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THESIS

**STRATEGIC AUTONOMY AND THE EUROPEAN
UNION'S PERMANENT STRUCTURED COOPERATION**

by

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June 2019

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**STRATEGIC AUTONOMY AND THE EUROPEAN UNION'S PERMANENT
STRUCTURED COOPERATION**

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ABSTRACT

Is the European Union's Permanent Structured Cooperation (PESCO) providing a coherent and comprehensive effort to achieve "strategic autonomy" in military capabilities or is it just a collection of miscellaneous initiatives under one umbrella? Is PESCO likely to pursue only temporary political results or does it manifest the potential to overturn the transatlantic order? This thesis approaches these research questions from three perspectives: the political, the operational, and the inventorial. It analyzes official statements about PESCO for the political side, reports from field missions for the operational side, and the arsenals of PESCO participants for the inventorial aspects. PESCO participants support only a limited European strategic autonomy, relying on NATO for collective defense. PESCO addresses several operational shortfalls, but not the most important ones: air lift and air refueling. PESCO contains several projects for replacing non-EU capabilities, mostly land systems. PESCO participants will remain dependent on outside sources for air systems, partly because PESCO does not contribute to closing the technological gap with American companies. In summary, PESCO does not provide European strategic autonomy but contributes to improving the military capabilities of its participants. Given the current situation, even this represents progress.

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LIST OF ACRONYMS AND ABBREVIATIONS

BLOS	Beyond Line of Sight
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance, Reconnaissance
CARD	Coordinated Annual Review on Defence
CDP	Capability Development Plan
CFSP	Common Foreign and Security Policy
CSAR	Combat Search and Rescue
CSDP	Common Security and Defence Policy
ECAP	European Capability Action Plan
EDA	European Defence Agency
EDC	European Defence Community
EDF	European Defence Fund
EEAS	European External Action Service
ESDP	European Security and Defence Policy
ESS	European Security Strategy
EU	European Union
EUFOR	European Union Force
EUFOR CROC	EUFOR Crisis Response Operations Core
EUGS	European Union Global Strategy
EUISS	European Union Institute for Strategic Studies
EUNAVFOR	European Union Naval Force
GDELS	General Dynamics European Land Systems
GDLS	General Dynamics Land Systems
GOVSATCOM	Government Satellite Communications
IED	Improvised Explosive Device
IISS	International Institute for Strategic Studies
ISR	Intelligence, Surveillance, Reconnaissance
JCMS	<i>Journal of Common Market Studies</i>
KNDS	KMW+Nexter Defense Systems
MALE RPAS	Medium Altitude Long Endurance Remotely Piloted Air System

MCCE	Movement Coordination Centre Europe
MMF	Multinational Multirole Tanker Transport Fleet
MPCC	Military Planning and Conduct Capability
MRAP	Mine Resistant Ambush Protected
MRTT	Multi Role Tanker Transport
NASAMS	National Advanced Surface to Air Missile System (also Norwegian Advanced Surface to Air Missile System)
NATO	North Atlantic Treaty Organization
NDPP	NATO Defense Planning Process
NSPA	NATO Support and Acquisition Agency
OCCAR	Organisation Conjointe de Coopération en matière d'Armement; Organization for Joint Armament Cooperation
OHQ	Operational Headquarters
PESCO	Permanent Structured Cooperation
SAC	Strategic Airlift Capability
SALIS	Strategic Airlift Interim Solution (sometimes also Strategic Airlift International Solution)
SIPRI	Stockholm International Peace Research Institute
UAS	Unmanned Aerial System
UGS	Unmanned Ground System
UN	United Nations

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I. INTRODUCTION

The institutional foundation of European security has been a subject of debate and policy inquiry since the late 1940s, and the current juncture poses no exception—particularly in the face of a potential weakening of the transatlantic link. In November 2017, the European Union launched the Permanent Structured Cooperation (PESCO). It declared that PESCO’s goal was to “strengthen the strategic autonomy of both Europeans and the EU.”¹ In November 2018, French President Emmanuel Macron underlined this new impetus when he said that “Europe needs to be prepared to ‘[defend] itself better alone, without just depending on the United States.’”² He used this language almost in the sense of “all azimuths,” a phrase employed in the 1960s by another French advocate of a strategically independent Europe, President Charles de Gaulle.

“Strategic autonomy” seems to be a call for a more united Europe in security policy. But what kind of “strategic autonomy” are the participants in PESCO pursuing?

Taking a modest approach, this policy would only mean to enable the European Union (EU) to conduct limited operations on its own (an agreed goal since the late 1990s), without relying on the strategic enablers that have so far been provided by Canada, the United Kingdom, or the United States. At the same time, the EU would still depend on the North Atlantic Treaty Organization (NATO) for Europe’s collective defense in more demanding contingencies. This idea is one way of understanding strategic autonomy.

On the other hand, the term “strategic autonomy” could also indicate a long-term aspiration on the part of the EU *to supplant* NATO’s role in providing for the collective defense of Europe, making NATO obsolete and diminishing the influence of the United States in European defense matters. Here is a classic question about the European

¹ European Union, “Joint Notification on Permanent Structured Cooperation (PESCO) to the Council and to the High Representative of the Union for Foreign Affairs and Security Policy,” November 17, 2017, 5, <http://www.consilium.europa.eu/media/31511/171113-pesco-notification.pdf>.

² Eli Meixler, “French President Emmanuel Macron Calls for a ‘European Army’ to Defend against China, Russia and the U.S.,” *Time.com* (blog), November 7, 2018, <http://time.com/5446975/emmanuel-macron-european-army-russia-us/>.

security order in its newest form, a question that requires discerning and systematic scholarly analysis.

The declared goal of PESCO, to “strengthen the strategic autonomy” in the security and defense policy of the EU, implies that currently the EU does not possess this autonomy or has this capability to an inadequate extent. This premise serves as the starting point to develop the research question regarding a European strategic autonomy.

Both terms—“strategy” and “autonomy”—are used widely and possess varied meanings. Thus, for a meaningful analysis, the terms “strategy” and “autonomy” need to be defined first. This provides the anchor for the following chapters.

Autonomy can be defined as the (emphasis added):

condition or right of a state, institution, group, etc., to make its own laws or rules and **administer its own affairs**; self-government, independence.³

Strategy can be defined as (emphasis added):

the art or practice of planning the future direction or outcome of something; the formulation or implementation of a plan, scheme, or course of action, esp. of a **long-term or ambitious nature**. Also: policy or means of achieving objectives within a specified field.⁴

The combination of “strategy” and “autonomy” in the PESCO context may mean that the EU has the ambitious long-term goal of administering its own affairs, without outside interference or dependence. Since this term first appeared in the 2016 European Global Security Strategy and again with the activation of PESCO, this “strategic autonomy” is directed at the field of security and defense policy.

Therefore, this thesis takes the EU at its word and asks the following research questions: Is PESCO providing a coherent effort to achieve “strategic autonomy,” or is it just a collection of miscellaneous initiatives under one umbrella? Is PESCO likely to pursue only temporary political results, or does it manifest the potential to overturn the

³ *Oxford English Dictionary Online*, s.v. “autonomy,” accessed April 19, 2019, <http://www.oed.com/view/Entry/13500>

⁴ *Oxford English Dictionary Online*, s.v. “strategy,” accessed April 19, 2019, <http://www.oed.com/view/Entry/191319>

transatlantic order? The next section of the introduction discusses the relevance of the question, explains the academic “state of the art” via a literature review, and develops the research design.

A. SIGNIFICANCE OF THE RESEARCH QUESTION

For the European members of NATO, which are at the same time members of the European Union,⁵ the division of labor was clear during the Cold War: managing economic, development, and finance matters within the institutions of European integration,⁶ and security and collective defense via NATO.

This division of labor has become less clear-cut than in the past. Since the end of the Cold War, the European Union has been asserting a stronger role in security and defense, starting with the Common Foreign and Security Policy in the 1993 Treaty of Maastricht. The EU established its Common Security and Defence Policy with the 2007 Treaty of Lisbon, which entered into force in 2009. Under the leadership of the President of the European Commission, Jean Claude Juncker, and the High Representative of the Union for Foreign Policy and Security Affairs, Federica Mogherini, the EU released the 2016 European Union Global Strategy (EUGS). In this document, the EU declared, for the first time, its ambition of gaining “strategic autonomy” in security and defense policy.⁷

The term “strategic autonomy” is ambiguous and undefined, and the declaration of this goal immediately started a debate as to the nature of the “strategic autonomy”

⁵ Belgium, Bulgaria, Croatia, the Czech Republic, Denmark, Estonia, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, and the United Kingdom. The UK was scheduled to leave the EU in March 2019, but its departure is unclear at this writing.

⁶ The European integration movement has been known as the European Union since 1993. From 1951 to 1993, it was known under a series of institutional names, beginning with the European Coal and Steel Community.

⁷ High Representative of the Union for Foreign Affairs and Security Policy Vice-President of the European Commission, “Shared Vision, Common Action: A Stronger Europe. A Global Strategy for the European Union’s Foreign and Security Policy” (European Commission, June 28, 2016), http://europa.eu/globalstrategy/sites/globalstrategy/files/pages/files/eugs_review_web_13.pdf.

envisaged by the EU. When PESCO was initiated in November 2017, the term “strategic autonomy” re-appeared as one of its declared goals.⁸

Most scholars interpret this term in a limited way, pointing to the professed desire of the European Union members to strengthen their militaries and make them operationally more capable and able to act autonomously, that is, able to act without outside help for logistics, communications, and other functions. These more capable European militaries are expected to make NATO stronger as well in the sense of the classical European pillar envisaged in the 1950s and 1960s. The role of NATO in the collective defense of Europe is meant to remain untouched. EU leaders and PESCO participants share this interpretation in their policy statements and speeches.

It is worthy of inquiry, however, that a greater degree of European “strategic autonomy” in security and defense policy is supposed to strengthen NATO. In the final sense, NATO’s source of strength is the political cohesion of the alliance. If one pillar of an alliance strives to be more autonomous, it stands to reason that the whole alliance may not be stronger, but weaker as a result.⁹ Much depends on the intentions and ambitions of the allies seeking greater autonomy.

The fact that the European PESCO participants are using the EU framework and not NATO to make their militaries more capable and “autonomous” also merits investigation.

These countries could have used NATO, the classic military powerhouse on the continent. Instead, the PESCO-participating Europeans have chosen to use the EU, an organization whose aim has been to ever more closely integrate its members, first by economic and later by political means. The European Union as a security actor is only a recent development. This explains why the EU is a supranational entity in some political and economic matters, but has remained intergovernmental in security-related matters.

⁸ European Union, “Joint Notification on Permanent Structured Cooperation (PESCO) to the Council and to the High Representative of the Union for Foreign Affairs and Security Policy.”

⁹ Alyson J. K. Bailes, “NATO’s European Pillar: The European Security and Defense Identity,” *Defense Analysis* 15, no. 3 (December 1999): 317, <https://doi.org/10.1080/713604684>.

This means that the member states have largely retained their sovereignty over their security and defense policies.

It can therefore be argued that this “strategic autonomy” is more closely connected to economic and financial matters than to military strategy. If one considered the countries that promote a state-sponsored arms industry and those that are skeptical of American or British goals concerning security and defense, this policy would indicate that European autonomy is sought in the economic and financial aspects of defense, that is, in research and development and the acquisition of weapon systems. As a result, the main suppliers of arms for European forces outside the EU might be targeted in this pursuit of “strategic autonomy”—that is, the major defense suppliers in the United States that have had pride of place in the armaments of European NATO allies through security assistance since 1950, but who have always caused controversy and upheaval in the political and economic sectors that want a strong European policy to include an arms sector.¹⁰

In short, a PESCO that opens the way to a strategically autonomous European Union could contribute to an enormous change in the transatlantic relationship between the United States and its European Allies, from close allies with shared values to states associated only for utilitarian and transactional purposes.

B. LITERATURE REVIEW

The topic of PESCO and European strategic autonomy has received intense attention since PESCO was activated in November 2017.

The most active institutions publishing studies on these topics include the European Union Institute for Security Studies (EUISS), the Belgian Egmont–Royal Institute for International Relations, the Clingendael Netherlands Institute of International Relations, the International Institute for Strategic Studies (IISS), and the Stiftung Wissenschaft und Politik (German Institute for International and Security Affairs). Several other institutions and journals also provide valuable contributions to the debate.

¹⁰ William Matthews, “Pitchmen - Duel for USAF Tanker Deal Competitors Claim Boost for U.S. Jobs, Performance Superiority,” *Defense News*, September 19, 2005.

The most notable include the *European Foreign Affairs Review*, *European Security*, the Chaillot Papers, *Contemporary Politics*, the *Journal of Common Market Studies* (JCMS), and finally, the Stockholm International Peace Research Institute (SIPRI).

Additionally, the various European Union institutions provide an enormous output of information. While the European Commission mostly supplies overarching information,¹¹ the European External Action Service and the European Defence Agency concentrate on their special topics.¹² The European Union institutions' different reports to each other are also of interest, even though it is extremely difficult to keep track of them.¹³ The European Parliament Research Service contributes excellent background information.¹⁴

Even before PESCO was activated the Common Security and Defense Policy of the EU member states was a constant topic in the literature. Many scholars were critical of the European Union's progress in this policy field, advocating more progress in areas such as policy, capabilities, and defense industry.¹⁵ But PESCO was evaluated as toxic by EU member states, Sven Biscop claims, until exogenous factors, like "Putin, Brexit, and Trump," came to the front of the stage.¹⁶

Some scholars cast doubt on the ability of PESCO to contribute to European strategic autonomy, because it remains voluntary to participate, and EU nations will

¹¹ Example: European Commission, "EU Sets out Path for Ambitious European Cooperation in Defence and Security," May 8, 2015.

¹² Example: European Defence Agency, "Capability Development Plan Factsheet," June 28, 2018.

¹³ Example: European Commission, "Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Towards a More Competitive and Efficient Defence and Security Sector," 2013, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%5B2013DC0542&print=true>.

¹⁴ European Parliament Research Service, "Progress on European Defence to Be Evaluated by the European Council" (Brussels, June 25, 2015).

¹⁵ Margriet Drent, Dick Zandee, and Eva Maas, "Defence Matters: More Urgent than Ever," *Clingendael Report*, April 2015, 30.

¹⁶ Sven Biscop, "Differentiated Integration in Defence: A Plea for PESCO," *Istituto Affari Internazionali IAI*, January 20, 2017, 3.

respond differently.¹⁷ Additionally, the European Defence Agency (EDA) lacks any formal power to coerce nations to participate in collaborative programs.¹⁸ The lack of progress, according to some scholars, led to nations calling on NATO for support, with the 2011 Libya crisis as one example.¹⁹ Some scholars assert that the European Union, in the light of the pivot of the United States toward the Asia-Pacific region and the current developments in the European neighborhood, does not even have a choice other than to pursue a greater degree of strategic autonomy.²⁰

A team of eight scholars analyzed the EU's military level of ambition by examining several scenarios and comparing the requirements to European capabilities, taking into account a possible Brexit.²¹ They concluded that even with the United Kingdom the EU member states could barely conduct missions in line with the declared level of ambition. Christoph Meyer found in his study on European strategic culture that, even though there appears to be some consensus among EU member states regarding the desirability of deeper cooperation in military matters, national strategic cultures are serious obstacles to a true cooperation.²²

The relationship between PESCO, the Coordinated Annual Review on Defence (CARD), and the European Defence Fund (EDF) is also addressed frequently. Daniel Fiott, who publishes extensively on European Union matters, sees promise in CARD for delivering a more stringent capability planning process for EU member states, but recognizes the challenges as well, since it is a voluntary undertaking and must also be

¹⁷ Simon Duke, "The EU, NATO and the Treaty of Lisbon: Still Divided within a Common City," in *EU External Relations Law and Policy in the Post-Lisbon Era*, ed. Paul James Cardwell (The Hague, The Netherlands: T. M. C. Asser Press, 2011), 351, https://doi.org/10.1007/978-90-6704-823-1_16.

¹⁸ Duke, 351.

¹⁹ Jolyon Howorth, "Strategic Autonomy and EU-NATO Cooperation: Squaring the Circle," *Egmont Security Brief* 85 (May 2017): 1.

²⁰ Sven Biscop, "All or Nothing? European and British Strategic Autonomy after the Brexit," *Egmont Papers* 87 (September 2016): 21.

²¹ Douglas Barrie et al., *Protecting Europe: Meeting the EU's Military Level of Ambition in the Context of Brexit* (London: International Institute for Strategic Studies, 2018).

²² Christoph O. Meyer, *The Quest for a European Strategic Culture* (London: Palgrave Macmillan UK, 2006), 13, <https://doi.org/10.1057/9780230598218>.

synchronized with NATO's Defense Planning Process (NDPP).²³ Biscop asserts that the European Defence Fund could provide strong incentives for states to join PESCO, if the European Commission matched the nations' contributions with financial support from the EU budget.²⁴

The topic of EU-NATO relations and the question of organizational supremacy in the field of security policy have also become more prominent. Biscop argues that the European Union is an actor, while NATO is an instrument. He sees the EU on its way to strategic autonomy for expeditionary operations only, while NATO will keep its role for the collective defense of Europe. As a long-term prospect, he supports an idea that was brought forward by Barry Posen in 2013, namely to replace NATO with a new alliance between the United States and the European Union.²⁵ In Posen's proposal, the EU would take over the military tasks of NATO, while keeping the United States politically involved.²⁶ Hanna Ojanen challenges the dominant notion that the EU will remain subordinate to NATO in its development and holds that these two organizations are dependent on each other for their future development.²⁷ Simon Duke finds that the 2009 Lisbon Treaty did not fundamentally alter the relationship between NATO and the EU, since the core mandate of NATO remains untouched.²⁸ Jolyon Howorth has found a fitting metaphor for describing the relationship between the EU and NATO: "squaring the circle."²⁹

Even though many articles, studies, and information bulletins have been released on PESCO, the Common Security and Defence Policy (CSDP), NATO, and their complex relationship, there is a lack of detailed analysis of PESCO itself. It appears that

²³ Daniel Fiott, "The CARD on the EU Defence Table," *Issue Alert*, 10 (April 2017): 2.

