

The next-generation multirole fighter for Poland – operational, economic and strategic aspects of the procurement process

In May 2019, Poland's Minister of National Defence announced that the Polish government had sent a letter of request to the U.S. Department of Defence regarding the procurement of 32 F-35A multirole fighters. Selection of the next generation aircraft is of great importance for any state.

Currently, Poland and its Armed Forces have reached the turning point which will have an enormous impact for the entire defence system of the country; its economic and technological development, particularly in the field of aircraft and missile industry; as well as the political relations with allied nations and Poland's security environment in the future. However, Poland's Ministry of Defence has limited the so-called

The procurement of combat aircraft is of strategic importance. The programme will have an impact on capabilities of the Air Force, the national economy, as well as political relations with other states, including Poland's allies. Therefore, the final decision regarding the purchase of multirole fighters ought to take into consideration the operational, economic and political implications of the procurement process.

'analytical-conceptual' phase of the procurement process and eventually dropped tender competition to acquire the next-generation fighter for the Air Force. Such an approach to the procurement may speed up the acquisition of new aircraft, but, on the other hand, it can have a detrimental impact on the final result of the entire process.

There is no doubt that the purchase of the next-generation multirole fighter should be perceived as a priority which has been reflected in the 2017-2026 Technical Modernisation Plan; however, which aircraft should have been selected for the Polish Air Force is open to question. Currently, there are several types of multirole jet fighters that

could have been considered by the Ministry of Defence. Nevertheless, to choose the optimal solution it is necessary to determine needs of the Air Force and its tasks as far as defence of Poland is concerned.

A series of accidents involving MiG-29 fighters that happened from 2017 to 2019 forced the Ministry of Defence to accelerate the procurement process of the new aircraft. The MiG-29 is used by the Polish Air Force as an air superiority fighter despite that Soviet engineers designed it to play a complementary role to the Su-27 aircraft; this was the main reason why the MiG-29 was designated as a 'frontline fighter'. Today, the MiG-29 aircraft is completely obsolete and its capabilities are only of symbolic importance. Given that the Polish Air Force has to compete with an enemy equipped with numerous advanced combat fighters, the MiG-29 is no match for hostile forces. The Polish Air Force has even more ancient Su-22 bombers which are used to maintain pilots' skills and to develop cooperation with the Land Forces in joint operations. The only relatively modern aircraft of the Air Force is the F-16C/D Block 52+. Despite being considered as an exceptionally well-designed fighter and playing a role of the workhorse of the Air Force, for example by supporting the Land Forces and conducting air-to-ground attack operations, the F-16 is unable to compete against enemy air superiority fighters. The main disadvantage of the F-16 compared to hostile air superiority fighters is its performance; for example, the F-16 cannot operate at altitudes beyond 40,000 feet; it can carry a small number of air-to-air missiles, and finally, its radar has a limited range of detecting hostile targets which reduces the overall aircraft capability. Given that the Polish Air Force is a user of the F-16, the Ministry of Defence should consider solutions applied by other NATO member states. For example, in the British Royal Air Force as well as the Italian Air Force, an offensive, ground-attack fighter (today it is the F-35; in the past, both air forces used Panavia Tornado) is supported by a defensive fighter (Eurofighter Typhoon) which is responsible for conducting air superiority missions and defending the former one. The U.S. Air Force has applied a similar model with the F-16/F-35 and the F-15/F-22 respectively. Therefore, it seems obvious that the Polish Air Force needs an air superiority fighter to defend the territory of Poland and support the F-16 fighters in their ground-attack missions and defence of the Land Forces.

