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An Opportunity for Europe to Expand Joint Defence Funding

FINABEL - The European Land Force Commanders Organisation

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Director's Editorial

After a year of warfare in Ukraine, European political life has once again come to be dominated by matters of defence. As states provide financial and military aid to Kyiv, diminishing military stocks highlight the need to reinforce a European Defence Technological and Industrial Base that has, until recently, been left relatively stagnant. The fragmentation of the EU Member States' Defence Technological and Industrial Bases has resulted in inefficiencies that limit interoperability and are a great financial and resource waste. Chief amongst these issues is the resulting profligate duplication among EU military-industrial complexes.

This Food for Thought, therefore, examines the deficiencies of the European Defence Technological and Industrial Base, the development of EU joint funding frameworks, and possible ways to further develop the European Defence Fund. This article's argument emphasises the importance of gradually shifting focus towards intra-European defence research, development, and even acquisition, as well as budget and planning cycles.

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Abstract

The European Defence Fund (EDF) was launched in 2017 as an aspect of the European Union's Common Security and Defence Policy (CSDP) to increase coordination and investment in defence research and development (R&D) and improve interoperability between European national armed forces. Domestic demand for defence technologies in Europe has fallen sharply in recent decades, which has led to smaller investments in R&D, increased dependence on civilian sectors, and stagnation of military-industrial skills. Small and medium-sized enterprises, especially those from smaller European states, struggle to compete with larger corporations from bigger economies. Furthermore, European military spending has become mired with inefficiencies and duplications. After an initial pilot period, the EDF has been allotted €8 billion for R&D. And while this is a start, the EDF requires a serious expansion for the current and future European capability needs. There are significant hurdles that Europe faces, some of which remain outside the scope of the EDF, such as the lack of an open European defence equipment market. These issues cannot be ignored when conventional warfare has returned to Europe.

Introduction

European defence spending has generally been recovering in the past few years. However, expenditures throughout Europe fell greatly following the end of the Cold War. Economic crises, especially the Global Financial Crisis of the late 2000s, coupled with political incentives to focus on social welfare and EU deficit rules, have stagnated defence spending and investments over the last decades. EU R&D expenditures, in particular, have been stagnant for at least the last 20 years; again, apart from the past two or three years.

Research and technology (R&T) expenditures have risen as a percentage of overall defence spending but still fail to make the 2% benchmark. 82% of all defence investment spending goes to equipment procurement (Schoeffmann, 2022).

Still, the EU has been spending less than half of what the United States spends on defence; the United States invests four times as much per soldier than the EU (European Commission, 2019). The EU has likely been spending less than the People's Republic of China, although it is difficult to ascertain how much goes into R&D, which demonstrates how European focus and spending on defence has fallen behind (Tian & Su, 2021).

The European Defence Technological and Industrial Base (EDTIB) has grave issues regarding exports, lack of joint-funding engagement, reliance on civilian dual-use products, competitive challenges for small and medium enterprises (SME), generally underwhelming defence expenditures, loss of skilled labour, and wasteful duplication. However, the EU has gradually developed programmes to strengthen the EDTIB, particularly to promote greater participation in multinational defence R&D projects, eventually culminating in the EDF, which helps fund a given project's research and its development aspects. But the EU's initiatives require much work, as many member states still prefer to cooperate outside of this framework for bigger projects. There are important challenges in terms of trade and internal border obstacles and, most critically, a lack of serious funding. The contemporary crisis in Ukraine could be a good opportunity to reinvigorate the EDTIB as defence spending grows. After all, much of the equipment sent to Ukraine will need to be replaced as military stocks become depleted (Brobst & Bowman, 2023; Turak, 2022). The EDF requires an expansion in its budget and possibly in its scope to include joint procurement. The EU must also strive toward a more open European defence market. At the same time, member states should invest more in human capital and coordinate better defence planning synchronisation with multinational goals.

