/F fighter, but there were considerations from the Indonesian government regarding the provision of spare parts so the Gripen E/F aircraft was canceled by Indonesia. So it is certain that by buying a Dassault Rafale fighter there will be more advantages and in terms of losses there will be no. minimize threats in Indonesian airspace

CONCLUSION

Based on the results of research conducted, it shows that Indonesia's decision to buy Dassault Rafale fighter aircraft from France was based on two considerations, namely economic considerations where maintenance costs are low, technology transfer, and the potential to increase the national defense industry, increase independence in the production and maintenance of military defense equipment and political considerations. namely diplomatic relations, regional security and national strategic interests. This choice reflects efforts to strengthen defense and build close military collaboration with partner countries.

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