Given the aforementioned gap in Poland's air defence system, the Ministry of National Defence should seek a fighter designed to effectively engage enemy forces and to hold air

superiority. In fact, it means that the Air Force could consider only two or three fighter jets, given that the fourth one that has the most advanced capabilities in this field, the F-22 Raptor, will not be available for Poland due to the U.S. policy that does not allow to export these fighters overseas and the fact that the F-22 is no longer produced. The other three fighters are Boeing's F-15, Dassault Aviation's Rafale as well as the Eurofighter Typhoon produced by BAE Systems, Airbus and Leonardo. These three planes were developed to intercept Soviet or Russian ground-attack and air superiority fighters; Dassault Rafale, however, has certain limitations given that its fuselage is also adapted to conduct carrier-based operations. It is worth noting that the primary choice of the Polish Ministry of Defence, the F-35, has not been designed as an air superiority fighter and will never be able to seize control of enemy airspace. Joint Strike Fighter is similar to the F-16 and is supposed to serve as a 'workhorse' of the air force by filling close air support roles and attacking hostile air defence systems. Given that all aforementioned missions are rather offensive, such a fighter is not an optimal solution for the Polish Air Force whose primary duty is to defend the Poland's territory.

The second dimension of the procurement process is related to the following financial and economic aspects: particularly the direct cost of procurement (purchase of the next generation aircraft, all necessary equipment, infrastructure, training and logistics); certain indirect costs (especially life-cycle costs which can reach even three fourth of the value of the entire next-generation aircraft programme); as well as an impact of the aircraft purchase on Poland's economy, benefits from the offset agreement etc.

As far as the first dimension is concerned, the open tender competition involving a number of aircraft producers would be the most optimal choice for the state budget and Polish taxpayers. In contrast, arbitrary decision-making in terms of the aircraft procurement should be considered the least favourable option. In the first case, an ordering party has plenty of opportunities to reduce the final price thanks to a number of available options provided by several producers. In the second case, however, the contracting authority is dependent on the product provider whose primary consideration is a profit. Even though the U.S. Foreign Military Sales procedure is slightly different than the latter case, it is worth noting that the final price depends on sales commission and moreover, the product provider is less eager to offer a competitive offset agreement.

Consequently, in the aforementioned scenario, it is less likely to reach satisfying conditions in the negotiation process. On the other hand, rejecting an offer is considered a 'nuclear option' that will eventually lead to the end of the procurement procedure. Therefore, the government willing to purchase military equipment under such a procedure becomes a hostage of the supplier who is able to offer high prices and an inadequate offset contract thanks to its high bargaining power. This scenario should not come as a surprise. Having considered that the company faces no competition, it can set the price at the very high level. As a consequence, the state budget and other military modernisation programmes will have to pay the price; for example, the Ministry of Defence can be forced to cut expenses on other classified projects. Therefore, the negative impact of the aforementioned procedure is not only related to the state budget but also the entire national defence system due to constraints imposed on other technical modernisation programmes.

As far as financial and economic aspects of the procurement process are concerned, it is worth noting that the purchase of expensive and technologically advanced military systems, such as multirole fighters, should provide the national industry with a technological leap. Given that the Ministry of National Defence is about to sign a multi-billion-dollar deal, the national industry should participate in the programme as an equal partner, instead of being just a customer. Domestic aircraft companies could benefit from such a program in several dimensions. As a consequence, the Polish policy-makers should conduct an in-depth analysis to examine involvement of the Polish defence companies as subcontractors as well as beneficiaries of the technology transfer. Consequently, Poland's economy could create thousands of new, well-paid vacancies that require highly-skilled professionals. Furthermore, the technological leap could boost the performance of the entire industry; increase spending on investment, research and development; and finally, increase revenue of the state budget. It is worth emphasising that even the best offset agreement will never provide as many benefits as participation in a development project as a partner. Furthermore, this is the only way to involve the national defence industry, as well as academic and research institutions in the global supply chain of the foreign partner. Therefore, it is crucial to conduct a broader analysis regarding the prospects for domestic aircraft industry and missile manufacturers. It is also necessary to take a closer look at R&D projects related to the procurement of the next generation fighter and its

further development in the future, as well as other opportunities for Polish defence industry in terms of participation in partner's chain of supply. Undoubtedly, the least favourable options are those that do not include domestic companies in development process of the selected aircraft, which eventually means that the state funds will not be allocated in the national industry. The purchase of advanced multirole fighters ought to be perceived not only in the context of improving the national defence system but also in terms of economic clout of the state. Therefore, a transfer of several billion dollars to a foreign company seems the worst scenario.