Deficiencies in the European Defence Technological and Industrial Base

The EDTIB is defined by Briani et al. (2013) as "the structure, organisation, activities and processes of those DTIBs linked to the European political space that change in a way that they become more integrated, more competitive or more capable on the European level" (p. 18). In other words, it can be thought of as the collective engine behind the CSDP. The EDTIB seeks higher cooperation, consolidation and competitiveness, bolstering the general military capabilities of the EU (Briani et al., 2013). The EDTIB is a large component of global arms development and exports, making up around 13% of all arms sales by companies in the SIPRI Top 100 for 2021, in which the United Kingdom made up close to 7% of the top global arms sales, but lost from the EDTIB since Brexit (Béraud-Sudreau et al., 2022). In fact, among the top ten arms-manufacturing companies in the world in 2021, only one was European: BAE Systems (UK) (Béraud-Sudreau et al., 2022). And despite American and Chinese dominance in the global arms markets, many top European companies have been performing considerably well; for example, Leonardo (Italy), MBDA (trans-European), the Naval Group and the Dassault Aviation Group (France) saw an 18%, 15%, 20% and 59% increase in sales, respectively, from 2020 to 2021 (Béraud-Sudreau et al., 2022). Yet, despite these optimistically high turnovers by the top European arms producers, substantial issues persist in the EDTIB.

Most arms exports from European countries go outside European borders, although most defence industry consumption for the larger European economies is domestic. The relatively low intra-European exports are partly the result of controversial interpretations of Article 346(1)(b) of the Treaty of the Functioning of the European Union. This article allows members to ignore EU law on economic competition to protect their national security interests regarding defence industries (Randazzo, 2014).

However, this has been used for economic protectionist purposes and holds back the possibility of developing an open European market for defence equipment (Drent and Zandee, 2018; Liberti, 2011; Randazzo, 2014). It is also an example of the member states' focus on national rather than collective European commitments.

Efforts to focus on defence innovation have been increasing with the growth of dual-use technologies that can serve both military and civil purposes (Csernatoni, 2021). And while the focus on dual-use technologies has opened new markets in civilian security, as Drent and Zandee (2018) point out:

European defence companies continue to face serious challenges, of which staying on the technological edge is the most daunting. Dependencies on the civilian commercial sector have grown, in particular in areas such as big data, robotics, blockchain technology and advanced materials. (p. 10).

These fields are perhaps excellent areas for the development of SMEs. Problematically, the domestic dominance of top companies, the lack of open competition across European borders, the need for greater staffing due to cultural and linguistic differences, and low internal demand in the past couple of decades have made it difficult for SMEs to compete, thrive and consequently provide in necessary areas.

Another obstacle, especially for SMEs, has been the varied and fragmented national and regional laws that control military equipment exports. However, the EU recently adopted new and updated regulations (2021/821) that establish a common export regime, particularly regarding dual-use items (European Commission, n.d.-b).

And although member states can still impose controls on other items not listed by regulations, this new effort is a positive step towards a more unified European defence industry market. Before, SMEs had much larger pressures to consider regional or national controls, which could limit the countries their products could be exported to after being first delivered to, for instance, another EU country (Drent and Zandee, 2018). However, SMEs based in non-EU countries do not benefit from these new developments.

Over the past few decades, low EU defence expenditures have also lowered the investment and demand for the required skilled labour. Defence markets have a great need for specialists (Galai et al., 2019). However, defence enterprises must compete with non-defence sectors for these skilled workers, something that impacts SMEs the most (RAND Corporation, 2020). The defence sector continues to be less attractive than the civil sector, due to wage competition, perceptions of inflexibility, and a lack of diversity (RAND Corporation, 2020). Furthermore, low investment, especially in R&D, has made maintaining and acquiring new skills a considerable challenge, which is made more profound by the ever-increasing use of new technologies (Galai et al., 2019). Issues also arise from demographic challenges, such as the retirement of experienced workers without replacements (RAND Corporation, 2020). Moreover, EU member states' strategies and initiatives regarding defence-related skills are disjointed and fragmented (Galai et al., 2019). Smaller economies are also challenged to compete with countries that get significantly higher financial turnovers and attract more skilled workers. Overall, much can and must be done regarding these problems, but the focus ought to be on continuous development of skills initiatives, long-term planning, and greater investment.