²⁴ Biscop, "Differentiated Integration in Defence: A Plea for PESCO," 8.

²⁵ Sven Biscop, "EU-NATO Relations: A Long-Term Perspective," *Nação e Defesa* 150 (2018): 92.

²⁶ Barry R. Posen, "Pull Back: The Case for a Less Activist Foreign Policy," *Foreign Affairs* 92, no. 1 (February 2013): 125.

²⁷ Hanna Ojanen, "The EU and Nato: Two Competing Models for a Common Defence Policy," *JCMS: Journal of Common Market Studies* 44, no. 1 (March 2006): 73, <https://doi.org/10.1111/j.1468-5965.2006.00614.x>.

²⁸ Duke, "The EU, NATO and the Treaty of Lisbon," 354.

²⁹ Howorth, "Strategic Autonomy and EU-NATO Cooperation: Squaring the Circle."

the PESCO activation was enough for most scholars to come to conclusions regarding the European security and defense policy. Most articles remain in the policy sphere, without examining closely the field PESCO is supposed to be addressing: military capability development. The article by Alice Billon-Galland and Yvonni-Stefania Efstathiou constitutes an exception. They compared the various PESCO projects to the priorities of the EU Capability Development Plan (CDP) and concluded that “a degree of willingness to meet CDP requirements is evident.”³⁰

Nonetheless, the causal chain of how PESCO could contribute to European strategic autonomy has not been examined yet. There has been no detailed analysis of (a) specific PESCO projects regarding previously identified operational shortfalls or (b) the capability inventory of PESCO participants.

The issue of analyzing operational shortfalls was hampered by the classification of relevant EU documents as “EU Restricted,” making them unavailable for this thesis. It was therefore necessary to turn to secondary sources to identify operational shortfalls. But only a few case studies exist.³¹ This made it necessary to comb through many documents and articles which contained useful information on operational shortfalls in EU military missions.³²

This thesis also used data from the commercially published Jane’s database to investigate the contribution of PESCO from an inventory perspective. This was necessary because a condensed dataset was needed, which was otherwise not available or would have needed months of research.

This thesis contributes to research on PESCO by using first-hand data from political leaders, by analyzing the level of member states’ participation in PESCO projects, as well as documented operational shortfalls, and the inventory of PESCO

³⁰ Alice Billon-Galland and Yvonni-Stefania Efstathiou, “Are PESCO Projects Fit for Purpose?,” *European Defence Policy Brief*, February 2019, 12.

³¹ Example: Niklas Nováky, “From EUFOR to EUMAM: The European Union in the Central African Republic,” *European Foreign Affairs Review* 21, no. 1 (2016): 20.

³² Example: Christian Küsters, “Why Is There No Joint European Remotely Piloted Aircraft System Project under the Common Security and Defence Policy?,” *The RUSI Journal* 163, no. 2 (March 4, 2018): 55, <https://doi.org/10.1080/03071847.2018.1475625>.

participants. The study leaves the sometimes lofty sphere of pure normative policy analysis and concentrates on facts in their rich detail. This work thus contributes a building block for further analysis of European “strategic autonomy,” PESCO, and the EU’s Common Security and Defense Policy.

C. POTENTIAL EXPLANATIONS, RESEARCH DESIGN, AND CHAPTER OUTLINE

At this point, the thesis reiterates the research question and the definition of European strategic autonomy:

Is PESCO providing a coherent effort to achieve “strategic autonomy,” or is it just a collection of miscellaneous initiatives under one umbrella? Is PESCO likely to pursue only temporary political results, or does it manifest the potential to overturn the transatlantic order?

Strategic autonomy might mean that the EU has the ambitious long-term goal of administering its own affairs, without outside interference or dependence in the sphere of security and defense policy. It appears that there are three levels of European strategic autonomy in security and defense policy. First, on the political level there must be a consensus of all member states that the EU should indeed be strategically autonomous in security and defense policy. Secondly, the EU must be able to provide all required resources and capabilities for an autonomous security policy; otherwise, it would not be able to “administer its own affairs” independently. Thirdly, the EU member states must be independent from outside sources for equipping their military forces, since dependence on outside sources degrades a genuine level of autonomy.

The premise of this thesis is that the EU has not yet reached “strategic autonomy” because (1) its members do not support it politically, (2) they lack certain important military capabilities, and (3) they rely on non-European sources to equip their military forces with key capabilities, undermining “autonomy” by making them dependent on outside suppliers.

This thesis breaks up the question of the nature of PESCO’s “strategic autonomy” into three distinct spheres: the political, the operational, and the inventory (Figure 1).

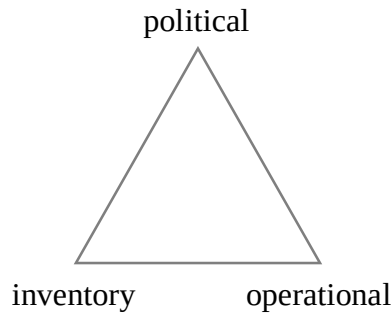


Figure 1. Overview of the different perspectives analyzed in this thesis

First, what kind of “strategic autonomy” is being pursued on a political level? To answer this question the thesis analyzes relevant statements by leading EU politicians and leaders of PESCO participant nations as to their understanding of the term. This analysis supports a preliminary understanding of PESCO from the perspective of its participants, with an emphasis on the European Union’s relationship to NATO and the United States. It is important to note that the European Union efforts are not wholly embraced by NATO. NATO Secretary General Jens Stoltenberg in November 2018 voiced concerns regarding the effect of an EU “strategic autonomy”:

more European efforts on defence is great, but it should never undermine the strength of the transatlantic bond. [...] So, if we speak too much about [...] this phrase "Strategic Autonomy", it's not totally clear what that means, but it sounds a bit like they're going to do these big strategic things alone, and I don't think that's wise, because actually the two world wars and the Cold War taught us the importance of doing things together.³³

An additional part of the political perspective is the level of participation in the 34 specific PESCO projects. A country that participates in many PESCO projects can be assumed to be supportive of greater European strategic autonomy, while countries that participate in only a few projects might be more skeptical.

³³ NATO, “Keynote Speech by NATO Secretary General Jens Stoltenberg at the “NATO Talk around the Brandenburg Tor” Conference,” November 12, 2018, http://www.nato.int/cps/en/natohq/opinions_160241.htm.

For the operational side the thesis identifies the military capability gaps that the EU needs to fill to be autonomous and no longer dependent on outside help. To this end, the thesis analyzes unclassified reports on EU-led military operations and integration measures as well as reports about NATO integration. This investigation may find operational shortcomings on the part of EU nations that stand in the way of “strategic autonomy.” The thesis then evaluates the 34 PESCO projects in light of the previously identified shortcomings to establish whether PESCO might be helpful in mitigating them, thus contributing to strategic autonomy.

From the inventory perspective, the EU members have repeatedly chosen to buy non-European products to equip their military forces for reasons that have little to do with the security goals of autonomy or independence. “Strategic autonomy” in this sphere would indicate that the EU nations would in the future turn to European suppliers for arms and equipment that have been previously obtained from outside of the EU. The task for PESCO would therefore be to provide alternatives for military capabilities that are currently supplied by non-EU producers. To this end, the thesis analyzes the military inventory of EU members to identify which major military systems are supplied by non-European sources. Following this, the thesis compares the PESCO projects with the results of the inventory analysis to determine whether PESCO appears likely to contribute to greater “strategic autonomy” from an inventory perspective.

In a last step, the thesis combines the results from the operational and inventory sides to establish what kind of “strategic autonomy” PESCO is supporting. Together with the results of the analysis of the political side, the thesis offers conclusions as to whether PESCO satisfies the EU’s ambition of “strategic autonomy.” This also helps to answer the lingering question of the long-term relationship between NATO and the EU in security and defense policy and their division of labor in promoting international security. This is of special importance given that the EU has mostly been a civilian organization, whose security and defense pillar is only gradually evolving, while NATO, a fully-fledged politico-military alliance, has been active in this policy field since its inception in 1949.

The thesis is organized as follows.

Chapter II briefly describes the genesis of PESCO and what it is, which projects it contains, and how it fits into the activities of the EU for developing its member states' military capabilities.

Chapter III analyzes the policy statements of EU leaders and PESCO participants. It additionally breaks down the participation of different EU members in PESCO projects to shed some light on their attitude toward a higher level of European strategic autonomy.

Chapter IV turns to the operational side of EU missions and European deployments to identify possible shortcomings and evaluate PESCO's 34 projects with these shortcomings as background.

Chapter V breaks down the inventories of PESCO participants with an emphasis on air and land systems from outside of Europe and then compares them with PESCO projects to determine whether PESCO contributes to strategic autonomy from an inventory perspective.

The conclusion, Chapter VI, draws the results together to establish what kind of "strategic autonomy" PESCO is supporting and whether this ambition is justified and likely to be achieved, given the political and economic constraints.

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II. PESCO OVERVIEW

Some EU member states have repeatedly affirmed their commitment to build a common security and defense policy in Europe, the first steps dating back to the early 1950s with the failed Pleven Plan and the European Defence Community (EDC).³⁴ The Pleven Plan involved France, Italy, West Germany, and the Benelux Countries. In the years 1950–1954, the proponents of the EDC manifested strong hopes for a European Army, but the proposal failed for various reasons, including international political factors and French domestic politics in the wake of the Indo-China War. Much time had to pass before a comparable undertaking appeared.

The establishment of the EU via the 1993 Treaty of Maastricht³⁵ was groundbreaking: It established the Common Foreign and Security Policy (CFSP) as one of the three pillars of the European Union.³⁶ The 1999 Treaty of Amsterdam³⁷ created the “High Representative of the Common Foreign and Security Policy” as a single voice for the foreign policy of the EU.³⁸ The 2001 Treaty of Nice³⁹ added another layer to the CFSP, the European Security and Defence Policy (ESDP).⁴⁰ In the wake of the 2003 Iraq War, the EU formulated a European Security Strategy (ESS) and created the European Battle Groups, multinational light infantry units as crisis reaction forces.⁴¹

The 2009 Treaty of Lisbon⁴² finally transformed the ESDP into the CSDP, reinforcing the idea of a common European policy in this field, and making the “High

³⁴ Signed May 27, 1952, never effective due to French non-ratification.

³⁵ Signed February 7, 1992, effective 1 November 1993.

³⁶ Annegret Bendiek, “A Paradigm Shift in the EU’s Common Foreign and Security Policy: From Transformation to Resilience,” *SWP Research Paper*, no. 19/2017 (October 2017): 7.

³⁷ Signed October 2, 1997, effective 1 May 1999

³⁸ Neil Winn, “CFSP, ESDP, and the Future of European Security: Whither NATO?,” *The Brown Journal of World Affairs* IX, no. 2 (Winter/Spring 2003): 152.

³⁹ Signed December 11, 2000, effective February 1, 2003.

⁴⁰ Winn, “CFSP, ESDP, and the Future of European Security: Whither NATO?,” 154.

⁴¹ Winn, 156.

⁴² Signed December 13, 2007, effective December 1, 2009.

Representative of the Union for Foreign Affairs and Security Policy” one of the Vice Presidents of the European Commission. In this treaty, the PESCO policy mechanism was included, but it lay dormant until 2017, eight years later. Concurrently in 2008, the ESS was carefully adapted to include emerging threats, including cyber and climate change.

Yet, the EU for all its will and effort to strengthen a coordinated European security policy has not much to show for it.⁴³ EU military missions have generally remained small and brief, the EU Battle Groups have never been used, and whenever a heavy military involvement could be expected, the Europeans have turned to NATO.⁴⁴ Defense budgets have remained low and cooperation in developing and acquiring weapon systems has been minimal. Despite the remarkable extent of European integration in other fields, security and defense have remained core elements of national sovereignty.

Numerous events in recent years, however, have given new momentum to European cooperation in security and defense policy. NATO’s Libyan intervention in 2011 revealed that the Europeans were not able to conduct such an operation without outside help.⁴⁵ Russia annexed the Crimean Peninsula in 2014, thereby undermining key provisions of the international legal order.⁴⁶ Donald Trump became the U.S. president in 2017, and he has since nurtured doubts regarding the reliability of the United States’ commitment to NATO and multilateralism.⁴⁷ The United Kingdom, historically the main opponent to more extensive European defense integration, voted for Brexit in 2016, thereby creating a new opportunity for the EU to deepen cooperation in this regard.⁴⁸

⁴³ Jolyon Howorth, “For a True European Defence Union,” *European View* 17, no. 1 (April 2018): 3, <https://doi.org/10.1177/1781685818769842>.

⁴⁴ Jolyon Howorth, “EU–NATO Cooperation: The Key to Europe’s Security Future,” *European Security* 26, no. 3 (July 3, 2017): 457, <https://doi.org/10.1080/09662839.2017.1352584>.

⁴⁵ Howorth, 457.

⁴⁶ Dušan Fischer, “All Grown up - European Union on the Path to Strategic Autonomy,” *International Issues & Slovak Foreign Policy Affairs* 26, no. 3/4 (July 1, 2017): 57.

⁴⁷ Fischer, 57.

⁴⁸ Fischer, 57.

As a reaction⁴⁹ to the changing international environment, the EU adapted its European Security Strategy statements from 2003 and 2008 to the 2016 Global Strategy for the EU's Foreign and Security Policy (EUGS).⁵⁰ Furthermore, action on PESCO was finally initiated in 2017.⁵¹ PESCO became the subject of intense interest both from the political and the scholarly side even before it was activated.⁵² But no comprehensive overview of PESCO and its 34 projects is available. This chapter provides such an overview.

It is important to recognize that PESCO involves more than just the development of military capabilities. In the notification of the PESCO activation, the participating nations committed themselves to certain goals and processes, including to provide an annual implementation plan and individual project reports to the EDA, which acts as a secretariat.⁵³ These reports are then made available to all other participants to create transparency and increase the motivation for progress.

It must also be understood that PESCO is but one of three main pillars aimed at improving EU military capabilities.⁵⁴ The other main pillars are the European Defence Fund and the Coordinated Annual Review on Defence, both of which started at roughly the same time as PESCO.⁵⁵

⁴⁹ Alexandra De Hoop Scheffer and Martin Quencez, "Will Europe's Defense Momentum Lead to Anything?," *Security and Defense Policy*, Security and Defense Policy, 22 (June 2017): 7.

⁵⁰ High Representative of the Union for Foreign Affairs and Security Policy Vice-President of the European Commission, "Global Strategy for the European Union's Foreign And Security Policy."

⁵¹ European Union, "Joint Notification on Permanent Structured Cooperation (PESCO) to the Council and to the High Representative of the Union for Foreign Affairs and Security Policy."

⁵² Sven Biscop and Jo Coelmont, "CSDP and the Ghent Framework: The Indirect Approach to Permanent Structured Cooperation," *European Foreign Affairs Review* 16 (2011): 149–67.

⁵³ European Union, "Joint Notification on Permanent Structured Cooperation (PESCO) to the Council and to the High Representative of the Union for Foreign Affairs and Security Policy."

⁵⁴ European Defence Agency, "Factsheet Coordinated Annual Review on Defence (CARD)," November 26, 2018, https://www.eda.europa.eu/docs/default-source/eda-factsheets/2018-11-26-factsheet_card.

⁵⁵ CARD: May 18, 2017; EDF: June 7, 2017; PESCO: November 17, 2017.

The EDF, for the first time, directly taps the EU budget for support instead of relying on member states.⁵⁶ The EDF provides financial contributions to research and development of military capabilities.⁵⁷ Research, studies, and design can be supported “up to 100% in grants, prizes and procurement.”⁵⁸ The development of prototypes can be promoted up to 20%, and for PESCO projects up to 30%. Furthermore, testing, qualifications, and certification can be facilitated up to 80% from the EU budget. The acquisition of systems, however, is not part of the EDF.

The CARD is conducted by the European Defence Agency, which acts as the secretariat. The CARD aggregates information from EU member states and evaluates their efforts with a perspective from the EU-agreed Capability Development Plan to determine to what extent EU member states are working in the right direction to meet the commonly agreed capability priorities.⁵⁹ It is comparable to the NATO Defense Planning Process. With this context, this thesis now turns to PESCO and its 34 projects.⁶⁰

PESCO started in 2017 with 17 specific projects in three overarching categories.⁶¹ The three categories were initially Common Training and Exercises; Operational Domains (Land, Air, Maritime, Cyber); and Joint and Enabling Capabilities (bridging operational gaps). They were later changed and expanded to the seven categories listed in Figure 2.

⁵⁶ European Commission, “A European Defence Fund: €5.5 Billion per Year to Boost Europe’s Defence Capabilities,” June 7, 2017, http://europa.eu/rapid/press-release_IP-17-1508_en.htm.