The third and the most important factor to consider is related to the political and strategic aspects of the procurement process. Most security and defence experts believe that diversification must be a priority as far as weapon systems and military equipment are concerned; moreover, the same rule should be applied in the context of allies. There is no doubt that the most favourable option is the purchase of the military equipment from the national industry given that the government can control domestic companies and thus guarantee supplies even if the state faces a military threat. Unfortunately, most countries are not able to produce all advanced weapon systems; therefore, the purchase of weaponry (usually based on one platform) from external sources is very often the only option. There is no denying that Poland can be classified into this group of nations. However, having a relatively large defence budget, Poland's Ministry of National Defence is able to afford two different types of aircraft. It is also worth noting that Polish policy makers seek to implement such a model due to the potential threats faced by Poland.

Therefore, the Ministry of National Defence ought to diversify the fleet of military aircraft given that the Air Force is currently reliant on one type of multirole fighters (the F-16 Fighting Falcon) provided by a single, U.S.-based producer. It is necessary to emphasize that dependence on just one foreign supplier can have a detrimental impact on the decision-making process regarding the use of the multirole fighters in a potential conflict. Even if the supplier is based in the territory of Poland's ally, there is no guarantee that the company would respond to a request of the Polish government regarding spare parts supply etc. in the event of war. That is why diversification is not a matter of convenience but a key element of the decision-making process which can have a critical impact on the national security system.

The second dimension of diversification related to alliances is much more complex but not less important. Poland as NATO's and EU's eastern flank nation shares a border with an assertive rival of the West – the Russian Federation. Despite that Poland is a member of the two most important organisations of the Western world—the North Atlantic Treaty Organisation and the European Union—whose treaties include principles of collective defence (Article 5 of the Washington Treaty and Article 42 (7) of the Treaty on European Union), in fact there is no chance to verify that the allies invoke the aforementioned clauses in response to a hypothetical military conflict. Allies' willingness to contribute to the collective defence efforts depends on a number of factors, for example, political and economic proximity between nations which is determined by bilateral defence trade among others. Since the fall of communism, Poland has based its relations with the United States on procurement of military equipment. Consequently, the United States are the only ally involved in supporting Poland's defence and security, whereas the other powerful NATO member states (France, the United Kingdom, Germany, and Italy) seem to play second fiddle. Nevertheless, in the near future, the United States will have to strengthen its presence in Asia-Pacific to counter growing China's influence. Given that the Far East has become Washington's priority and taking into account limited resources of the United States, Europe and Poland cannot only rely on U.S. military support in case of war with Russia. Therefore, European members of the North Atlantic Alliance will have to defend themselves using their own military as well as the limited U.S. forces deployed in Europe. That is why the response of the key European players should be perceived crucial to Poland's defence. The marginalisation of the Western European allies by the Polish government as far as the arms trade is concerned can only undermine Poland's security. That is why the Polish government should balance its relations with Washington, D.C. and the most important European capitals and subsequently seek compromise in terms of military procurement. Poland has already signed deals for the U.S.-made Patriot air defence system and HIMARS mobile rocket launchers; therefore, it is high time for the Polish policy makers to consider European producers of multirole fighters.