The last EDTIB deficiency is that of inefficiencies. According to the European Commission (2019), while the United States has 30 types of weapons systems, the EU has over 170.

The US has one main battle tank, four destroyers/frigates, and six fighter planes (European Commission, 2019). The EU has 17, 29 and 20, respectively (European Commission, 2019). This duplication happens mainly because most military procurement is done nationally (European Commission, 2019). The European Commission (2021) claims that " Only 9% of research and technology in the field of defence is conducted in cooperation between Member States" (p. 2). While eliminating duplication altogether is not currently realistic, improving coordination in R&D would go a long way to cutting down up to €100 billion misspent every year (European Commission, 2019). This issue highlights that improving the EDTIB is not just a matter of spending more but doing it efficiently.

Europe Catching Up?

The above-discussed issues have kept the EDTIB from being more competitive and coordinated for at least two decades. Problems related to European fragmentation are no secret and have often been a major source of concern regarding political, economic, and foreign policy issues. And while it has been a long build-up to the current situation, the European Commission has been paying attention more seriously to the EDTIB since 2013. What Csernatoni (2021) calls "the emergence of a supranational European defense research program" began in practice with a 2015 pilot programme that was allotted a mere €1.4 million (An Alignment of Planets section, para. 6). The European Defence Agency (EDA) accepted three proposals to receive parts of the overall grant: Inside Building Awareness and Navigation for Urban Warfare (SPIDER), Standardisation of Remotely Piloted Aircraft System (RPAS) Detect and Avoid (TRAWA), and Unmanned Heterogeneous Swarm of Sensor Platforms (EuroSWARM) (European Defence Agency [EDA], 2016; Wilkinson, 2020). These were awarded to consortiums that included companies and institutions from Bulgaria, France, Germany, Greece, Italy, the Netherlands, Portugal, Sweden and the United Kingdom (EDA, 2016).

While the funding was relatively small, around €430,000 per programme, it was considered a successful first step (EDA, 2016; Wilkinson, 2020).

With the accomplishment of the pilot programme, the EDA moved forward with an improved funding programme, the Preparatory Action on Defence Research (PADR). Norway joined the programme with €2 million in extra funding to the already allocated €90 million (European Commission, n.d.-c). PADR would go on to fund 18 projects over three years (European Commission, n.d.-c). A peculiarity is that this time PADR had a "funding model where projects could only receive financing if participating Member States agreed to buy the final product" (Wilkinson, 2020, p. 9). Here, the increase in funding was noticeable. Among the larger R&T projects, OCEAN2020, focused on enhanced situational awareness systems in maritime environments, received €35 million and was composed of 43 European partners spearheaded by the Italian company Leonardo (Directorate-General for Defence Industry and Space, 2021; Wilkinson, 2020). Other projects focused on topics such as high-power laser effectors (TALOS), unmanned systems (INTERACT), and electromagnetic spectrum dominance (CROWN) (European Commission, n.d.-c). PADR demonstrated that larger research programmes funded supranationally could be successful and that future joint defence funding could be justified.

Building on the success of PADR was the European Defence Industrial Development Programme (EDIDP). This specifically targeted improving the military-industrial capabilities of the EDTIB, with a budget allocation of €500 million; this time, however, projects would be mostly co-financed by member states (European Commission, n.d.a; Wilkinson, 2020). Further cooperation was incentivised by giving bonuses to Permanent Structured Cooperation (PESCO) projects (European Commission, n.d.-a; Wilkinson, 2020). Moreover, participating SMEs would also receive grant bonuses; a positive step towards involving smaller enterprises in the EDTIB (Wilkinson, 2020). Projects would have to involve at least three member states and could also have non-EU participants under certain conditions (European Commission, n.d.-a; Wilkinson, 2020).

The EDIDP saw a great increase in proposals. SME participation was high, as desired, reaching 35% of participating parties in 2020 (European Commission, n.d.a). Two major projects were allocated a €137 million budget: MALE RPAS (Eurodrone) and ESSOR, the latter focused on interoperability through communication technologies (European Commission, n.d.-a). These two would be managed by the Organisation for Joint Armament Cooperation (OCCAR), which seeks to facilitate armament programmes (European Commission, n.d.-a). Other projects focused on command and control (C2) systems, cyber defence, ground-based precision strikes and more.