⁵⁷ European Commission, “Factsheet European Defence Fund,” March 19, 2019, <https://ec.europa.eu/docsroom/documents/34509>.

⁵⁸ European Commission.

⁵⁹ European Defence Agency, “Capability Development Plan Factsheet.”

⁶⁰ Council of the European Union, “Permanent Structured Cooperation (PESCO) Updated List of PESCO Projects - Overview,” November 19, 2018.

⁶¹ European External Action Service, “Permanent Structured Cooperation (PESCO) - Factsheet” (Brussels, June 25, 2018).

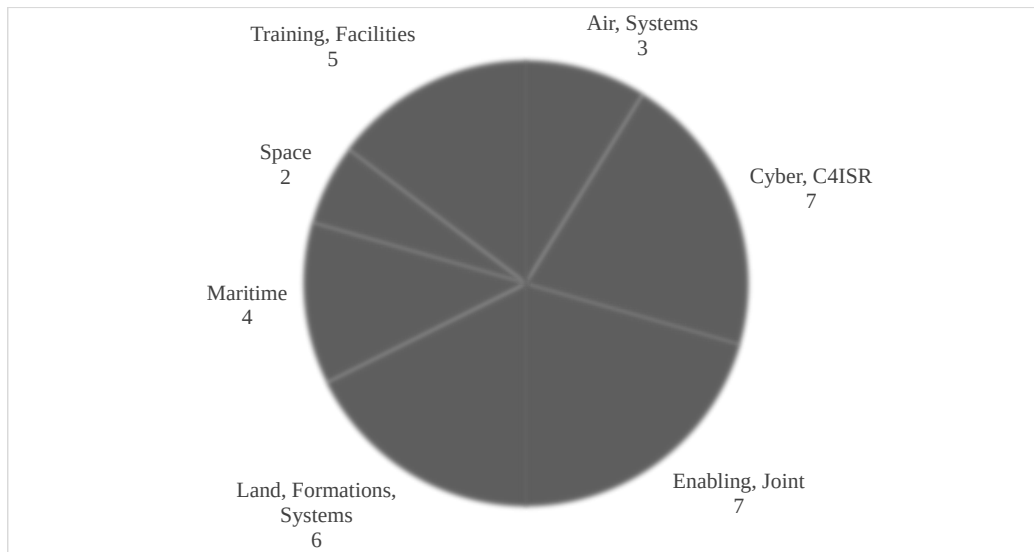


Figure 2. PESCO categories and number of programs

The number of projects doubled, from 17 in 2017 to 34 in 2018 (Table 1). All projects have a lead nation and participating nations, except for the “EU Test and Evaluation Centres,” which is headed by two lead nations, France and Sweden. It appears that no overarching principle binds the various prospects together. There are projects for the development of military assets, as well as projects for enabling functions, and even projects that appear to be hooks to include several initiatives at once, most notably the “Network of logistic hubs in Europe and support to operations.” It seems that PESCO is used to combine several individual projects in one framework. This fact would speak against reliance on a strategic approach when these projects were selected.

Table 1. PESCO categories and projects⁶²

Year	Category	Project
2018	Air, Systems	European Medium Altitude Long Endurance Remotely Piloted Aircraft Systems (MALE RPAS (Eurodrone))
2018	Air, Systems	European Attack Helicopters TIGER Mark III
2018	Air, Systems	Counter Unmanned Aerial Systems (C-UAS)
2017	Cyber, C4ISR	Cyber Threats and Incident Response Information Sharing Platform
2017	Cyber, C4ISR	Cyber Rapid Response Teams and Mutual Assistance on Cyber Security
2017	Cyber, C4ISR	Strategic Command and Control (C2) System for CSDP Missions and Operations
2017	Cyber, C4ISR	European Secure Software defined Radio (ESSOR)
2018	Cyber, C4ISR	European High Atmosphere Airship Platform (EHAAP) - Persistent Intelligence, Surveillance and Reconnaissance (ISR) Capability
2018	Cyber, C4ISR	One Deployable Special Operations Forces (SOF) Tactical Command and Control (C2) Command Post (CP) for Small Joint Operations (SJO) - (SOCC) for SJO
2018	Cyber, C4ISR	Electronic Warfare Capability and Interoperability Programme for Future Joint Intelligence, Surveillance and Reconnaissance (JISR) Cooperation
2017	Enabling, Joint	European Medical Command
2017	Enabling, Joint	Network of logistic Hubs in Europe and support to Operations
2017	Enabling, Joint	Military Mobility
2017	Enabling, Joint	Energy Operational Function (EOF)
2018	Enabling, Joint	Chemical, Biological, Radiological and Nuclear (CBRN) Surveillance as a service (CBRN SaaS)
2018	Enabling, Joint	Co-basing
2018	Enabling, Joint	Geo-meteorological and oceanographic (GeoMETOC) Support Coordination Element (GMSCE)
2017	Land, Formations, Systems	Armoured Infantry Fighting Vehicle/ Amphibious Assault Vehicle / Light Armoured Vehicle
2017	Land, Formations, Systems	Indirect Fire Support (EuroArtillery)
2017	Land, Formations, Systems	Deployable Military Disaster Relief Capability Package
2017	Land, Formations, Systems	EUFOR Crisis Response Operation Core (EUFOR CROC)
2018	Land, Formations, Systems	Integrated Unmanned Ground System
2018	Land, Formations, Systems	EU Beyond Line of Sight (BLOS) Land Battlefield Missile Systems
2017	Maritime	Upgrade of Maritime Surveillance
2017	Maritime	Maritime (semi-) Autonomous Systems for Mine Counter Measures (MAS MCM)
2017	Maritime	Harbour & Maritime Surveillance and Protection (HARMSPRO)
2018	Maritime	Deployable Modular Underwater Intervention Capability Package (Divepack)
2018	Space	EU Navigation Solution (EURAS)
2018	Space	European Military Space Surveillance Awareness Network (EU-SSA-N)
2017	Training, Facilities	European Training Mission Competence Centre (EU TMCC)
2017	Training, Facilities	European Training Certification Centre for European Armies
2018	Training, Facilities	Helicopter Hot and High Training (H3)
2018	Air, Systems	European Medium Altitude Long Endurance Remotely Piloted Aircraft Systems (MALE RPAS (Eurodrone))
2018	Air, Systems	European Attack Helicopters TIGER Mark III

⁶² Adapted from: Council of the European Union, “Permanent Structured Cooperation (PESCO) Updated List of PESCO Projects - Overview.”

The states' participation in the different projects is not evenly distributed (Figure 3). The leading project by far is Military Mobility. The median⁶³ participation is four countries per project, which appears to be a good size to achieve results, given that too many participants per project might slow down progress due to increased administration, and too few might produce results with not enough impact.

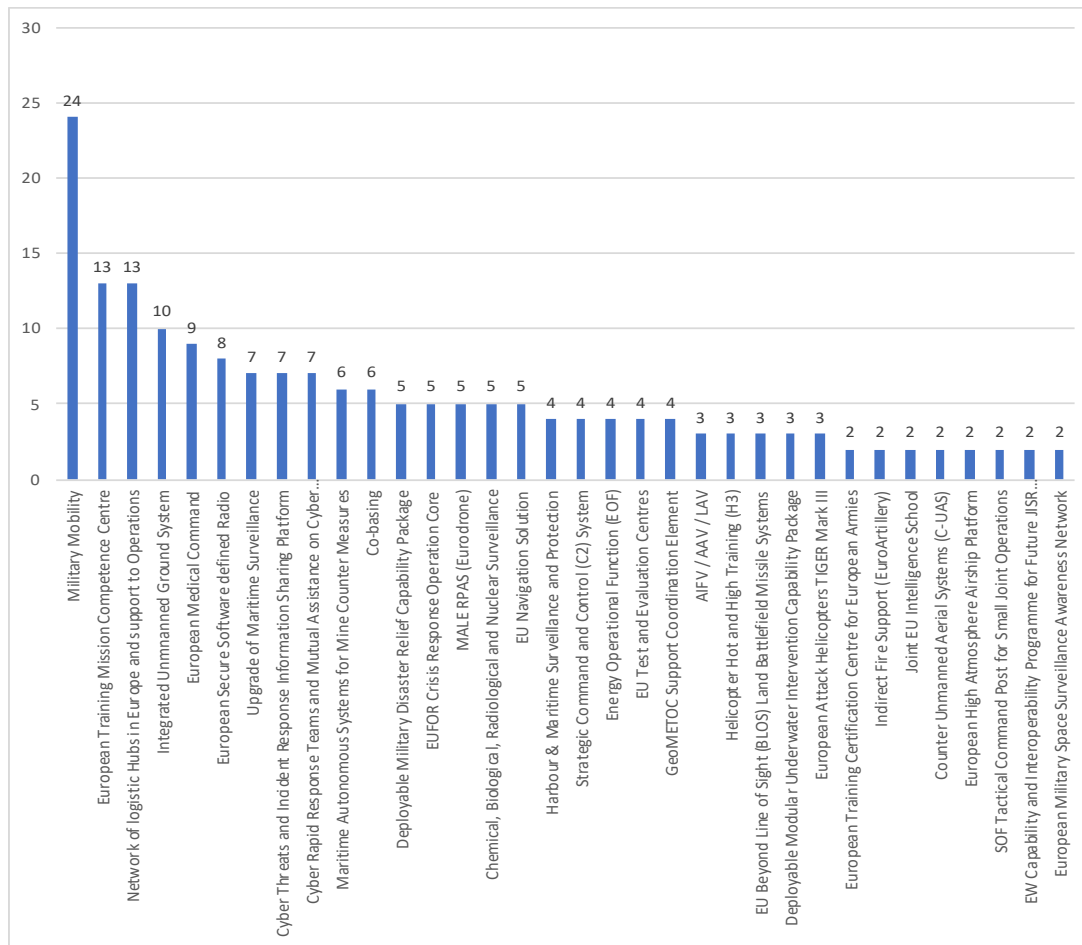


Figure 3. PESCO projects (names abbreviated) and number of participating nations⁶⁴

⁶³ The median statistical function is more suited to this list because the outlier “Military Mobility” would contaminate the simple average, or mean. Therefore, the median was chosen to come to a more useful result.

⁶⁴ Adapted from: Council of the European Union, “Permanent Structured Cooperation (PESCO) Updated List of PESCO Projects - Overview.”

The project “Military Mobility” deserves a closer look for several reasons. It is by far the project with the most participants, with 24 out of 25 PESCO participants, Ireland being the sole exception. Its goal is to “simplify and standardize cross-border military transport procedures. It aims to enhance the speed of movement of military forces across Europe.”⁶⁵ It can be argued that such a project only makes sense under two scenarios: crisis management within Europe, and collective defense of Europe. Although the ability to conduct crisis management operations within Europe is important, it seems far-fetched that so many countries would participate in such a project merely for military crisis management. Common sense dictates that this project is rather aimed at improving the conditions for collective defense.

It is noteworthy, that the PESCO participants, including EU member states that are not members of NATO, are thereby directly supporting NATO’s efforts to improve cross-border military movement, including the European Union as a whole, which could via the EDF, contribute money directly to a NATO effort.

The foregoing constitutes the broad overview of PESCO. The perspective of the countries participating in specific projects follows in the next chapter.

⁶⁵ Council of the European Union, 12.

III. THE POLITICAL PERSPECTIVE

A. INTRODUCTION

With PESCO, 25 European Union (EU) member states formally announced their commitment to better synchronize and combine their defense activities. When the PESCO participants officially notified the European Council of their intent to activate the previously unused Permanent Structured Cooperation option, they declared that one of their goals was to “strengthen the strategic autonomy of both Europeans and the EU.”⁶⁶ The step was noteworthy, because the EU and the Europeans⁶⁷ had not sought “strategic autonomy” on defense-related matters before, only a “capacity for autonomous action.”⁶⁸

This chapter investigates what kind of strategic autonomy is pursued on the political level. Is the goal a fully-fledged European Defense Union, with the prospect of replacing NATO in Europe, or is the objective more limited? This question is addressed by scrutinizing documents, statements, and speeches of the EU and PESCO participants in a qualitative content analysis, and by analyzing the participation in the different PESCO projects.

The evidence shows that the PESCO participants, at least on the declaratory level, do not seek complete “strategic autonomy” from NATO for the European Union’s defense integration. The consensus is that PESCO should contribute to strengthening the European pillar within NATO. Nevertheless, as analysis of statements by European arms manufacturing countries reveals, PESCO contains one facet that indicates a desire for “real” European autonomy: the development and acquisition of European military hardware as an alternative to relying on United States-supplied military systems. Furthermore, participation in PESCO projects reflects the statements on the political level. Countries that appear to be skeptical about a European strategic autonomy detached

⁶⁶ Annex I - Principles of PESCO to the European Union, “Joint Notification on Permanent Structured Cooperation (PESCO) to the Council and to the High Representative of the Union for Foreign Affairs and Security Policy,” 2.

⁶⁷ The term “Europeans” in this thesis refers to the member states of the EU.

⁶⁸ Maartje Rutten, “From St-Malo to Nice: European Defence: Core Documents,” *Chaillot Paper* 47, no. 2001 (May 2001): 8.

from NATO are reluctant to participate, while other countries underline their commitment by involving themselves in many PESCO projects.

Since the term “strategic autonomy” was first used in the 2016 European Union Global Strategy, the EUGS serves as the starting point for analysis.

B. STATEMENTS IN THE EUROPEAN UNION GLOBAL STRATEGY

The EUGS was released in June 2016. In 60 pages, the EUGS defines interests and guidelines, which include peace, security, prosperity, democracy, a rule-based international order, multilateralism, and partnerships. Priorities include the security of the European Union, resilience in the eastern and southern neighborhoods, an integrated approach to conflicts, cooperation to uphold regional order, and rule-based global governance in the 21st century. Strategic autonomy regarding the EU’s relationship to NATO and the United States is mentioned in the following contexts (emphasis added):

The Strategy nurtures the ambition of strategic autonomy for the European Union. [...] we know that such priorities are best served when we are not alone. And they are best served in an international system based on rules and on multilateralism. **This is no time for global policemen and lone warriors.** Our foreign and security policy has to handle global pressures and local dynamics, it has to cope with super-powers as well as with increasingly fractured identities.

Our Union will work to strengthen our partners: We will keep deepening the transatlantic bond and our partnership with NATO, **while we will also connect to new players and explore new formats.**⁶⁹

The terms in bold font are of special interest because they define the EU by contrasting it to “global policemen” and “lone warriors.” The “global policemen” metaphor is most likely directed at the United States,⁷⁰ while the term “lone warrior” might also point to Russia single-handedly annexing the Crimean Peninsula. The other

⁶⁹ High Representative of the Union for Foreign Affairs and Security Policy Vice-President of the European Commission, “Global Strategy for the European Union’s Foreign And Security Policy,” 4.

⁷⁰ Google Search “global policeman” on September 4, 2018 returned 46,100 hits. All hits on the first page (hits with highest relevance) have a clear U.S. direction, if not carrying the name “United States” or “U.S.” or “America” directly.

words in bold font open the perspective of cooperation beyond the transatlantic sphere, meaning beyond NATO and the United States.

Yet today terrorism, **hybrid threats**, economic volatility, climate change and energy insecurity endanger our people and territory. An appropriate level of ambition and strategic autonomy is important for Europe's ability to promote peace and security **within and beyond its borders**.⁷¹

The words in bold font indicate identified threats and the assumed area of responsibility. The term “hybrid threats” is generally not defined but is largely used to describe Russian activities in connection with the annexation of the Crimean Peninsula and the separatist movements in eastern Ukraine. The Rand Corporation has identified three hybrid scenarios (nonviolent subversion; covert violent action; and conventional aggression supported by political subversion) based on these Russian activities. Generally, hybrid threats can be described as “covert or deniable activities, supported by conventional or nuclear forces, to influence the domestic politics of target countries.”⁷² The EU's reference to hybrid threats in this strategy suggests that it sees a role for itself in the defense of Europe against similar threats, which is a sphere dominated by NATO. According to the EUGS,

While NATO exists to defend its participants – most of which are European – from external attack, Europeans must be better equipped, trained and organised to **contribute decisively** to such collective efforts, as well as to **act autonomously if and when necessary**.⁷³

The phrase “contribute decisively” points to a new level of quantity and quality in European military contributions for collective defense. Currently, the collective defense of the alliance depends largely on the military capabilities of the United States, supported by Canada and the European allies. Given the preceding statement, it seems that the PESCO participants want to significantly increase their contribution to this task of the alliance. The call for an ability “to act autonomously if and when necessary” is of special

⁷¹ High Representative of the Union for Foreign Affairs and Security Policy Vice-President of the European Commission, “Global Strategy for the European Union's Foreign And Security Policy,” 9.

⁷² Andrew Radin, *Hybrid Warfare in the Baltics: Threats and Potential Responses* (Santa Monica, CA: RAND Corporation, 2017), 5, <https://doi.org/10.7249/RR1577>.

⁷³ High Representative of the Union for Foreign Affairs and Security Policy Vice-President of the European Commission, “Global Strategy for the European Union's Foreign And Security Policy,” 19.

importance: It signals that the EU has the ambition to act by itself, without outside support, in some circumstances. To reach such an ambition the EU participants must, inter alia, develop or acquire key strategic enabling capabilities that are currently non-existent or deficient in the European inventory (e.g., strategic air and sea lift; air refueling; and unmanned aerial systems), and that have previously been provided mainly by the United States.