Currently, there are several types of multirole combat aircraft that could serve in the Polish Air Force. Besides the F-35A, Eurofighter Typhoon, F-15E, and Dassault Rafale, the Ministry of National defence could acquire Saab's JAS-39E/F Gripen or Boeing's F/A-18E/F Super Hornet. Given the potential industrial partnership, the Ministry of National

Defence should scrutinise all possible options even though some of these jets cannot be perceived as typical air superiority fighters. Swiss aircraft procurement programme is an interesting case study worth mentioning in this context. In January 2019, the Federal Department of Defense announced an analysis of five offers submitted by Airbus (Eurofighter), Boeing (F/A-18 Super Hornet), Dassault Aviation (Rafale), Lockheed Martin (F-35A), and Saab (Gripen E). Such an approach to the procurement process will certainly reduce the final price which is beneficial to the federal budget and the taxpayers.

There is no doubt that multi-billion-dollar defence deals, particularly those relating to the aircraft purchase process, are extremely complex. Aircraft procurement programs do not only develop capabilities of the Air Force but can also open up global opportunities for national aircraft industry. Therefore, the entire process should be perceived as the way to strengthen bilateral relations with allies whose support is crucial to medium-sized countries such as Poland. Given the military strength and political unpredictability of the Russian Federation, Poland's aircraft procurement programme ought to reflect global and regional security environment. That is why the combat jet purchase for the Polish Air Force should be the focus of public debate. On the other hand, Polish policy makers ought to analyse all available information in order to find an optimal solution for the Air Force as well as the country as a whole.

Conclusions

1. The procurement of combat aircraft is of strategic importance. The programme will have an impact on capabilities of the Air Force, the national economy, as well as political relations with other states, including Poland's allies. Therefore, the final decision regarding the purchase of multirole fighters ought to take into consideration the operational, economic and political implications of the procurement process.
2. Given that the Ministry of National Defence is planning to phase out the MiG-29 aircraft, the Polish Air Force will lose its symbolic air superiority capabilities. Ability to defend its own airspace is necessary to conduct air, land, and sea operations by the Polish Armed Forces. Otherwise, the Polish military will be doomed to failure.

3. The multirole F-16 is still a relatively modern combat fighter; however, given that the close air support is its primary task, the Polish F-16s lack capabilities in the field of air superiority. It is worth noting that the F-16 cannot operate at altitudes beyond 40,000 feet (which is necessary for air superiority fighters), can carry a small number of air-to-air missiles, and finally, a total number of 48 fighters jets is not enough to defend Poland against a well-organised strike of numerous and advanced combat fighters of the enemy. Furthermore, due to its operational altitude and a relatively small radar, the F-16 has a limited range of detecting and destroying hostile targets.

4. As far as Poland's defence budget is concerned, a closed tender or arbitrary decision regarding the purchase of fighter jets will certainly increase the final cost of procurement which will have a detrimental impact on other military procurement programmes. The only way to avoid this situation is to announce the open tender competition involving a number of aircraft producer. The abovementioned scenario would force potential suppliers to compete against each other as far as the final price and the scope of the offset agreement are concerned. The open tender competition would improve the bargaining position of the Polish policy makers in terms of financial aspects of the agreement and the potential industrial partnership or the offset deal with a foreign partner.

5. The aircraft procurement process opens up new opportunities for the aircraft industry and its subcontractors as well as the national economy as a whole. An industrial partnership agreement could redirect significant amount of money from a foreign contractor to Polish companies and thus provide the national industry with a technological leap; create thousands of new, well-paid vacancies that require highly-skilled professionals; and lead to the technology transfer. Finally, the Polish defence industry could join partner's global supply and research chain as far as military and civil aircraft manufacturing is concerned.

6. Diversification in terms of weapons and military equipment is crucial to the national security system. The Ministry of National Defence should take into consideration all possible options and avoid dependence on just one foreign producer. Otherwise, it may turn out that the decision-making process regarding the use of combat fighters will no longer be in the hands of the Polish government or the command of the Polish Armed Forces.

7. Given that the United States will have to strengthen its presence in Asia-Pacific to counter growing China's influence, the U.S. administration will eventually reduce its involvement in Europe. Poland's policy makers should consider shifting its attention onto major Western European actors who are still focused on defence and security of Europe.

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