As big as EDIDP was, it was still rather small from a unified EDTIB point of view. Nevertheless, it demonstrated that the EU could bring together large companies, institutions, SMEs, willing and cooperative national governments and third countries for large, purposeful, and practical projects that member states would utilise, and that were often sought through PESCO.

CARD, PESCO, and the EDF

The Coordinated Annual Review on Defence (CARD) and the aforementioned PESCO were launched in 2017. As the name suggests, CARD is an annual "review of Member States defence plans and aims at improving coherence, serving as a pathfinder for defence cooperative activities" (EDA, n.d.b, para. 1). An important aspect is that, on a voluntary basis, member states will be able to identify areas where they might collaborate on defence-related projects (Drent & Zandee, 2018). This contributes to further unity in the EDTIB and intergovernmental cooperation. However, it also requires an active political effort by the member states, which ultimately determines the success of CARD, which in turn defines projects and long-term goals under PESCO. For its part, CARD provides an analysis and recommendations on defence spending, missions, and more.

Ideally, the areas identified for collaboration by CARD are picked up through PESCO. PESCO is the EU's strategy for increased defence integration; one of its key aspects is the 'binding commitments' made by the member states, including efforts such as increasing defence spending, spending 2% of defence budgets on R&T, seeking further cooperation in cyber defence, improving upon capability issues, enhancing interoperability, etc. (Permanent Structured Cooperation [PESCO], n.d.a). These commitments are made through annual National Implementation Plans (Drent & Zandee, 2018; PESCO, n.d.a). However, there do not seem to be actual consequences from failing to meet these commitments (Drent and Zandee, 2018).

NATO Secretary General Jens Stoltenberg welcomed PESCO and highlighted "the need for complementarity" between NATO and PESCO (North Atlantic Treaty Organization, 2017, para. 1). Ideally, better interoperability and deeper EDTIB integration would benefit NATO, as most PESCO members also belong to the alliance.

However, as Molenaar (2021) points out, "This year's CARD findings as well as earlier PESCO assessments still show unfortunately that national orientations and NATO priorities drive national defence planning, rather than EU priorities and mechanisms" (p. 18). Still, the 2022 EU Strategic Compass, which mandates member states commit to increasing defence spending and technological innovation, claims to seek greater cooperation with NATO and other organisations (European External Action Service, 2021). Still, PESCO is not meant to replace NATO but to develop goals and projects for the growth of the EDTIB. Progress seems evident: PESCO currently has 60 projects in development, including all defence domains (PESCO, n.d.b). Furthermore, many PESCO projects address NATO priorities (Molenaar, 2021).

The final piece is one of the European Union's most exciting efforts: the EDF. It was launched in 2017, with a total budget of €90 million for research and €500 million for development (Wilms et al., 2018). In effect, the EDF integrates both PADR and EDIDP—these two essentially being test runs for the EDF—but maintains the research-development distinction. The EDF kept many aspects from the prior programmes, including the requirement to have participants from multiple member states, the incentivisation of SME participation, the need for member states to buy/use the technology, and the possible bonus funding of PESCO projects (European Commission, 2021). In addition, "4-8% of the budget will be set aside to support innovative, disruptive technologies for defence that will boost Europe's long-term technological leadership and contribute to high-end defence products" (European Commission, 2021, p. 3).

The EDF's budget structure can fully cover research funding; meanwhile, the development side is co-financed with EU member states, and acquisition is fully covered by the member states (Wilkinson, 2020). The 2021–2027 EDF budget was originally proposed to be €13 billion, but it ended up receiving just €8 billion that some see "as a sign of decreased political attention" (Zandee, 2021, p. 3).

However, perhaps these cuts do not seem as dramatic when compared to the PESCO Military Mobility project's proposed funding going from €6.5 billion in 2018 to about €1.5 billion in 2020 (Csernatoni, 2020, Cuts to Defense Funding section, para. 2). Financially, the EDF is quite small when put into perspective, as it is just "0.74% of the total EU Multi-annual Financial Framework 2021-2027 budget of € 1.074 trillion" (Zandee, 2021, p. 3). Although, if the EDF proves to be a significant success, perhaps decision-makers will find it worth a greater budget allotment.