The ability to act alone, as well as the EU defining for itself a role in the collective defense of Europe as stated in the EUGS, might indicate a long-term desire of the EU to replace NATO in its collective defense role.

According to the EUGS,

A sustainable, innovative and competitive **European defence industry** is essential for Europe's strategic autonomy and for a credible CSDP.⁷⁴

Clearly, the European Union is asserting the aim of reducing its level of dependence on non-European sources for equipping the armed forces, thereby reducing possible avenues for outside influence on European Union policy making. Since the bulk of military hardware of European countries from outside the EU comes from the United States (e.g., fixed-wing aircraft and helicopters), the quoted statement refers directly to more independence from the United States in this regard.⁷⁵

In conclusion, the EUGS is exceptionally ambitious regarding European “strategic autonomy” and provides the conceptual groundwork for a European Union defense policy that can act without NATO. It is critical of unilateral action, but stops short of directly naming Russia and the United States. But the EUGS is not striving to deliberately replace NATO in its role (even though such a shift is a future possibility). The only facet of the EUGS that might indicate a direct desire to push the United States out of European matters is the aspiration to develop an independent European defense industry to provide armaments to European forces.

⁷⁴ High Representative of the Union for Foreign Affairs and Security Policy Vice-President of the European Commission, 45.

⁷⁵ Aude Fleurant et al., “Trends in International Arms Transfers, 2016,” *SIPRI Fact Sheet*, February 2017, <https://www.sipri.org/sites/default/files/Trends-in-international-arms-transfers-2016.pdf>.

C. STATEMENTS FROM EUROPEAN UNION LEADERSHIP

This section examines statements by two key EU politicians, Jean-Claude Juncker, President of the European Commission, and Federica Mogherini, High Representative of the Union for Foreign Affairs and Security Policy, regarding their understanding of “strategic autonomy.” These politicians are responsible for formulating the European Union’s security and defense policy. They also supervised the composition of the 2016 EU Global Strategy.

Juncker has said (emphasis added):

I welcome the steps taken today by Participants to lay the foundations of a **European Defence Union**. Europe cannot and should not **outsource our security and defence**.⁷⁶

More specifically, in his “State of the Union 2017” Juncker addressed the field of defense integration:

By 2025 we need a fully fledged **European Defence Union**. We need it. **And NATO wants it.**⁷⁷

What did Juncker mean by “European Defence Union”? In the background about his speech, part of the PESCO press release of the European Commission quotes a statement made by Juncker in April 2014 that sheds light on his view of such a European defense mechanism:

I believe that we need to take more seriously the provisions of the existing Treaty [2009 Treaty of Lisbon] that allow those European countries who want to do this to progressively build up a common European Defence.⁷⁸

Even though there is no direct evidence, it could additionally be argued that Juncker, long an outspoken proponent for further European defense integration, is directly referring to an earlier construct of European defense, the Western European

⁷⁶ European Commission, “European Commission Welcomes First Operational Steps towards a European Defence Union,” November 12, 2017, http://europa.eu/rapid/press-release_IP-17-5205_en.htm.

⁷⁷ Jean-Claude Juncker, “State of the Union Address 2017” (European Commission, September 13, 2017), 8, http://europa.eu/rapid/press-release_SPEECH-17-3165_en.htm.

⁷⁸ European Commission, “European Commission Welcomes First Operational Steps towards a European Defence Union.”

Union.⁷⁹ This treaty, defunct since 2011 after most of its institutions and tasks were carried over to the ESDP, included a mutual defense clause between its participants. The second statement implies that Juncker sees a strong autonomous role for the EU regarding its own defense. The remark that “NATO wants it” indicates his understanding of this European role as a much stronger European pillar within NATO.

The High Representative of the Union for Foreign Affairs and Security Policy, Federica Mogherini, also provided a statement about PESCO and European defense relationships on her homepage. She wrote on November 13, 2017:

23 European countries have signed on a “Permanent Structured Cooperation” in the field of defence. Technically it is called PESCO, in practice it is **the foundation of a future European defence**.

[...]

We moved beyond old taboos, including the fear that a European defence could create competition between the EU and NATO: on the contrary, over the last years we have made our relationship with NATO even stronger. [...] **A strong Europe can only make NATO stronger.**⁸⁰

While Mogherini makes it clear that she assesses PESCO to be a major milestone in European defense integration, she also underscores her view that it is not meant to push NATO out of Europe, but to support NATO with a strong Europe.

The statements by Juncker and Mogherini, the two leading EU politicians in matters of European security and defense policy, indicate that they see a much stronger role for the EU regarding European defense, and that they see this role as a powerful pillar within NATO.

D. STATEMENTS FROM PESCO PARTICIPANTS

Although initiated within the EU framework, each of the PESCO projects is owned and governed by its participants. It is therefore necessary to look at their understanding of PESCO’s role regarding strategic autonomy. Owing to space

⁷⁹ Effective October 23, 1954, declared defunct June 30, 2011.

⁸⁰ Federica Mogherini, “A Historic Day for the European Union,” *Federica Mogherini* (blog), November 13, 2017, <http://www.federicamogherini.net/historic-day-pesco/?lang=en>.

constraints, this thesis cannot examine the positions of all the states involved. This chapter nevertheless explores the views of some nations, with the aim of identifying different understandings of PESCO. The following countries are examined: France, Germany, and Italy as main drivers behind PESCO; Poland as a traditional supporter of NATO and the United States in defense matters; Latvia as an example of the Baltic countries most concerned about an effective collective defense and deterrence posture in relation to neighboring Russia; Sweden as an example of a neutral and Nordic state; and Bulgaria, Greece, and Romania in view of their Joint Declaration as Southeastern European countries.

This thesis cites statements given at the signing of the PESCO notification. Some PESCO-relevant statements were made at the 2018 Munich Security Conference, the largest international conference for security and defense policy. In the case of Poland, only one statement from a government spokesperson was available, indicating a perhaps a reserved Polish position toward PESCO.

It can be expected that the Eastern European countries (for instance, Latvia and Poland) will demonstrate a primacy for NATO, because they perceive Russia as an existential threat, while the Western and Central European countries (such as, France and Germany) might view the EU as a future primary defense pillar.

The French Prime Minister, Edouard Philippe, addressed PESCO and NATO at the 2018 Munich Security Conference (emphasis added):

The European Union has opened many of the options offered by the Lisbon Treaty in order **to eventually develop strategic autonomy**. This collective work made it possible to advance on two fundamental axes: the means is the European Defense Fund; and the method is **permanent structured cooperation**. [...] This Europe of defense, we will build it also by **taking full advantage of the know-how of NATO**. [...] A strong NATO is a stronger Europe of defense, as well as **a responsible European Union it is an asset for a military alliance like NATO**. And **France intends to play an active role in the Atlantic Alliance, a**

nuclear alliance as well as conventional. France, as it has always been, will obviously stand alongside its NATO allies.⁸¹

The phrase “eventually develop strategic autonomy” indicates that France regards autonomy as a long-term goal. France wants to build this Europe of Defense (Europe de la défense) not in competition with NATO but in a complementary role, using NATO knowledge and capabilities. France strongly supports NATO in its role for the collective defense of Europe, pointing explicitly to NATO as a nuclear alliance.

The German Minister of Defense, Ursula von der Leyen, gave a speech at the Munich Security Conference in 2018 addressing PESCO and NATO (emphasis added):

Last year, I opened this conference together with my colleague Jim Mattis. Today, I am opening with my colleague from France, Florence Parly. Both cases are an expression of German politics: We want to remain transatlantic—while also becoming more European. We want to enable Europe to also carry more weight in terms of military power. So that **Europe can become more independent and self-reliant – ultimately also within NATO.**⁸²

The highlighted text emphasizes that Germany views European defense efforts as aimed at greater autonomy within but not outside NATO. This is a somewhat unorthodox position given that NATO’s greatest strength arguably derives from the cohesion of the alliance. A greater autonomy within NATO might increase fragmentation within the alliance, thereby weakening NATO’s general standing and potency.

As one of the main drivers behind establishing PESCO, Italy is also the country most involved in the organization, participating in 21 out of 34 programs. That country’s acknowledgment of the drivers behind PESCO is reflected in a statement by the Italian

⁸¹ Edouard Phillipe, “Speech by French Prime Minister, Edouard Philippe at the 54th Munich Security Conference,” February 17, 2018, https://www.securityconference.de/fileadmin/MSC_/2018/Hauptkonferenz/MS2018_Reden/MS2018_speech_EdouardPhilippe.pdf. (own translation)

⁸² Bundesministerium der Verteidigung, “Speech by Federal Minister of Defence Dr Ursula von der Leyen on the Occasion of the Opening of the 54th Munich Security Conference in Munich on 16 February 2018,” February 16, 2018, <https://www.bmvg.de/resource/blob/22180/a4b7d92394e5ff6b7689c79cc71fa9d9/20180216-download-eroeffnungsrede-englisch-data.pdf>.

Minister of Defense, Roberta Pinotti, who wrote the following on December 10, 2017 (emphasis added):

[...] the EU needs to use any means possible to make its citizens and its institutions safer. Simply pooling buildings, personnel and equipment is not enough. We need new solutions that allow the **joint procurement** of what is required, not to mention **maintenance, logistical support, training and, when necessary, deployment**. To make this happen, we need new joint investment in which the EU has a key financial but also political role — new programs must reflect European needs and must be seen by all as intrinsically European.⁸³

It is noteworthy that in his statement, Pinotti addresses neither the idea of EU “strategic autonomy” nor the relationship between NATO and the EU. Nevertheless, the statement does reveal the Italy’s perspective on PESCO: The Italian government views it mainly as a program for common development and acquisition of military hardware. This is not surprising, given that Italy is one of the largest exporters of arms among the PESCO participants.⁸⁴

When Poland joined PESCO, a government spokesperson gave a short statement to Radio Poland, which published a message on its homepage (emphasis added):

“Thanks to the fact that Poland is becoming involved in the establishment of the new structure at this early stage, we will be one of its founding nations,” Bochenek told Polish Radio’s IAR news agency. Bochenek also said that **Poland's defence policy priority is to work with NATO**. “Cooperation as part of PESCO should **in no way be competitive with the Alliance**,” he added.⁸⁵

The Polish understanding is unambiguous: NATO has priority. For Poland, the EU will not establish strategic autonomy in relation to NATO, if at all. This view is in line with

⁸³ Roberta Pinotti, “Italy’s Defense Minister: Steps Forward in European Defense,” *Defense News*, December 10, 2017, <https://www.defensenews.com/outlook/2017/12/11/italys-defense-minister-steps-forward-in-european-defense/>.

⁸⁴ Aude Fleurant et al., “The SIPRI Top 100 Arms-Producing and Military Services Companies, 2016,” *SIPRI Fact Sheet*, SIPRI Fact Sheet, December 2017, 7.

⁸⁵ Radio Poland, “Poland to Join EU’s PESCO Defence Initiative: Gov’t Spokesman,” *Polskie Radio dla Zagranicy*, accessed August 18, 2018, <http://www.thenews.pl/1/10/Artykul/334584,Poland-to-join-EU's-PESCO-defence-initiative-gov't-spokesman>.

Poland's traditional perspective on security policy: NATO first, **the** EU in a supporting role.⁸⁶

Latvia's opinion on PESCO is similar to the Polish view. When Latvia joined PESCO the Ministry of Defence published a short statement on its homepage (emphasis added):

Launching PESCO is a major step in reinforcing the military capabilities of EU Participants. This will **complement NATO capabilities** and facilitate EU-NATO practical cooperation.⁸⁷

Latvia's perspective as a Baltic state with a direct Russian border and a large ethnic Russian and Russian-speaking minority in the country is unambiguous: For Latvia NATO is in the primary role, and PESCO and the EU will be supporting NATO.

The following statement was published on the homepage of the Swedish government (emphasis added):

The [European] Union's collective capability to **prevent conflicts and manage external crises** with various instruments is to increase within the framework of the follow-up. The government believes that Pesco will fulfill two strategic objectives: to **strengthen** the joint security and defence **policy** and to contribute to **strengthening European solidarity**. [...] The cooperation is intergovernmental and **fully in line with Sweden's military policy of nonalignment**.⁸⁸

The first sentence indicates that Sweden sees PESCO as an instrument solely for conflict prevention and crisis management, not for collective defense. This is a little surprising since neutral Sweden is not a member of NATO and cannot rely on the alliance for its defense. Therefore, it could be expected that Sweden might see such a role for the EU.

⁸⁶ Heiko Biehl, ed., *Strategic Cultures in Europe: Security and Defence Policies across the Continent*, Schriftenreihe Des Zentrums Für Militärgeschichte Und Sozialwissenschaften Der Bundeswehr 13 (Wiesbaden: Springer VS, 2013), 273.

⁸⁷ MoD Latvia, "Latvia Joins the EU Permanent Structured Cooperation on Security and Defence," Latvia joins the EU Permanent Structured Cooperation on security and defence, November 13, 2017, <http://www.mfa.gov.lv/en/news/latest-news/58393-latvia-joins-the-eu-permanent-structured-cooperation-on-security-and-defence>.

⁸⁸ Regeringen och Regeringskansliet, "EU's Ministers for Defence and Foreign Affairs Discussed Permanent Structured Cooperation," November 14, 2017, <https://www.government.se/press-releases/2017/11/eus-ministers-for-defence-and-foreign-affairs-discussed-permanent-structured-cooperation/>.

But the terms conflict prevention and crisis management are not synonyms for collective defense. This implies that Sweden sees a limited role for PESCO, rather than complete strategic autonomy or even a role in collective defense for the EU.

Since they share common interests, Bulgaria, Greece, and Romania meet regularly to coordinate their foreign policies. After their meeting in March 2018, they released a statement (emphasis added):

In this respect, we welcome the signing of PESCO and we are looking forward to its swift implementation. It is an opportunity to work together, innovate, **create jobs, support our economies and provide the most technologically advanced capabilities** to our armies.

Therefore, a coherent and effective coordination between NATO and the EU is a must, taking into account the different nature, decision making autonomy and **complementarity of the two organizations** in full respect of the principles of transparency, inclusiveness and reciprocity.

NATO should remain ready to address all threats and challenges, irrespective of their geographical origin, based on the principle of indivisibility of the Allies' security as well as NATO.

Enhancing NATO's presence in the **Black Sea region** is a clear demonstration of Allied solidarity and **determination to defend NATO territory** against any possible aggression.⁸⁹

The words in bold font indicate the understanding of these three countries with regard to PESCO: It is an industry program that might contribute to their economies. PESCO is also understood to be complementary to NATO and not as a mechanism for competition with the alliance. Given the remark regarding the Black Sea region, it is clear that the three countries see NATO as their primary security provider, since Russia is a direct neighbor in the broader Black Sea region.

In summary, it can be said that generally the PESCO participants do not foresee complete strategic autonomy for the EU in relation to NATO. They view PESCO as complementary rather than competitive to NATO. It seems that this view is especially

⁸⁹ Spiros Sideris, "Joint Declaration of the 10th Trilateral Meeting of the FMs of Bulgaria, Greece and Romania," March 12, 2018, <http://balkan.eu.com/joint-declaration-of-the-10th-trilateral-meeting-of-the-fms-of-bulgaria-greece-and-romania/>.

prevalent in countries that are close to Russia or that feel threatened by Russia. Germany alone has indicated that PESCO might lead to greater European autonomy within NATO. But an organization in which members or groups are striving for autonomy from other participants is inherently weaker than a united alliance.

E. PARTICIPATION IN PESCO PROJECTS

The political perspective on PESCO is not only visible in statements by leading politicians and leaders of the participating countries, but also discernible from the participants' level of participation in PESCO projects. If a country participates in many projects, the high level of participation might indicate that the country indeed aims for more European autonomy in military capabilities. In contrast, a country participating in only a few projects might indicate that it does not support a stronger and more autonomous role for the EU in military capabilities, perhaps because the country prefers NATO for such activities.

Comparisons of country participation in PESCO projects show that the countries sharing a border with Russia or situated near the Russian border are significantly less engaged in PESCO projects than Western and Central European countries (Figure 4). Countries' participation levels in PESCO projects correspond to the previously quoted statements of their respective politicians. Those countries sharing a border with Russia or located near the Russian border have declared a clear preference for NATO and do not seek a "strategic autonomy" of the EU in military matters.

A striking example is Estonia, a victim of noteworthy Russian cyber-attacks. Estonia hosts the NATO Cooperative Cyber Defence Centre of Excellence. It could therefore be expected to participate in, or even lead, one of the two cyber-related PESCO projects. But Estonia is not even participating in them—a clear signal of its preference for NATO. By allowing some speculation, one could argue that the Baltic countries in particular would have preferred to stay out of PESCO altogether, if this would not have meant embarrassing their European partners.

On the other side, strong political statements are mirrored in strong participation, as exemplified by France, which is participating in 15 projects in 2018 alone, and Italy with 12 in 2017 alone.

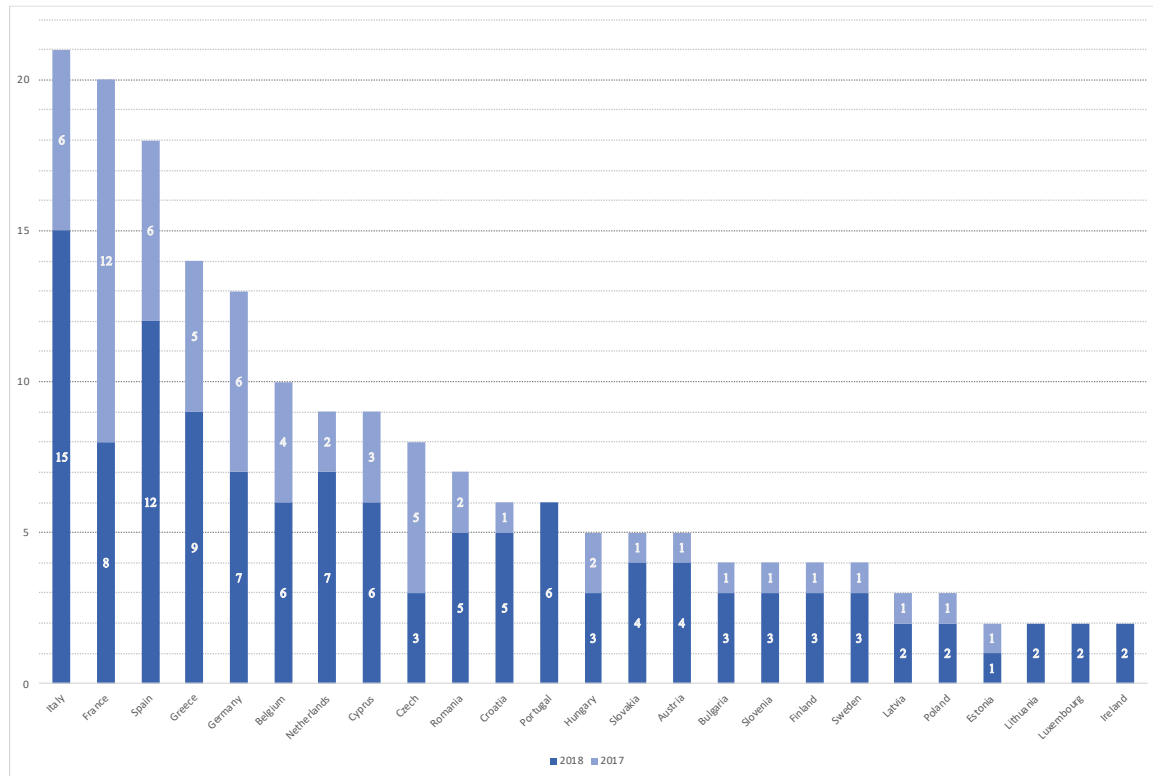


Figure 4. PESCO participation by country and year, per number of projects⁹⁰

The analysis of the distribution between lead nations (nations that have taken the responsibility for leading and coordinating the development of a project) and participating nations is less clear-cut (Figure 5). Italy, France, Germany, and Greece lead the most projects, while Spain, even though participating in 18 projects, leads only one of them (Strategic Command and Control for CSDP Missions). It is noteworthy that Estonia

⁹⁰ Adapted from: Council of the European Union, “Permanent Structured Cooperation (PESCO) Updated List of PESCO Projects - Overview.”

and Lithuania, even though participating in only two projects, are both the lead nation for one of them.⁹¹

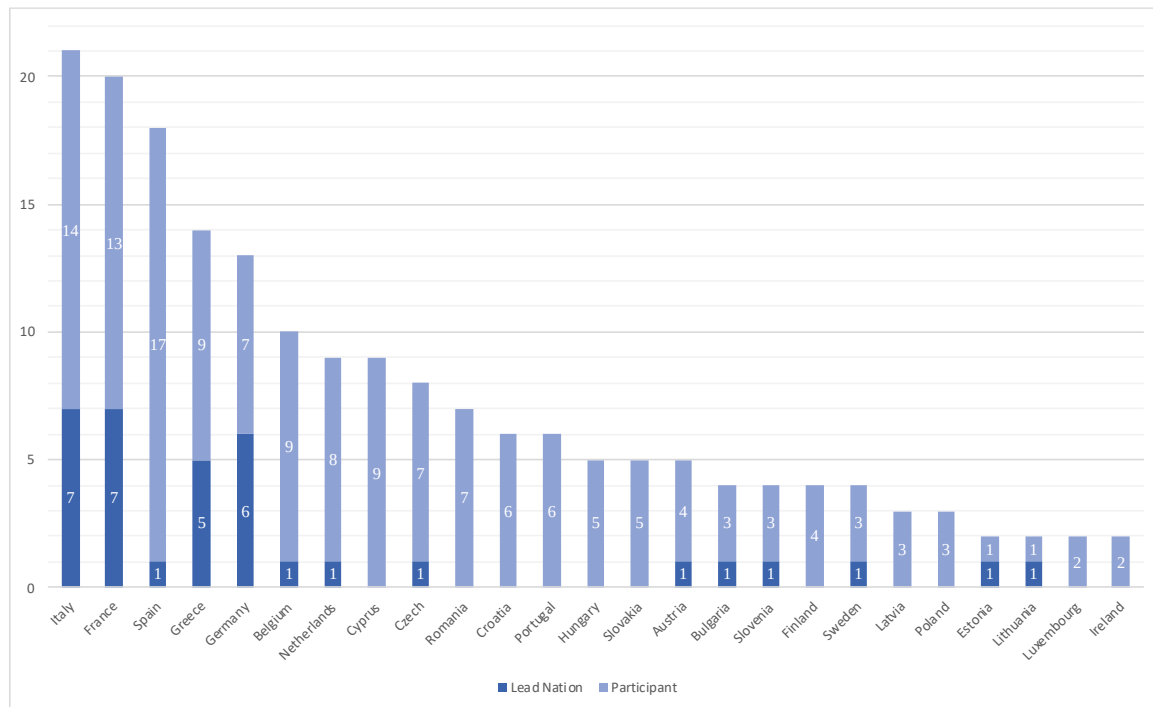


Figure 5. PESCO participation, divided by lead nation-projects and participant projects, per number of projects⁹²

F. CONCLUSION OF THE POLITICAL PERSPECTIVE

This chapter discussed the research questions from a political and participatory perspective. Did the PESCO participants try to establish a counterpart to NATO and the United States with the eventual goal of assuming NATO’s traditional responsibility for the collective defense of Europe? Or, was PESCO intended to possess a more limited autonomy designed to strengthen the European position within NATO?

⁹¹ Estonia leads the “Integrated Unmanned Ground System,” and Lithuania leads the “Cyber Rapid Response Teams and Mutual Assistance on Cyber Security” project.

⁹² Adapted from: Council of the European Union, “Permanent Structured Cooperation (PESCO) Updated List of PESCO Projects - Overview.”

The analysis of the speeches and statements by senior EU personnel and various national PESCO participants showed that generally the more limited approach is behind the PESCO involvement. PESCO is mainly viewed as an effort to strengthen Europe within NATO and as an economic opportunity.

Perhaps more significantly, specific countries' level of participation in PESCO projects more accurately reflects their position. In their political statements, countries that have expressed a preference for NATO over the EU in security matters are generally less involved in PESCO projects. On the other hand, countries, most notably Italy and France, that have expressed strong support for PESCO are also more involved in PESCO projects.

The political perspective analysis confirms that no gap exists between political statements on the one hand and PESCO participation on the other hand.

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IV. THE OPERATIONAL PERSPECTIVE

A. INTRODUCTION

This chapter evaluates the operational perspective of PESCO and the EU's strategic autonomy. In the realm of operations, "strategic autonomy" requires the EU member states to be mostly self-reliant with their military capabilities. Accordingly, they must possess, maintain, and operate a broad range of forces and capabilities suitable for conducting combat operations independently, without relying on outside sources or support. Any shortfalls or discrepancies would impede the asserted "strategic autonomy" of the European Union. Thus, the aim of this chapter is to determine whether PESCO does indeed contribute to a genuine "strategic autonomy" in military assets by addressing identified operational shortfalls in EU military capabilities.

The main question is: Does PESCO address the operational shortfalls of the European Union? The first step in answering this question is to analyze case studies, EU documents, and scholarly articles to determine the shortfalls of EU military operational capabilities, including European contributions to NATO-led operations. The chapter then looks at initiatives that have been launched by either the European Union or individual member states in defense capability building to determine whether some operational shortfalls have already been addressed with them. If so, PESCO would not need to address them.

It should be noted that the analysis presented here uses only non-classified EU documents, such as reports and factsheets. Unfortunately, the most relevant official documents have been classified "EU restricted" or higher and could thus not be used for this purpose.⁹³ In addition, a number of scholarly books, journals, and articles have been evaluated to determine the operational shortfalls of EU member states. These sources cannot be as precise and detailed as the aforementioned different catalogues, but the

⁹³ These documents are the different catalogues prepared during the capability and force development process. Most relevant for this paper would have been the "Progress Catalogue" because it lists the shortfalls when comparing the "Requirements Catalogue" with the "EU Force Catalogue," which contains the pledges from member states.

analysis revealed results that are nevertheless helpful. The public documents of the European Union deal mostly with general capability targets and initiatives for critical shortfalls without explaining how these shortfalls had been identified.⁹⁴ The annual EU report on missions and operations, for example, does not contain this level of detail and is more reminiscent of a factsheet than a critical report.⁹⁵ Only a few scholarly case studies exist, and only a few of them contain information on critical shortfalls. Among the few case studies that do address critical shortfalls, they focus most notably on the maritime operations EUNAVFOR Atalanta,⁹⁶ Artemis,⁹⁷ and EUFOR Chad/CAR.⁹⁸ A short but nevertheless valuable contribution came from the then-commander of U.S. Army Europe, Lieutenant General Ben Hodges, who pointed out critical shortfalls within Europe for preparing the theater and deploying forces to possible hotspots.⁹⁹ Even though Hodges identified shortfalls in connection with the collective defense of Europe in the NATO framework and not for the EU, these shortcomings are still relevant for crisis-response operations within Europe when conducted by the EU.

Of the numerous identified operational shortfalls, PESCO addresses several in a comprehensive manner. These are interoperable C4ISR (command, control, communications, computer, intelligence, surveillance and reconnaissance), medical evacuation, and a permanent headquarters. Significant gaps remain, notably in strategic airlift and air refuelling, which PESCO does not even address. But even with non-PESCO programs, such as the “Strategic Airlift Capability” and the “Multi-Role Transport Tanker Fleet” (MMF), these shortfalls remain serious obstacles to European strategic

⁹⁴ European Council, “Conclusions of the European Council (19/20 December 2013)” (Brussels, December 20, 2013), 5.

⁹⁵ Example: European External Action Service, “Annual Report 2016 on European Union Common Security and Defence Policy Missions and Operations” (Brussels, 2017).

⁹⁶ Trineke Palm, “Cooperative Bargaining in the EU’s Common Security and Defence Policy: EUNAVFOR Atalanta,” *Contemporary Politics*, May 28, 2018, 1–21, <https://doi.org/10.1080/13569775.2018.1477463>.

⁹⁷ Bastian Giegerich, “EU Crisis Management: Ambitions and Achievements,” *The Adelphi Papers* 48, no. 397 (April 2008): 15–34, <https://doi.org/10.1080/05679320802536186>.

⁹⁸ Alastair Cameron et al., “European Defence Capabilities. No Adaptability without Co-Operation,” ed. Luis Simón, *RUSI Occasional Paper*, March 2010, 8–13.

⁹⁹ Ben Hodges, “Redefining Readiness in Europe,” *Army Sustainment* 49, no. 3 (June 2017): 17–19.

autonomy. PESCO therefore contributes to improving the military capabilities of the participating nations, but does not provide strategic autonomy.

B. SHORTFALLS WITHIN THE MILITARY CAPABILITIES OF EUROPEAN UNION MEMBER STATES

As mentioned previously, the first step in determining whether PESCO addresses the operational shortfalls of the EU is to perform a qualitative analysis of a variety of sources, including scholarly books, journals, and articles on EU operations, the CSDP in general, and the European Defence Agency. The aim of this analysis was to find direct references to shortfalls as well as indicators that point to shortfalls. During the analysis, certain capability gaps came up frequently, others less so, and some were only mentioned once. Due to the multitude of sources, the shortfalls came up in different formats, more general and generic in high-level EU documents¹⁰⁰ as well as very detailed in several case studies.¹⁰¹ It was therefore necessary to categorize them for comparison to the different PESCO projects. The initial categories used were the ones introduced with the launch of PESCO in 2017 and later refined with the second batch of projects in 2018.¹⁰²

The present research adds another layer of categories to assess whether PESCO addresses critical shortfalls. Several articles and documents used the term “strategic enablers” to describe some shortfalls in the field of military mobility, but none of them defined the term more precisely.¹⁰³ Other shortfalls were not even categorized in a meaningful way. Therefore, our analysis uses the terms strategic, operational, and tactical for categorizing the shortfalls. Even though military capabilities are at the center of the analysis, our terminology deviates from the NATO-agreed use of the terms “strategy” and “operational.”¹⁰⁴ In this paper, strategic capabilities can produce an effect over a long

¹⁰⁰ Example: European Council, “Conclusions of the European Council (19/20 December 2013).”

¹⁰¹ Example: Palm, “Cooperative Bargaining in the EU’s Common Security and Defence Policy.”

¹⁰² Council of the European Union, “Permanent Structured Cooperation (PESCO) Updated List of PESCO Projects - Overview.”

¹⁰³ Example: Sven Biscop, “The State of Defence in Europe: Dependence, Deterrence and Deployment,” *Global Affairs* 1, no. 2 (March 15, 2015): 172, <https://doi.org/10.1080/23340460.2015.1034976>.

¹⁰⁴ NATO Standardization Agency, “NATO Glossary of Terms and Definitions (AAP-06)” (NATO, April 29, 2014).

distance, even intercontinental, or between different operational areas. Operational capabilities affect mainly an operation in one area or during one campaign, while tactical capabilities mainly affect battles and engagements between units. In practice, it is not easy to draw a line between these levels but for our analysis, this categorization appears to be valid. Furthermore, the cyber domain presents a particular challenge because it permeates all these categories. PESCO addresses cyber with two initiatives aimed mainly at the operational domain (incident information sharing and response teams). Therefore, cyber appears in the operational category for our analysis.

Björn Seibert introduced the concept of absolute and relative shortfalls. An absolute shortfall denotes a capability that is “physically not available.” In other words, the capability is not present within the military inventory of participating states.¹⁰⁵ A relative shortfall refers to a certain capability present in the inventory of member states, but that they decided, for whatever reason, not to use the capability in operations.¹⁰⁶ Given that PESCO is an initiative to obtain non-existent European military capabilities or to mitigate insufficient ones, it appears counterintuitive that projects would be launched in areas in which sufficient capabilities are already available within participants. Consequently, the discussion assumes that the identified gaps in military capabilities are absolute shortfalls, meaning that they represent a complete or partial lack of capability rather than a lack of political will to use them.

1. Strategic Capabilities

The analysis found eight capability shortfalls that fall into the strategic category: air lift; air refueling; unmanned aerial systems for ISR,¹⁰⁷ power projection; medical evacuation; interoperable C4ISR,¹⁰⁸ permanent Operational Headquarters capability, and satellite communications. While the first three are among the most-cited shortfalls, the

¹⁰⁵ Bjoern Seibert, “The Quest for European Capabilities,” in Cameron et al., “European Defence Capabilities. No Adaptability without Co-Operation,” 11.

¹⁰⁶ Seibert, in Cameron et al., 11.

¹⁰⁷ Intelligence, Surveillance, Reconnaissance

¹⁰⁸ C4ISR – Command, Control, Communication, Computer, Intelligence, Surveillance, Reconnaissance

latter five were mentioned significantly less frequently. This chapter therefore addresses the first three separately.

a. *Airlift Capability*

The lack of airlift capability came up in official EU documents as well as in scholarly case studies. Since 2003, it has been part of the EU Capability Plan (ECAP) schedule, in which “Strategic Air Lift” is mentioned in connection with an ECAP Project Group.¹⁰⁹ In 2007, the EU declared its ability to “conduct the full spectrum of military CSDP operations [...] with different levels of operational risks arising from identified shortfalls.”¹¹⁰ The EU named strategic airlift as one of these risks: “they relate to the capability to transport forces to the theatre.”¹¹¹

Sven Biscop points out that deployment entails not only troops but also heavy equipment. In other words, Europe must have a capability for transporting heavy equipment, even for expeditionary or peacekeeping operations: there is “nothing like a main battle tank to deter a potentially hostile actor.”¹¹² Notably, the 2013 French intervention in Mali required the United States’ support with “more than 47 C-17 transport [...] sorties.”¹¹³ Bastian Giegerich in his case study similarly notes that the EU operation Artemis required 44 flights with Antonov AN-124, each with an 85-ton load from Europe to Entebbe, and 220 flights from Entebbe to Bunia with C130 and C160 transport planes.¹¹⁴ While flights with C130 and C160 planes are normal in an intra-theater lift set-up, the strategic transport from Europe to Entebbe points to a critical shortfall: there are no organic strategic lift assets within EU member states, with the United Kingdom's Boeing C-17 aircraft being the sole exception. If the United Kingdom

¹⁰⁹ Council of the European Union, “2509th Council Meeting - External Relations -Brussels, 19-20 May 2003” (Brussels, May 20, 2003), XIV, http://europa.eu/rapid/press-release_PRES-03-138_en.htm.

¹¹⁰ European External Action Service, “CSDP Capabilities,” accessed March 25, 2019, https://eeas.europa.eu/topics/common-security-and-defence-policy-csdp/5393/csdp-capabilities_en.

¹¹¹ European External Action Service.

¹¹² Biscop, “The State of Defence in Europe,” 174.