Still, the current funding of the EDF is much larger than any of its predecessors. The research budget alone is greater than that for both PADR and EDIDP at €2.7 billion; development is allotted €5.3 billion and co-financed (European Commission, 2021).

However, this budget is less impressive when considered on a per-annum basis. That research budget is a bit under €400 million annually, which is still larger than the total PADR budget, but well below the originally proposed €4.1 billion, or slightly under €600 million annually (Wilkinson, 2020). Meanwhile, the development budget breaks down to about €750 million, which is also less than the originally expected €1.3 billion (Wilkinson, 2020).

For comparison, according to the American Association for the Advancement of Science (2022), the United States Department of Defense invested around $80 billion in total defence R&D in 2022, 10 times greater than the entire EDF budget for seven years. And while the EDF is not the entire EU defence R&D expenditure, EU member states spent just €9 billion in R&D in 2021 (Schoeffmann, 2022). But, considering Europe's defence spending lag and the significantly larger American technological and industrial base, it is still demonstrative that this first 2021–2027 budget should be just the beginning for the EU to 'catch up'. In any case, the EDF's expenditure will be an excellent starting stimulus to the EDTIB.

CARD, PESCO, and the EDF are all complementary of one another and necessary tools for the future of the EDTIB. The naval domain provides an excellent example of the dynamics involved. CARD's 2020 report identified the EU's very fractured patrol vessel capabilities as an area for improvement and recommended the development of a common European patrol corvette (EDA, n.d.a). PESCO approved the project, which was to be spearheaded by Italy and involved other member states (Calcagno et al., 2022). The new European Patrol Corvette (EPC) would be a replacement for at least two Italian, two Spanish, and one French ship (Calcagno et al., 2022). A 40-company consortium managed to get its €60 million project proposal accepted to create a Modular and Multirole Patrol Corvette (MMPC), called for through the EDF (Calcagno et al., 2022).

The EPC notably demonstrates the dynamics of CARD, PESCO and the EDF. CARD identifies an area or possible project to develop. PESCO then selects, approves and defines common requirements (Calcagno et al., 2022). Finally, the EDF coordinates and provides the necessary funding. Concluding this process, construction of the corvettes is reported to begin in 2026, with deliveries beginning in 2030 (Gain, 2022).

Another big project has been developing on land, with the development of the Main Ground Combat System (MGCS), taken up by France, Germany, and probably Italy in the near future (Arivella & Moran, 2022). This new main battle tank (MBT) is expected to be ready by 2040, replacing France's Leclerc, Germany's Leopard 2, and possibly Italy's C1 Ariete (Arivella & Moran, 2022). Yet this project has some worrying implications for the EDTIB/EDF concept: despite a European MBT being identified as a necessity by CARD, the MGCS is not a PESCO project and is strictly funded and cooperated by the aforementioned participants; the same thing is occurring with the Future Combat Air System (FCAS) project (Biscop, 2020; EDA, n.d.a).

And while the bigger European industrial countries do have an active participation in PESCO/EDF efforts, their preference for bilateral/multilateral programmes outside of the EU's structure leaves concerns regarding the member states' willingness and interest to focus on developing the EDTIB (Drent & Zandee, 2018).

Other Challenges for the EDF

The EDF has been developed and is working within an unprecedented territory. It is no surprise that difficulties are encountered along the way, some of which have already been touched upon. As previously discussed, the EDF is still the largest joint defence funding programme the EU has ever attempted.

As aforementioned, active member state participation is a key aspect and challenge for the EDF. There are influential moral and political objections to participation with the EDF. Some Europeans object on grounds of pacifism (Wilkinson, 2020). Wilkinson (2020) mentions that "An open letter from more than 1,000 academics and scientists to Members of the European Parliament (MEPs) implored them not to sign off on the funding" (p. 13). There are concerns regarding how "Powerful industry-driven lobbying has played a significant role in shaping priorities in European security and defense R&D," and that prime companies might "graft their strategic interests onto European defense policy processes to reap financial benefits from EU-level defense research grants" [sic] (Csernatoni, 2020, Transparency and Accountability section, para. 6). There are also worries that extreme, populist and nationalist political movements will stand against the EDF, mainly based on Euroscepticism (Fiott, 2018). Even disregarding these movements, recent European history has shown that many states are not very willing to spend significantly on defence, although this has been changing slowly during the past couple of years (Schoeffmann, 2022).

Ultimately, the EDF must be a worthwhile investment for member states. The development phase requires great contributions from member states in the form of co-financing, which is a particularly big investment for smaller economies (Drent & Zandee, 2018). In other words, it must be able to 'sell' itself politically and financially. A big question policy-makers will ask is whether joint R&D and its consequent procurement are actually cheaper than the alternatives (Wilkinson, 2020). Projects like the EPC, which explicitly focus on cost-effectiveness, demonstrate that member-state interest does exist. However, the MGCS and FCAS examples imply that member states will continue to pick and choose. Considering that these two are large projects, perhaps it is a case of states preferring to leave the EDF for cooperation on smaller developments, such as drones and the EPC. A compelling argument from the EDF is that it can pool together resources and save billions of euros that would otherwise be wasted on unnecessary duplication (European Commission, 2019). In fact, the joint funding done through the EDF consolidates demand and reduces the waste of otherwise fragmented R&T (Briani et al., 2013).

Another consideration is trade. It is important to note that, according to Paragraph 25 and Article 20 in the Establishing the European Defence Fund and repealing Regulation (EU) 2018/1092 (Regulation 2021/697), the ownership of research project products goes to the member states involved. The EU does not own any products made through the EDF. According to this regulation's 25th paragraph, it is in the prototype phase where involved countries determine, among other things, the ownership of the project (Establishing the European Defence Fund and repealing Regulation (EU) 2018/1092, Regulation 2021/697). This means that, in practice, items outside the dual-use products export regime will have export rules differing on a case-by-case basis. Whether this lack of an all-encompassing export regime will have negative consequences remains to be seen.

Internal EU borders are also a challenge when considering the difficulties faced by SMEs originating from smaller states. Not only do these SMEs have greater difficulties accessing larger EU markets, but they can also lack the human resources—particularly research experts—to compete and participate internationally (Zandee, 2021). Wilms et al. (2018) mention that "Participation of SMEs is further hindered by administrative burdens and access to investment funds, particularly in Member States with less developed and less efficient financial markets" (p. 14). The steps first taken by the EDIDP, in terms of providing bonus funds to SMEs, were and are a positive move. And yet, "while SMEs represent 40% of all the organisations awarded EDF funds, they will only receive around 20% of the total funding" (Tani, 2022, para. 7). Furthermore, SMEs mostly have a subcontracting, supplier role in projects, when perhaps the EDF should incentivise SME-centred projects (Tani, 2022; Wilms et al., 2018).

In conclusion, the EDF still has several obstacles ahead. The biggest problem is that of financing. The budget cuts have hampered what could be an increasingly competitive EDTIB, which might also limit member states' interests in the EDF, especially considering the costs of co-financing during the development phase. Still, such issues do not deny that immense progress has been made since the development of CARD, PESCO, and the EDF in recent years. Indeed, we are still just at the beginning of the EDF's first cycle.

Recommendations

With the return of state-on-state war in Europe, the EU might be presented with a key opportunity to bolster the EDTIB. The Stockholm International Peace Research Institute (2022) reports that the world spent over $2 trillion in defence for the first time in 2021; none of the top five spenders were in the EU. However, this global expenditure grew by 3.7% in 2022, with spending in Central and Western Europe reaching "the highest level since the end of the cold war" (Tian et al., 2023, p. 9).

With the Russo-Ukrainian War demonstrating that European warfare has not ended, EU member states, media, and the public are again paying close attention to defence affairs. It might be, for instance, a chance for the EU's leadership to urge for further funding of the EDF.