¹¹³ Raphael S. Cohen and Gabriel M. Scheinmann, “Can Europe Fill the Void in U.S. Military Leadership?,” *Orbis* 58, no. 1 (December 2014): 47, <https://doi.org/10.1016/j.orbis.2013.11.002>.

¹¹⁴ Giegerich, “Chapter One,” 28.

leaves the European Union in 2019, such assets will no longer be part of the inventories of single EU member states.

At the same time, Björn Seibert in his EUFOR Chad case study concluded that EU planning for military operations was already downsizing the force requirements during the planning phase because of “known capability shortfalls — such as in inter- and intra-theater lift.”¹¹⁵ This means that EU operations will remain small as long as these capability shortfalls exist.

b. Air Refueling

Air refueling is, together with airlift, one of the capability shortcomings already brought up in 2003.¹¹⁶ Although the deficiency was obviously recognized early on, the shortfall became most visible during the 2011 NATO Operation Unified Protector in Libya. While strike missions became more evenly divided between U.S. aircraft and the aircraft from other states of the coalition, the United States “continued to provide nearly 80% of all air refuelling [...] missions.”¹¹⁷ In addition to the previously mentioned U.S. support for transport sorties in the 2013 French intervention in Mali, the United States also provided assistance with “more than 200 KC-135 refueling sorties.”¹¹⁸

The level of U.S. support required in these cases indicates that the deficiency in air refueling on the side of the European allies has continued. Given that air refueling is a mature technology, it appears that this shortfall derives from a lack of investment and not of technology. Since air refueling is needed for almost any kind of military air operation due to distances and fuel consumption, this shortfall seriously restricts the ability of EU members to conduct larger air operations for a sustained period.

¹¹⁵ Cameron et al., “European Defence Capabilities. No Adaptability without Co-Operation,” 9.

¹¹⁶ Council of the European Union, “2509th Council Meeting - External Relations -Brussels, 19–20 May 2003,” XIV.

¹¹⁷ Claire Taylor, “Military Operations in Libya,” House of Commons Library (London: House of Commons, October 24, 2011), 9.

¹¹⁸ Cohen and Scheinmann, “Can Europe Fill the Void in U.S. Military Leadership?,” 47.

c. *Unmanned Aerial Systems for ISR*

Surveillance and reconnaissance in today's military operations have become unthinkable without the use of unmanned aerial systems (UAS), either armed or unarmed. The European Union had already put UAS on the development horizon in 2003, together with airlift and air refueling.¹¹⁹ In some documents, the European Union professed an intention to acquire a Medium Altitude Long Endurance (MALE) unmanned aircraft, a plane roughly comparable to the Israeli Heron or the U.S.-built Reaper. But apparently these efforts did not deliver the capabilities envisaged.

The 2011 NATO Operation Unified Protector demonstrated that the European allies could not contribute to aerial surveillance on par to the United States, which provided “almost 75% of aerial surveillance.”¹²⁰ Without the ability to operate UAS sustainably over an area of interest EU members are largely dependent on results produced by other actors, like the United States,¹²¹ or must use other assets (such as space-based sensors or manned aircraft) to compensate. Both alternatives are expensive and, in the case of manned aircraft, expose personnel to potential hostile action.

This shortfall presents a serious obstacle to European “strategic autonomy.”

d. *Additional Strategic Capabilities Shortfalls*

The research identified additional strategic capability shortfalls, but these were mentioned significantly less frequently than the aforementioned. They encompass power projection, medical evacuation, interoperable C4ISR, a permanent headquarters, and satellite communication.

Several scholars highlighted a lack of power projection capabilities on the part of the European Union. Biscop asserts generically that “the Europeans must be capable of ‘power projection’ to defend their interests ... with partners from the region whenever

¹¹⁹ Council of the European Union, “2509th Council Meeting - External Relations -Brussels, 19-20 May 2003,” XIV.

¹²⁰ Taylor, “Military Operations in Libya,” 9.

¹²¹ Tim Haesebrouck and Melanie Van Meirvenne, “EUFOR RCA and CSDP Crisis Management Operations: Back on Track?,” *European Foreign Affairs Review* 20, no. 2 (2015): 274.

possible but alone if necessary.”¹²² Tim Haesebrouck and Melanie van Meirvenne concluded that “the Libya campaign [...] again showed that Europeans fall short on a wide range of vital capabilities, like ... aircraft carriers....”¹²³ Citing force projection shortfalls in the maritime domain, Raphael Cohen and Gabriel Scheinmann explain that the Royal Navy has lost the power projection capabilities it possessed during the 1982 Falkland War owing to extreme downsizing.¹²⁴ They also cite the fact that “U.S. cruise missiles took out the Libyan air defenses that allowed European jets to fly unchallenged.”¹²⁵ The High Representative of the Union in her 2014 report put it upfront: “Substantial shortfalls are still evident in strategic capabilities, such as [...] force projection.”¹²⁶

Aside from force projection, there are other strategic capability shortfalls. Cohen and Scheinmann mention that European allies in Afghanistan are relying on United States’ assets for medical evacuation.¹²⁷ The EDA in 2015 proposed that medical evacuation in support to operations should be investigated “subject to European Council guidance.”¹²⁸

Shortcomings in interoperable C4ISR came up in EU documents as well as in scholarly articles. The European Union concluded in its Progress Catalogue 2007 that some shortfalls are critical, including the ability “to acquire information superiority.”¹²⁹ According to Stephen Coonen, “American and European forces do not necessarily require

¹²² Biscop, “The State of Defence in Europe,” 173.

¹²³ Haesebrouck and Van Meirvenne, “EUFOR RCA and CSDP Crisis Management Operations: Back on Track?,” 274.

¹²⁴ Cohen and Scheinmann, “Can Europe Fill the Void in U.S. Military Leadership?,” 46. The paper demonstrates this by showing that today’s Royal Navy has only a third of the available frigates and submarines, half of mine-hunting assets and destroyers, and only one carrier under construction.

¹²⁵ Cohen and Scheinmann, 48.

¹²⁶ High Representative and Head of the EDA, “Implementing the December 2013 European Council Conclusions on Security and Defence” (European Commission, 2014), 10.

¹²⁷ Cohen and Scheinmann, “Can Europe Fill the Void in U.S. Military Leadership?,” 47.

¹²⁸ European Defence Agency and European Commission, “Overview of the Implementation of Work Resulting from the December 2013 European Council (EC) Conclusions; and Some Initial Proposals on the Way Forward,” May 8, 2015, http://eeas.europa.eu/archives/docs/csdp/documents/pdf/report-ahead_european-defence-agency.pdf.

¹²⁹ European External Action Service, “CSDP Capabilities.”

the same type of capabilities to be interoperable, but at a minimum they must be able to communicate with each other via secure modes.”¹³⁰ Hodges in his short article concentrated on interoperable C4ISR: “These formations must be able to plug into multinational and joint communications, fires, intelligence, and logistics systems. [...] The absence of interoperability degrades air defense, rapid counterfire capabilities, sustainability, communications security, and the common operational picture. [...] Nations must reevaluate the restrictions placed on their mission command systems so they can federate on a secret network.”¹³¹ Even though Hodges wrote this from his position as Commander U.S. Army Europe with a perspective on collective defense within a NATO framework, his insights apply to multinational European military deployments as well.

The EU in 2003 identified the need for a headquarters and addressed it with an ECAP Project Group.¹³² Haesebrouck and van Meirvenne concluded that a “permanent Operational Headquarters (OHQs), capable of planning and commanding EU-led operations,” is desperately needed.¹³³ The call for a single permanent OHQ highlights the disadvantages of having five OHQs—in France (Mont Valérien), Germany (Potsdam), Greece (Larissa), Italy (Cento Celle), and the United Kingdom (Northwood)—with rotating responsibilities, attached to larger national headquarters. Such a set-up in a multinational environment slows down processes and hinders coherence on a strategic level.¹³⁴ The European Union needs a permanent headquarters able to conduct and plan missions and operations, including the civil aspects, coherently.

¹³⁰ Stephen J Coonen, “The Widening Military Capabilities Gap between the United States and Europe: Does It Matter?,” *US Army War College Quarterly Parameters* 36 (Autumn 2006): 77.

¹³¹ Hodges, “Redefining Readiness in Europe,” 18.

¹³² Council of the European Union, “2509th Council Meeting - External Relations -Brussels, 19–20 May 2003,” XIV.

¹³³ Haesebrouck and Van Meirvenne, “EUFOR RCA and CSDP Crisis Management Operations: Back on Track?,” 274.

¹³⁴ Nik Hynek, “EU Crisis Management after the Lisbon Treaty: Civil–Military Coordination and the Future of the EU OHQ,” *European Security* 20, no. 1 (March 2011): 95, <https://doi.org/10.1080/09662839.2011.556622>.

The final strategic shortfall is satellite communications. Haesebrouck and van Meirvenne name satellite communications one of the “strategic enablers” lacking within the European Union, and it was a requirement called for as a collaborative project by then-High Representative Ashton in 2014.¹³⁵ Satellite communications are also connected to C4ISR, since they provide a means of securely communicating over strategic distances. Despite the importance of the technology as a strategic enabler, in a 2015 roadmap of the European Commission this topic appeared to be still in development: “A clear political sign is needed in favour of the development of a new capacity programme in the field of Government Satellite Communications (GOVSATCOM).”¹³⁶

2. Operational Capabilities

The shortfalls in operational capabilities are varied. They include a generic Special Operations Forces requirement, heavy equipment transport (including heavy railcars), logistics in general, a Single European Sky, maritime air surveillance, cyber defense, and precision munitions. The generic Special Operations Forces requirement itself was mentioned only in a 2003 EU document, together with capabilities such as air refueling and headquarters, but without further elaboration.¹³⁷ The topic was not further mentioned in other documents.

On the other hand, logistics in general was mentioned in a number of documents, though no more specific description was available. Within scholarly sources, Hodges gave some insight into required capabilities that are lacking, in particular heavy equipment transports and heavy railcars.¹³⁸ He cited these shortfalls in connection with requirements for a collective defense of Europe. If the EU members had to quickly move heavy equipment (like main battle tanks) even within Europe, they would be seriously impeded by a lack of transport assets. Since rail transport is the more efficient solution,

¹³⁵ Haesebrouck and Van Meirvenne, “EUFOR RCA and CSDP Crisis Management Operations: Back on Track?,” 281.

¹³⁶ European Commission, “Roadmap - European Defence Action Plan,” November 2015, 2.

¹³⁷ Council of the European Union, “2509th Council Meeting - External Relations -Brussels, 19–20 May 2003,” XIV.

¹³⁸ Hodges, “Redefining Readiness in Europe,” 19.

heavy railcars are needed. Yet, according to Hodges: “Heavy railcars capable of hauling M1A2 SEP tanks are in short supply in Europe.”¹³⁹ Even within Europe, the EU members are not able to rapidly deploy heavy forces, be it for crisis management (e.g., in the Balkans) or collective defense in cooperation with non-EU NATO allies. Together with the aforementioned lack of strategic airlift assets, the general European inability to transport heavy assets points to a serious gap.

One attempt to address a critical shortfall within Europe is the EU’s “Single European Sky” initiative, which has implications for military aviation. In contrast with the unified airspace of the United States, in Europe the airspace is separated by many national frontiers, making administration and decision making tedious and slow. Also, the certification of new technology is more difficult in Europe, as demonstrated by the German project “EuroHawk,” which failed mainly on EU certification issues.¹⁴⁰ Martin Quencez and Alice Billon-Galland have thus suggested that the “Single European Sky” should become part of PESCO, presumably to accelerate this initiative.¹⁴¹ It appears, however, that such a project would clearly leave the field of military capability development and spill over into administrative management, not at the heart of PESCO.

A shortcoming in maritime air surveillance was mentioned in a case study on the EU anti-piracy operation Atalanta. Hans-Georg Ehrhardt and Kerstin Petretto asserted that, among other capabilities, air surveillance was not made sufficiently available by participating nations.¹⁴² According to the authors, the shortfall stems from a lack of will by the nations possessing the required capability. Given that maritime air surveillance can be furnished in principle by a variety of means (helicopters, planes, UAS, satellites) the general lack of this capability in Operation Atalanta rather points to a lack of will to acquire the necessary means. This judgment is supported by the European Defence

¹³⁹ Hodges, 19.

¹⁴⁰ Sebastian Sprenger, “‘Euro Hawk’ Fiasco Looms Large in Germany’s New Spy Drone Search,” *Defense News*, May 25, 2018, <https://www.defensenews.com/unmanned/2018/05/25/euro-hawk-fiasco-looms-large-in-germanys-new-spy-drone-search/>.

¹⁴¹ Martin Quencez and Alice Billon-Galland, “Can France and Germany Make PESCO Work as a Process Toward EU Defense?,” *German Marshall Fund Policy Brief* 33 (October 2017): 5.

¹⁴² Hans-Georg Ehrhardt and Kerstin Petretto, “The EU, the Somalia Challenge, and Counter-Piracy: Towards a Comprehensive Approach?,” *European Foreign Affairs Review* 17, no. 2 (2012): 276.

Agency, which has proposed to launch a prioritized collaborative project including, among other assets, maritime patrol aircraft.¹⁴³

Although not mentioned as frequently, perhaps because it is a more recent concern was cyber defense. It was, however, was mentioned prominently in a 2014 report by the High Representative and Head of the European Defence Agency. This report listed areas in which work must be concentrated, indicating a shortfall in capabilities such as cyber defense education; protection of communication networks supporting CSDP structures, missions, and operations; cooperation with other EU actors; support to member states' cyber defense capabilities; and finally, cooperation with NATO in this field.¹⁴⁴

The last operational capability shortfall is precision munitions. This lack was already visible during the 1999 NATO Air Operation Allied Force,¹⁴⁵ and became even more evident in NATO's Operation Unified Protector in Libya, when European participants quickly ran out of precision munitions and had to be re-supplied by the United States.¹⁴⁶

3. Tactical Capabilities

Having evaluated strategic and operational capabilities, this chapter now turns to tactical capabilities that have been found lacking in European military deployments. Identified tactical shortfalls vary immensely: from force protection (including Counter-IED¹⁴⁷ and Counter-UAS), naval vessels, and Combat Search and Rescue to helicopters.

When the EU evaluated the 2007 Progress Catalogue it identified critical shortfalls for the conduct of European missions, with one of them being the capability “to

¹⁴³ European Defence Agency and European Commission, “Overview of the Implementation of Work Resulting from the December 2013 European Council (EC) Conclusions; and Some Initial Proposals on the Way Forward,” 15.

¹⁴⁴ High Representative and Head of the EDA, “Implementing the December 2013 European Council Conclusions on Security and Defence,” 5.

¹⁴⁵ Taylor, “Military Operations in Libya,” 42.

¹⁴⁶ Cohen and Scheinmann, “Can Europe Fill the Void in U.S. Military Leadership?,” 48.

¹⁴⁷ IED – Improvised Explosive Devices

protect” forces.¹⁴⁸ Seven years later, the High Representative of the Union repeated force protection as a continuing substantial shortfall.¹⁴⁹ Since force protection is a wide field, our analysis puts Counter-IED and Counter-UAS under this rubric. In a 2015 roadmap of the European Commission, Counter-IED was mentioned as an area of mutual interest related to “detection technologies, and methods to counter improvised explosive devices.”¹⁵⁰ Additionally, the European Defence Agency in 2015 proposed, in the field of force protection, to begin a prioritized collaborative project that included “countering mini-drones.”¹⁵¹ The EDA also came up with a proposal to start a collaborative project in maritime capabilities such as patrol ships and support ships.¹⁵² The proposal was targeted to address a lack of different types of naval capabilities, most notably patrol boats and boarding teams, cited in connection with the EU anti-piracy mission Atalanta.¹⁵³

The next two tactical shortfalls are closely connected. The ability to conduct Combat Search and Rescue¹⁵⁴ requires specialized equipment, including helicopters. This shortfall was identified by the European Union in its list of ECAP project groups in 2003.¹⁵⁵ But in 2008, even non-specialized helicopters were scarce in the inventories of EU member states. Seibert in his case study of EUFOR Chad/CAR reported that “a

¹⁴⁸ European External Action Service, “CSDP Capabilities.”

¹⁴⁹ High Representative and Head of the EDA, “Implementing the December 2013 European Council Conclusions on Security and Defence,” 10.

¹⁵⁰ European Commission, “Roadmap - European Defence Action Plan,” 2.

¹⁵¹ European Defence Agency and European Commission, “Overview of the Implementation of Work Resulting from the December 2013 European Council (EC) Conclusions; and Some Initial Proposals on the Way Forward,” 15.

¹⁵² European Defence Agency and European Commission, 15.

¹⁵³ Ehrhardt and Petretto, “The EU, the Somalia Challenge, and Counter-Piracy: Towards a Comprehensive Approach?,” 276.

¹⁵⁴ The NATO Glossary of Terms and Definitions (2014) defines Combat Search and Rescue (CSAR) as “the detection, location, identification and rescue of downed aircrew in hostile territory in time of crisis or war and, when appropriate, isolated military personnel in distress, who are trained and equipped to receive combat search and rescue support.”

¹⁵⁵ Council of the European Union, “2509th Council Meeting - External Relations -Brussels, 19-20 May 2003,” XIV.

shortage in helicopters would persist through much of the operation.”¹⁵⁶ This shortage could only be resolved by relying on Russian transport helicopters.¹⁵⁷

4. Summary

The analysis of a variety of sources revealed several shortfalls in the capability inventories of EU member states for the conduct of military missions. They range from strategic (“strategic enablers”) to operational and tactical capabilities shortfalls. The most pronounced and most frequently referenced shortfalls concern air lift, air refueling, and unmanned aerial systems for ISR. All the identified shortfalls are impeding the fulfillment of a declared European desire for “strategic autonomy,” regardless of the defense ambition (fully-fledged collective defense or limited military crisis management).