Stretching the EDF's Limits

Clearly, the current level of funding for the EDF is not enough and, at best, is a stepping stone for greater budgets. And as Europe debates the possibility of a looming recession, there is little reason to assume that average defence spending will necessarily fall (Deutsche Welle, 2023). Even during the COVID-19 pandemic and its consequential economic hardships, total EU defence expenditure reached heights not seen in decades, although still far from the 2% of GDP guideline (Schoeffmann, 2022). The EDF's €1.14 billion R&D per annum budget, under €400 million in research and about €750 million in development, is simply too small to truly signal to member states to shift focus to joint defence R&D funding, considering they already spent over nine times that amount in 2021, and will likely spend more in the coming years (Schoeffmann, 2022). The EDF must be pushed further to meet the military threats and challenges of the 21st Century.

The war in Ukraine seems to have reinvigorated the EU leadership's attention to the EDTIB. A proposal has appeared in the past year to reinforce the EDTIB through joint procurement funding. It is a short-term instrument established as the European Defence Industry Reinforcement through Common Procurement Act (EDIRPA) with €500 million from the EU budget (European Commission, 2022). A press release detailed the following:

In particular, the Instrument will:

- Foster Member States cooperation in defence procurement. This contributes to solidarity, interoperability and efficiency of public spending; prevents crowding-out (impossibility for Member States to satisfy their demand of defence products because of a demand peak); and avoids fragmentation.
- Boost the competitiveness and efficiency of the European Defence Technological and Industrial Base, in particular by speeding up the adjustment of industry to structural changes, including ramp-up of its manufacturing capacities, resulting from the new security environment following Russia's aggression in Ukraine (European Commission, 2022, Objectives of the Instrument section).

There are still several steps until EDIRPA is adopted (Members' Research Service, 2023). But if this were to be adopted, it would leave an incredible precedent for joint funding, since procurement has historically been left entirely up to the member states. Drent and Zandee (2018) bring up the benefit of already-existing clusters of defence cooperation as offering "the best potential for planning common procurement programmes", such as "the Belgian-Netherlands naval cooperation programmes for procuring the same frigates and counter-mine warfare capacities" (p. 11). Accordingly, there are bilateral precedents which EDIRPA could build upon.

Expanding both national and joint defence funding is not a simple task. It is a fiscal and political issue that can only be overcome if enough interest and effort is made. While national expenditures are more difficult to stimulate from an EU perspective, demonstrating that joint defence funding, of R&D or otherwise, is a cheaper, less risky, and less wasteful alternative to much domestic defence spending is how the EDF can grow. But this perhaps requires bigger projects that even those outside the defence sector can recognise and want to support.

Unfortunately, two of the most central European projects, the MGCS and FACS, are outside the EU framework. Even outside of an EU cooperation point of view, that the largest economies in Europe choose to work on such projects outside of PESCO and the EDF is politically damaging to the framework. However, it does show that prime companies from some member states "are already moving in the direction of closer cooperation, common programmes and even merging" (Drent & Zandee, 2018, p. 9). Still, in an EU context, the participation and success of other member states is also critical. And since February 2022, it is likely that the political will to join defence programmes and projects, particularly by smaller, Eastern European states, has been growing. Eastern EU countries already tend to spend more as a percentage of GDP than many of their counterparts; notably, in 2020, only Estonia, Greece, Latvia, and Romania spent over 2% of their GDP on defence (Statista Research Department, 2022). Although smaller in size, eastern countries and SMEs generally have much to provide to the titans of the defence industry. It is, therefore, important that Europe's economic and military giants involve themselves more in EU initiatives. A larger coalition can bring in technological specialisations from individual countries and spread-out development costs (Arivella & Moran, 2022).

An added bonus of greater defence funding, both at EU and national levels, is the development of the skills needed for defence industries (RAND Corporation, 2020).

Expanding defence-related SMEs through greater funding would provide a wealth of opportunities for new and skilled workers across Europe. In general, EU and national institutions ought to develop and expand initiatives to train and retrain staff, while also "[promoting] diversity and [raising] the attractiveness of the defence industry to potential recruits" (RAND Corporation, 2020, p. 4). Investment in human capital is thus a necessity.