C. OTHER INITIATIVES

Before this chapter surveys the different PESCO projects it looks at some other capability-building initiatives that were started by the EU or EU members before PESCO, because they might already address some of the operational shortfalls, making it unnecessary to include them in PESCO.

This chapter examines the Military Planning and Conduct Capability (MPCC) and the Multi-Role Tanker Transport Fleet (MMF). The discussion also encompasses the Movement Coordination Centre Europe (MCCE), the European Air Transport Command (EATC), and the multinational NATO Support and Procurement Agency (NSPA) program “Strategic Airlift Capability.”

a. *The Military Planning and Conduct Capability*

The European Union in June 2017 established the Military Planning and Conduct Capability. The EU intends for the initiative to provide coherent and consistent “operational planning and conduct of the EU’s non-executive military missions. [...] The Council has agreed to give the MPCC the additional responsibility to be ready also to

¹⁵⁶ Cameron et al., “European Defence Capabilities. No Adaptability without Co-Operation,” 9.

¹⁵⁷ Cameron et al., 10.

plan and conduct one executive military operation of the size of an EU Battlegroup.”¹⁵⁸ (To provide some context: A typical EU Battlegroup consists of approximately 1,500 soldiers with communications and support elements.) The MPCC provides the EU with the much-needed standing planning capacity.¹⁵⁹ Thierry Tardy asserts that the initiative marks the beginning of the EU creating “a proper command capacity itself, something which has been resisted in the past.”¹⁶⁰

It appears that the MPCC does indeed address the operational shortfall by establishing a permanent headquarters with a planning capability.

b. Multinational Multi-Role Tanker Transport Fleet

The Multinational Multi-Role Tanker Transport Fleet started in 2012 as an initiative by the European Defence Agency. The MMF currently consists of five nations (Belgium, Germany, the Netherlands, Luxembourg, and non-EU member Norway), which used the Organization for the Management of Cooperative Armament Programmes (OCCAR) on behalf of the NATO Support and Procurement Agency to acquire eight commonly paid-for Airbus A330 MRTT aircraft, with options for a total of 11 aircraft.¹⁶¹ The planes can be used for air refueling, transport of passengers and cargo, as well as for medical evacuation.¹⁶² They are owned by NATO and operated by the NSPA.¹⁶³

Even though this initiative is laudable and primarily addresses the operational shortfall in air refueling, it is nevertheless small when compared to the effort of the United States, which is currently replacing its legacy air refueling platforms. The United

¹⁵⁸ European External Action Service, “Factsheet: The Military Planning and Conduct Capability (MPCC),” November 2018, https://eeas.europa.eu/sites/eeas/files/mpcc_factsheet_november_2018.pdf.

¹⁵⁹ Thierry Tardy, “MPCC: Towards an EU Military Command?,” *EUISS Brief Issue 17* (June 2017): 2, <https://doi.org/10.2815/331897>.

¹⁶⁰ Tardy, 3.

¹⁶¹ European Defence Agency, “Multinational Multi-Role Tanker Transport Fleet (MMF) Takes Shape,” July 28, 2016, <https://www.eda.europa.eu/info-hub/press-centre/latest-news/2016/07/28/multinational-multi-role-tanker-transport-fleet-%28mmf%29-takes-shape>.

¹⁶² European Defence Agency, “Multi-Role Tanker Transport Fleet (MMF) Expands Significantly,” September 25, 2017, [https://www.eda.europa.eu/info-hub/press-centre/latest-news/2017/09/25/multi-role-tanker-transport-fleet-\(mmf\)-expands-significantly](https://www.eda.europa.eu/info-hub/press-centre/latest-news/2017/09/25/multi-role-tanker-transport-fleet-(mmf)-expands-significantly).

¹⁶³ OCCAR, “MMF (Multinational MRTT Fleet) Acquisition,” 2019, <https://www.occar.int/programmes/mmff>.

States operates approximately 2,700 military aircraft (counting bombers, fighters, and aircraft for training purposes only).¹⁶⁴ The acquisition of tanker aircraft accounts for 179 tanker aircraft, and there are plans to replace a third of the current fleet of old KC-135 tanker aircraft.¹⁶⁵ The EU members operate close to 2,000 aircraft in the same categories as the United States aircraft,¹⁶⁶ and the MMF provides for eight tanker aircraft. This enormous difference between the United States' acquisition and the initiative of the EU (179 U.S. tanker aircraft vs. eight MMF tanker aircraft) clearly shows that the MMF will contribute to mitigating the operational shortfall in air refueling, but is far from closing it.¹⁶⁷ Consequently, the members of the EU will remain dependent on outside support for air refueling, mostly from the United States, and will not reach "strategic autonomy" in the foreseeable future.

c. *Movement Coordination Centre Europe and the European Air Transport Command*

The need for combining lift capabilities between European and transatlantic partners was recognized early. Therefore, on July 1, 2007, several nations came together and established the Movement Coordination Centre Europe, with the aim of coordinating sea lift, air transport, inland surface transport, and air refueling among the different partner nations.¹⁶⁸ There are currently 28 members.¹⁶⁹ Membership is open to all EU and NATO member states.

¹⁶⁴ Statista, "Total Aircraft Force of the U.S. Air Force 2018-2020, by Type," 2019, <https://www.statista.com/statistics/239424/total-aircraft-force-of-the-us-air-force-by-type/>.

¹⁶⁵ Jeremiah Gertler, "Air Force KC-46A Tanker Aircraft Program," CRS Report No. RL34398 (Washington, D.C.: Congressional Research Service, May 14, 2013), 5, <https://fas.org/sgp/crs/weapons/RL34398.pdf>.

¹⁶⁶ IISS, "Chapter Four: Europe," *The Military Balance* 119, no. 1 (January 2019): 67, <https://doi.org/10.1080/04597222.2018.1561029>.

¹⁶⁷ All PESCO participants combined possess only 25 tanker aircraft (A310 MRTT, C-130, KC-135; see also next chapter).

¹⁶⁸ Movement Coordination Centre Europe, "MCCE at a Glance," September 2018, <http://mcce-mil.com/wp-content/uploads/2019/03/MCCE-At-A-Glance-March-2019.pdf>.

¹⁶⁹ Founding nations of the MCCE were Belgium, Canada, Denmark, France, Germany, Hungary, Italy, Latvia, the Netherlands, Norway, Slovenia, Spain, Sweden, Turkey, and the United Kingdom. In 2007 Estonia, Finland, and Luxembourg joined. In 2008 Poland, Romania, and the United States became participants. In 2010 Austria, the Czech Republic, and Portugal joined, Croatia in 2011, Lithuania and Slovakia in 2015. The last member to join was Bulgaria in 2017.

Through the MCCE, the members make transport capacity available to other members. A novel characteristic of the MCCE is the compensation method: members are not compensated monetarily. Instead, they are compensated with flying hours for air transport and twenty-foot container equivalents (TEU) over 100 kilometers for land transport. The MCCE initiative is closely linked to the European Air Transport Command, which was established in September 1, 2010.¹⁷⁰ Seven members operate their military air transport capabilities using the EATC.¹⁷¹ Like the MCCE, the EATC uses flying hours as currency, with one flying hour of a C-130 transport plane serving as the baseline. Both entities are based at Eindhoven Air Base in the Netherlands, making coordination between them easier.

These initiatives bring together the diversified transport capacities of their members, making operating small fleets less costly. They are in line with the policies of the EU's "pooling and sharing," and NATO's "smart defense." Both entities, however, can only coordinate assets made available by the member states. A general lack of capabilities, like air refueling, can only be compensated to a degree, given that few air refueling assets are present in the European inventories. The same holds true for capabilities to transport outsize cargo. The issue of outsize cargo is discussed in more depth in the following paragraph dealing with the Strategic Airlift Capability.

d. Strategic Airlift Capability

Various European countries are successively replacing the diminishing capacity of old-generation military transport planes. So far, of the 170 Airbus A400M aircraft ordered, 71 have been delivered and are operable, which means that a shortfall in capacity is likely to be temporary.¹⁷² But airlift is not just about capacity. The A400M does not provide a capability for the transport of outsize cargo. Although the Airbus

¹⁷⁰ European Air Transport Command, "The Member Nations," accessed April 19, 2019, <https://eatc-mil.com/en/who-we-are/the-member-nations>.

¹⁷¹ EATC members are: Belgium, France, Germany, Italy, the Netherlands, Luxembourg, and Spain.

¹⁷² Airbus, "Orders, Deliveries, In Operation Military Aircraft by Country - Worldwide," February 28, 2019, https://www.airbus.com/content/dam/corporate-topics/publications/o&d/2019-2%20MRS_GEN_Ord-Deliv-by-country.pdf.

A400M can lift a maximum of 37 tons,¹⁷³ that is only a quarter of the tonnage of the AN-124, and half of the tonnage of a U.S.-built Boeing C-17. Given that current main battle tanks weigh around 60 tons, and current infantry fighting vehicles (like the Boxer) approach 40 tons, it appears that the A400M is, even today, incapable of transporting these kinds of vehicles. Moreover, if the Airbus A400M is equipped with ballistic protection (e.g., additional Kevlar mats around vital components), the usable tonnage decreases even further.

Currently, the only operator of C-17 transport planes in the European Union is the United Kingdom, which is slated to exit the European Union in 2019, leaving EU member states with a gap of heavy airlift capability. On the other hand, the NATO Support and Procurement Agency in 2008 started the “Strategic Airlift Capability,”¹⁷⁴ which essentially consists of three commonly owned C-17 planes stationed in Hungary and provide strategic airlift for the 12 participating nations.¹⁷⁵ It is noteworthy, however, that certain major EU nations, including France, Germany, Italy, and Spain, are not members. It is also of interest that the United States, with its already impressive fleet of national strategic airlift assets, uses one-third of the available flight hours of this program.¹⁷⁶

The only other options for plugging the gap in strategic airlift are the United States, with its fleet of C-5 and C-17 planes (which are in high domestic demand already), and commercially available AN-124 aircraft, which had been part of the combined Russian-Ukrainian enterprise Strategic Airlift Interim Solution (SALIS). Since in 2018 Russia declared that it would no longer take part in this enterprise, the number of available flight hours per year has dropped sharply, from 2,300 hours to 900 hours.¹⁷⁷

¹⁷³ Airbus, “A400M,” accessed March 25, 2019, <https://www.airbus.com/defence/a400m.html>.

¹⁷⁴ NSPA, “Heavy Airlift Wing,” accessed March 27, 2019, <https://www.sacprogram.org/en/Pages/Heavy-Airlift-Wing.aspx>.

¹⁷⁵ Bulgaria, Estonia, Finland, Hungary, Lithuania, the Netherlands, Norway, Poland, Romania, Slovenia, Sweden, and the United States.

¹⁷⁶ NSPA, “The Strategic Airlift Capability (SAC),” accessed April 11, 2019, <https://www.sacprogram.org/en/Pages/The%20Strategic%20Airlift%20Capability.aspx>.

¹⁷⁷ Heiner Siegmund, “Volga-Dnepr Steps Out of SALIS,” Cargo Forwarder Global, April 15, 2018, <http://www.cargoforwarder.eu/2018/04/15/breaking-news-volga-dnepr-steps-out-of-salis/>.

This means that the EU members are seriously hampered in their ability to transport heavy equipment by airlift, delaying any rapid response scenario. Additionally, when AN-124 aircraft, with a maximum load of up to 100 tons, cannot be used by EU members, their A400Ms must compensate for each AN-124 sortie with three A400M sorties. Such heavy use will put a lot of strain and flight hours on the A400M aircraft, so they might need to be replaced earlier than originally expected.

The shortfall in strategic airlift remains critical, even if the non-EU “Strategic Airlift Capability” initiative is considered. It appears that strategic airlift for outsize cargo is perhaps the most critical obstacle to a European “strategic autonomy.” EU members will have to rely for this capability on outside sources—American, Russian, and Ukrainian—for this capability for the foreseeable future.

D. PESCO PROJECTS VERSUS IDENTIFIED OPERATIONAL SHORTFALLS

By 2018, 34 PESCO projects had been launched, 17 with the first batch in 2017 and again 17 with the second batch in 2018. They address several of the identified operational shortfalls, but not all of them.

This chapter assesses to what extent the identified operational shortfalls are partly or completely covered by PESCO projects. Since not all 34 PESCO projects address the identified operational shortfalls, some do not appear here. The list of shortfalls appears in Table 2. A yellow background indicates a partial fulfillment of the shortfalls, while light red indicates that no PESCO projects address the corresponding shortfall. The remarks in the column on the right of the table are based on the descriptions of the PESCO projects.¹⁷⁸

¹⁷⁸ Council of the European Union, “Permanent Structured Cooperation (PESCO) Updated List of PESCO Projects - Overview.”

Table 2. Operational shortfalls and corresponding PESCO projects

Operational Shortfall	PESCO project	Remarks
Airlift	None	Partially addressed by the NSPA “Strategic Airlift Capability” and the Movement Coordination Centre Europe and the European Air Transport Command. But these entities only coordinate assets and cannot provide new capabilities.
Air Refuelling	None	Partly addressed by the EDA “Multi-Role Tanker Transport Fleet (MMF)” and the European Air Transport Command.
UAS for ISR	European Medium Altitude Long Endurance Remotely Piloted Aircraft Systems – MALE RPAS (Eurodrone)	Project is supposed to provide this capability in 2025.
Power Projection (e.g., carriers, frigates, cruise missiles)	None	
Medical Evacuation	European Medical Command	Comprehensive approach, including Medical Task Force and assets for medical evacuation.
Interoperable C4ISR	▪ European Secure Software-defined Radio (ESSOR) ▪ Strategic Command and Control System for CSDP Missions and Operations ▪ European High Atmosphere Airship Platform (EHAAP) ▪ Electronic Warfare Capability and Interoperability Programme for Future Joint ISR Cooperation ▪ Chemical, Biological, Radiological and Nuclear (CBRN) Surveillance as a Service (CBRN SaaS) ▪ European Military Space Surveillance Awareness Network (EU-SSA-N)	In this field, several projects overlap due to the comprehensive aspect of C4ISR. While some projects address the C2 parts, other projects concentrate on the ISR part. The EU-SSA-N does not provide a space-based surveillance of earth, but is supposed to contribute to the protection of European space assets and services.
Permanent Headquarters	Strategic Command and Control System for CSDP Missions and Operations	Addressed by the EU “Military Planning and Conduct Capability (MPCC).” The PESCO project covers the technological aspect, which

Operational Shortfall	PESCO project	Remarks
		supports the functions of a permanent headquarters, but does not furnish the required coherent and persistent planning capability required.
Satellite Communication	None	
Special Operations Forces	Deployable Special Operations Forces Tactical Command and Control Command Post for Small Joint Operations (SOCC for SJO)	This is supposed to provide a Special Operations Forces Component Command for SJO, with Full Operational Capability foreseen for 2024. Since SOF is normally a dedicated national asset, the EU likely will not be fielding multinational SOF.
Heavy Equipment Transports/Heavy Railcars	None	The Military Mobility project is aimed at easing administration requirements and facilitating cross-border movements, but has not yet provided tangible capabilities.
Logistics	Network of logistic hubs in Europe and support to operations	Connected to the Military Mobility project. It is supposed to improve strategic logistical support and force projection in EU missions and operations. It is supposed to function as an “umbrella” to bring various European initiatives in logistics together. Does not yet present tangible benefits.
Single European Sky	None	
Maritime Air Surveillance	▪ Harbour & Maritime Surveillance and Protection (HARMSPRO) ▪ Upgrade of Maritime Surveillance	▪ HARMSPRO: Comprehensive solution, integrated sensor network (surface, subsurface, air); includes command and control functions for a deployable system. ▪ Maritime Surveillance: real-time information from international waters for all member states.
Cyber Defense	▪ Cyber Threats and Incident Response Information Sharing Platform (CTIRISP) ▪ Cyber Rapid Response Teams and Mutual Assistance in Cyber Security (CRRT)	▪ CTIRISP: Aims to develop active cyber defense measures; provides cyber threat intelligence to member states. ▪ CRRT: Provides specially equipped teams for training,

Operational Shortfall	PESCO project	Remarks
		diagnosis, and assistance in member states.
Precision Munitions	Indirect Fire Support (EuroArtillery)	Land-based, does not contribute to air-launched precision munitions.
Force Protection (including C-IED and C-UAS)	▪ C-IED: none ▪ Counter Unmanned Aerial System (C-UAS)	Aimed at mini and micro UAS. Can be employed in missions as well as at home. The EDA in 2013 launched a project “Joint Deployable Exploitation and Analysis Laboratory (JDEAL),” which provides technical exploitation of evidence after IED attacks.
Naval Vessels	▪ Maritime (semi-) Autonomous Systems for Mine Countermeasures (MAS MCM) ▪ Deployable Modular Underwater Intervention Capability Package (DIVEPACK)	▪ MASMCM: For the protection of objects and sea lanes. ▪ DIVEPACK: For the full spectrum of underwater interventions. Both projects contribute to maritime operations, but do not contribute naval vessels.
Combat Search and Rescue (CSAR)	None	
Helicopters	European Attack Helicopters TIGER Mark III	Aimed only at Tiger attack helicopters, with the goal of keeping the current fleet operational and effective. Does not provide additional helicopters.