Outside of internal policy decisions, the EU must incentivise cooperation and collaboration further. Taking the example of the MGCS again, if this programme is to cost billions in its lengthy development, it would greatly benefit from being in the EDF framework (Arivella & Moran, 2022). Greater EDF funding for development would be a good motivator, but perhaps making EDIRPA a permanent part of the EDF would finally incentivise big and small member states to participate in joint funding more. The €500 million from EDIRPA is not a particularly substantial amount "compared with the €200 billion that the EU member states are preparing to spend in the coming years to re-equip their armed forces" (Belin et al., 2022, para. 12). Especially when considering the equipment sent to Ukraine that needs to be replaced, member states will have to greatly increase their procurement spending relative to previous decades to compensate. Increasing the accessible amount of funds for procurement in this time of need could be an excellent way to incentivise governments to place a greater emphasis on joint ventures rather than the status quo overly focused on national research, development and procurement.

Other Policy Considerations

Beyond matters relating to funding and scope, there are other matters that the EU ought to consider. One is the subject of a more unified European defence market, while the second relates to defence planning. These matters are a challenge to navigate for the EU, as it must act authoritatively while maintaining and not infringing on member state sovereignty.

An open European defence equipment market is a challenge due to a lack of cross-border competition caused by national protectionism and complicated and differing defence export rules (Drent & Zandee, 2018). Liberti (2011) also argues that "a policy of common control and support for arms exports" could support the establishment of a common European defence industrial policy that could "facilitate crossborder cooperation and create towers of technological excellence on a European scale by investing in pre-existing industrial and technological clusters of excellence" (p. 29). However, this is complicated by the blurring of the lines between civilian, security, and defence products (Mawdsley et al., 2016). Thus, it is difficult to determine what should or should not be exported to, for instance, an authoritarian regime when a given product is not inherently for security or defence purposes, but could be modified for such reasons. And, as mentioned previously, European defence industries rely heavily on generic civilian technologies (Mawdsley et al., 2016). The situation has improved following updated EU controls on dual-use items; such legislation should regularly be updated to keep up with newer technologies and products.

It is also a challenge to break through the member state usage of Article 346, which is used for protectionism (Liberti, 2011). However, the experience with EDIRPA might be a good exemplary step forward if it is deemed a success. Joint European procurement of defence products could be a way to lower the usage of Article 346, promote intra-European exports, and promote more competition in the European defence market (Clapp, 2023).

There is a further complication with European defence planning. Firstly, the defence planning and industrial cycles of EU member states need to be synchronised (European Union Institute for Security Studies [EUISS], 2021; Drent & Zandee, 2018; Zandee, 2021; Zandee et al., 2021). Secondly, EU-wide "capability priorities and targets have to be integrated in the national defence planning processes" (EUISS, 2021; Zandee et al., 2021, p. 53). In this line, there is a need to "[break] national defence planning and industrial production cycles, which in the past have resulted in intra-European duplication, a waste of taxpayers' money and a lack of standardisation and interoperability" (Zandee, 2021, p. 4).

Moreover, if member states' national planning is not better aligned with the EDF and vice versa to meet the same needs and timelines, such inefficiencies and waste will persist; accordingly, synchronised budget and planning cycles would ensure greater long-term commitment. Thus, for the EU and NATO, it would be ideal if defence planning began with prioritised multinational targets, not treated as mere addenda. Overall, and although often overlooked, it is time to recognise that the EU has a critical role in contemporary European defence planning.

Conclusion

The EU's programmes to bolster the EDTIB are still quite new but are a crucial step in the right direction. The inefficiencies of the fragmented technological and industrial base still need to be overcome, such as the extremely wasteful duplication. The EU has demonstrated a willingness to experiment, as exemplified by PADR and the EDIDP, its overall commitment has been questioned due to the lack of funding originally provided to the EDF. Still, the CARD-PESCO-EDF framework is a significant development that, with the right political attention paid to it, may signal optimism for the future of the EDTIB. With greater funding, more committed cooperation from member states, and a more open European defence market, the EDF can help reconstruct the fractured EDTIB at a time of significant need.

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