It appears that PESCO does indeed address several operational shortfalls of EU member states. The C4ISR requirement is especially well covered and is being addressed from different directions. The need for a permanent headquarters is addressed through the combination of an outside project (MPCC) and the PESCO project for a “Strategic Command and Control System.” Maritime shortfalls are also well taken care of, except for making more vessels available.

Nevertheless, given that airlift and air refueling represent the most referenced operational shortfalls in EU documents as well as in scholarly analyses, it is surprising that these two topics are not part of PESCO. It seems plausible that due to the prohibitive costs of such programs and in the presence of the already launched “Strategic Airlift Capability” and the “Multi-Role Transport Tanker Fleet” initiatives, the PESCO

participants decided to not address these shortfalls with separate PESCO projects. Since both aforementioned initiatives deliver only small contributions, far short of a comprehensive solution to the underlying issues, the shortfalls will most likely persist for the foreseeable future. The third most referenced operational shortfall, a UAS for ISR, was part of the second batch of PESCO projects only and not addressed at all in the first batch.

The other topics not covered by PESCO appear to be at the most expensive and advanced end of the spectrum of military capabilities (e.g., satellite communications, CSAR), which could explain their absence from the list of PESCO projects. Furthermore, as Quencez and Billon-Galland have observed, the “Single European Sky,” with its civilian perspective, is unlikely to become a viable PESCO project.¹⁷⁹

Since PESCO already consists of 34 projects with only 23 participants, it seems reasonable that not all operational shortfalls can be addressed immediately. Nonetheless, the deficiencies in these capabilities will continue to seriously impede the EU’s pursuit of “strategic autonomy.”

E. CONCLUSION OF THE OPERATIONAL PERSPECTIVE

The aim of the chapter was to determine whether PESCO lives up to the stated goal of contributing to a European “strategic autonomy” in military capabilities by addressing identified operational shortfalls of EU military assets. These shortfalls have been identified in several case studies, EU documents and reports, as well as in scholarly studies.

PESCO addresses a number of critical shortfalls in a comprehensive manner, most notably the issue of interoperable C4ISR, with several PESCO projects contributing from different perspectives. Also, the shortfall characterized by not having a permanent headquarters with a standing and coherent planning capability is well covered through a combination of the PESCO project “Strategic Command and Control System for CSDP Missions and Operations” and the non-PESCO project “Military Planning and Conduct

¹⁷⁹ Quencez and Billon-Galland, “Can France and Germany Make PESCO Work as a Process Toward EU Defense?,” 8.

Capability,” which has already resulted in the creation of such a strategic headquarters in Brussels. The PESCO project “EU Medical Command” provides a similarly comprehensive medical solution that addresses structural, organizational, and technical issues, including medical evacuation assets. Finally, maritime shortfalls and cyber issues are also well covered under PESCO.

But significant gaps remain, strategic airlift being one of them. Although the deliveries of Airbus A400M military transport planes will certainly improve the ability of EU member states to transport troops and general cargo over strategic distances, these aircraft are not capable of transporting outsize cargo such as heavy equipment like main battle tanks and modern infantry fighting vehicles. For these items, the EU members will continue to rely on U.S. support or chartered civilian aircraft, which have become less available with Russia leaving the SALIS project. The “Strategic Airlift Capability” of the NSPA provides some capability through its three Boeing C-17 aircraft, but certainly not enough for a genuine level of strategic autonomy. If the EU members really aspire to conduct “the most demanding missions,” as the Treaty of the European Union declared for the activation of PESCO,¹⁸⁰ they must be able to rapidly deploy heavy equipment. But they do not possess the required ability to do so without outside support, and thus, they are not autonomous.

Air refueling presents another major obstacle to European strategic autonomy. In the past, the European air forces have relied heavily on U.S. support, as demonstrated by the 2011 NATO Operation Unified Protector, in which the U.S. Air Force provided 80% of all refueling sorties. In 2016 the European Defence Agency, together with four current EU nations (Belgium, Germany, Luxembourg, and the Netherlands) and one non-EU member (Norway) as participants, started the “Multinational Multi-Role Tanker Transport Fleet (MMF)” to address this shortfall. The MMF enables participating nations to pool eight commonly acquired Airbus A330 MRTT aircraft. Yet, this number pales when compared with the U.S. Air Force’s acquisition of 179 new tanker aircraft to replace one-third of its ageing tanker fleet. Given that the combined air forces within the

¹⁸⁰ Article 42.6 of the Treaty of the European Union (TEU).

European Union operate almost as many aircraft as the U.S. Air Force, it becomes apparent that the MMF is not nearly enough to provide European strategic autonomy.

As the analysis has shown, PESCO does not provide solutions for the lack in satellite communications, the transport of heavy equipment by road or rail, Combat Search and Rescue, and helicopters (except for Tiger attack helicopters). These shortfalls are also not addressed in other European initiatives.

To sum up and underline the most striking results: PESCO closes several critical operational shortfalls of European Union militaries, but not the most important and most often cited: strategic airlift and air refueling. It appears that the improved capabilities will contribute mostly to military operations in a larger framework (such as the UN and NATO), where other actors can provide the missing capabilities. The strategic autonomy to which PESCO is supposed to be contributing does not support a fully-fledged European Defense Union or “the most demanding missions,” but rather to limited crisis management operations. That alone would nonetheless represent progress.

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V. THE INVENTORY PERSPECTIVE

A. INTRODUCTION

This chapter addresses the inventory perspective of PESCO. From the inventory perspective, strategic autonomy is measured by the extent to which external sources equip EU member forces with military systems. The greater the reliance on outside sources, the more degradation of the EU members' asserted strategic autonomy. Such dependence opens the EU and its member countries to avenues for coercion or "motivation."

The aspect of influence in the dependent relationship has been illustrated recently by the example of the United States suspending Turkey's participation in the F-35 fighter program due to Ankara's pursuit of a Russian air defense system.¹⁸¹ Notwithstanding the merits of the case, in this instance an ally's participation in a military acquisition program has been used for political leverage. Turkey is apparently not "autonomous" enough to be immune from this kind of pressure.

In a 2019 press release, the European Commission made clear that the European Defence Fund, which is aimed at financially supporting the collaborative development of European Union military capabilities (including PESCO projects), will provide grants to EU member companies only, and only under special circumstances to European subsidiaries of third-country companies.¹⁸² Consequently, companies from the United States or the United Kingdom (should it leave the EU as planned in 2019) are not eligible at all to receive EDF grants. It can be concluded that, with such a move, the European Union is indeed pursuing a genuine level of strategic autonomy from non-EU suppliers of military systems. There has already been a strong critical reaction from the ambassador of

¹⁸¹ Karen DeYoung, "U.S. Suspends Turkey's Participation in F-35 Fighter Program over Ankara's Purchase of Russian System," *Washington Post*, April 1, 2019, https://www.washingtonpost.com/world/national-security/us-suspends-turkeys-participation-in-f-35-fighter-program-over-ankaras-purchase-of-russian-system/2019/04/01/c38a16be-54b6-11e9-8ef3-fbd41a2ce4d5_story.html.

¹⁸² European Commission, "EU Budget for 2021-2027: Commission Welcomes Provisional Agreement on the Future European Defence Fund," February 20, 2019, http://europa.eu/rapid/press-release_IP-19-1269_en.htm.

the United States to the EU, threatening retaliatory measures from the United States should these guidelines persist.¹⁸³

The inventories of PESCO participants currently contain systems from various countries, including EU countries, the United States, Russia, and others. This fact indicates that PESCO participants are already in part dependent on non-EU sources for equipping their military. PESCO is supposed to contribute to the strategic autonomy of the EU and Europeans. It should therefore be expected that several PESCO projects are aimed at replacing non-EU systems in the inventories of the participants.

The aim of this chapter is to determine whether PESCO lives up to the stated goal of contributing to the European Union's "strategic autonomy" in military capabilities by providing weapon systems that are now mainly provided from non-EU sources. The first section introduces the methodology used for analysis. The next section provides an overview of the inventories of the PESCO participants, combined with the country of origin for the different systems, and differentiating between air and land systems. It also presents some initial observations regarding the distribution between air- and land systems supplied by non-EU sources. The third section provides a more detailed analysis regarding the non-EU countries providing the most significant number of capabilities to the PESCO participants. These are Russia, Switzerland, and the United States. In this chapter, the United Kingdom is treated as a non-EU source even though it still is a member of the European Union. The reasons for doing so are discussed in the following methodology section. The chapter summary provides an answer regarding PESCO's ability to contribute to the European Union's strategic autonomy from an inventory perspective.

B. METHODOLOGY

The empirical data used for the analysis presented here was provided by the comprehensive Jane's database on the world's military equipment inventories. For analysis, the inventories of the PESCO participants were transferred to a large Excel

¹⁸³ Alex Barker and Michael Peel, "US Envoy Warns EU over Military Project Curbs," *Financial Times*, March 10, 2019, <https://www.ft.com/content/de898ddc-41b5-11e9-b896-fe36ec32aece>.

spreadsheet. Access to this commercially restricted database was provided by a subscription to Jane's of the Dudley Knox Library of the Naval Postgraduate School.¹⁸⁴

It is important to note some limitations to the data set used for the analysis. The inventory contained in the Jane's database is limited to land and air systems (including naval air systems) and does not contain naval vessels, which necessarily limits the analysis to air and land systems. This should not affect the results since PESCO does not include any projects providing for naval vessels. Furthermore, this database cannot deliver real-time accuracy, but such an exquisite level of accuracy is not required for the analysis. The picture is accurate enough to provide a meaningful source for analysis. The combined list, dated April 3, 2019, contains 1,090 data sets. All the tables presented in this chapter were prepared by the author using Excel's diagram functions. The primary focus of our analysis is on the number of delivered systems, not the number of ordered systems, and includes the number of Eastern bloc systems still in service.

Similarly, the compiled database required some manual intervention and fine-tuning, though they were few and did not negatively impact the quality of the analysis. In the database a few omissions came up that had to be corrected manually. One example was the missing entry of the German and Dutch Patriot air defense systems. Furthermore, the database contained information on the manufacturers, but not on the country of origin of the manufacturers. Again, the country of origin of the manufacturers had to be added manually. For analytical purposes, this chapter subsumed manufacturers from EU countries as a combined category, without further detail on the actual countries. Other countries providing material to PESCO participants include Argentina, Brazil, Canada, Chile, Israel, Russia, South Africa, South Korea, Switzerland, the United States, and the former Yugoslavia.

The United Kingdom presented a difficult case, since it still is an EU member, but scheduled to leave the EU in 2019. Yet, the United Kingdom has supplied many

¹⁸⁴ IHS Markit, "Jane's by IHS Markit," accessed April 5, 2019, <https://janes.ihs.com/Inventory/search?>

European countries with weapon systems. Therefore, it appeared reasonable to give the United Kingdom its own category and classify it as a non-EU source.

Many Eastern European countries are still using Eastern bloc material, first supplied by the Soviet Union, later by Russia, and in some cases by domestic firms during the Cold War. Russia also supplied material after the end of the Cold War to some PESCO participants. For the analysis, a distinction between the Soviet Union, Russia, and Cold War Eastern bloc firms was not necessary and thus all were categorized as Russia/Eastern bloc, in the full knowledge that the Soviet Union involved more corporations and products than today's Russian Federation.

Some systems have been produced by a conglomerate of different companies from different countries, e.g., NASAMS, which is jointly produced by Kongsberg of Norway and Raytheon of the United States. In such a case, the country of origin is the one with the original system or design. In the NASAMS case, it will be the United States, since the system is based on the Patriot System, developed by Raytheon.

The analysis found that there is a distinction between non-EU-provided air and land systems. In the air systems category a relatively clear-cut distinction can be made between EU and non-EU manufacturers. This is not true for land systems. Here U.S. and British corporations have been acquiring European competitors, which are providing systems to the inventories of PESCO participants, blurring the line between EU and non-EU companies.

Another difference exists in the technological capabilities. While EU companies are not yet able to deliver certain aircraft, like fifth-generation fighter bombers, which are supplied by Lockheed of the United States, no such technological gap exists for land systems. In this field, European companies can deliver all required capabilities.

This means that PESCO should focus on the development of air systems, which are currently only provided by non-EU sources. But PESCO does not close the gap between European companies and U.S. competitors in air systems, except for an up-to-date UAS. In contrast, PESCO includes several projects for land systems, an area that is already well covered by European manufacturers. From an inventory perspective, PESCO

does not contribute to European strategic autonomy. But it supports a consolidation of the extremely diversified European defense market, making it more competitive when facing larger American and British corporations.

C. OVERVIEW OF THE INVENTORIES OF PESCO PARTICIPANTS

Table 3 presents a first result of the analysis of the PESCO inventories by focusing on countries without going into specific systems. The top row represents the supplying countries, while the column on the left represents the PESCO participants. The light blue cells marked with ‘A’ stand for air systems, denoting that the supplying country has been providing one or more air systems to a PESCO participant. The light green cells marked with ‘L’ stand for land systems, and the light orange cells with ‘B’ stand for countries that have been supplying both air and land systems to the respective PESCO participant.

From a first overview, it becomes apparent that PESCO participants are already relying heavily on EU countries to provide both air and land systems. The other major suppliers providing both air and land systems are Russia/the Eastern bloc and the United States. Switzerland provides solely air systems, while the United Kingdom provides mainly land systems. The remaining non-EU countries (Argentina, Brazil, Canada, Chile, Israel, South Africa, South Korea, and the former Yugoslavia) supply only a few PESCO participants with either air or land systems. Brazil, Canada, and Israel provide mainly air systems, while Argentina, South Africa, South Korea, and Yugoslavia provide land systems only.

Table 3. Matrix of PESCO participants and non-EU suppliers

		Country of Origin													
		Argentina	Brazl	Canada	Chile	EU	Israel	Russia/Eastern Bloc	South Africa	South Korea	Switzerland	United Kingdom	United States	Yugoslavia	
PESCO participants	Austria					B					A	L	B		
	Belgium		A			B							B		
	Bulgaria					B		B			A		B		
	Croatia	L				B		B			A	L	B	L	
	Cyprus		L			B		B			A	A	B	L	
	Czech Republic					B		B					B		
	Estonia					B		B				L	B		
	Finland					B	A	L	L	L	B	B	B	L	
	France		A	A		B					A	L	B		
	Germany					B	A					L	B		
	Greece		A			B		B				L	B		
	Hungary					A		B					L		
	Ireland					B			L		A	B	B		
	Italy					B							L	B	
	Latvia					L		B					L	L	
	Lithuania					B		B					L	B	
	Luxembourg					L								L	
	Netherlands					B					A	L	B		
	Poland					B	A	B					L	B	
	Portugal			A		B							L	B	
Romania					B	L	B						B		
Slovakia					B		B						A		
Slovenia					B	L	B			A			B	L	
Spain				A	B	A			L			L	B		
Sweden					B	A			L			L	B		
Legend:		A	air systems												
		L	land systems												
		B	both systems												

After differentiating the results further by separating between air and land systems (Table 4 and Table 5), it becomes apparent that the United States is the non-EU provider supplying the largest number of both air and land systems. Every PESCO participant has air or land systems from the United States in its arsenal; many have both. Russia ranks second for number of air systems and third for the provision of land systems. The United Kingdom is the second largest supplier of land systems. Switzerland ranks third in air systems. For the two latter countries, the dataset revealed that in both cases just one company is responsible for the high ranking: BAE Systems for land systems, and Pilatus for air systems.

Table 4. Number of PESCO participants with air systems from non-EU sources, by country of origin

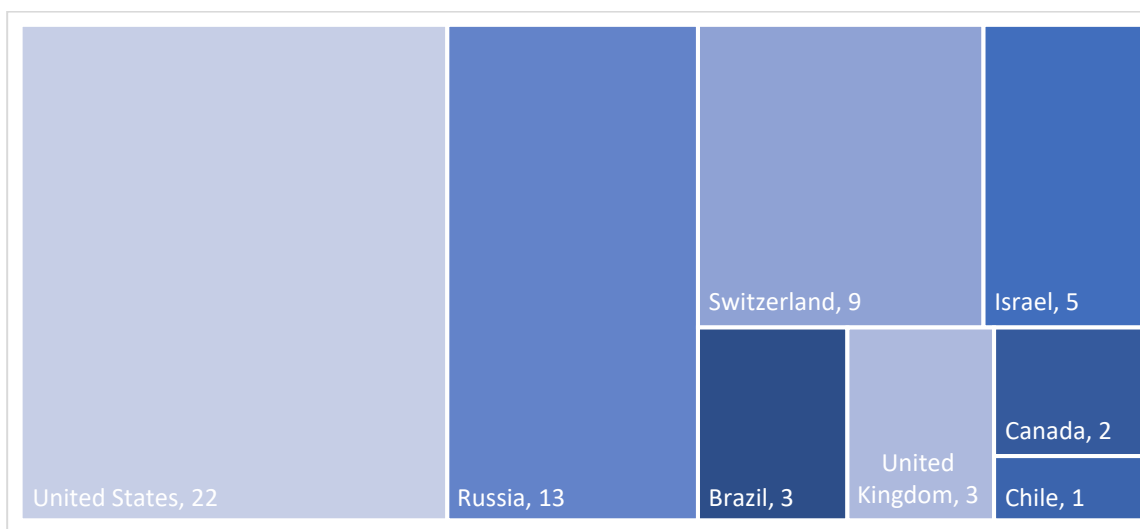
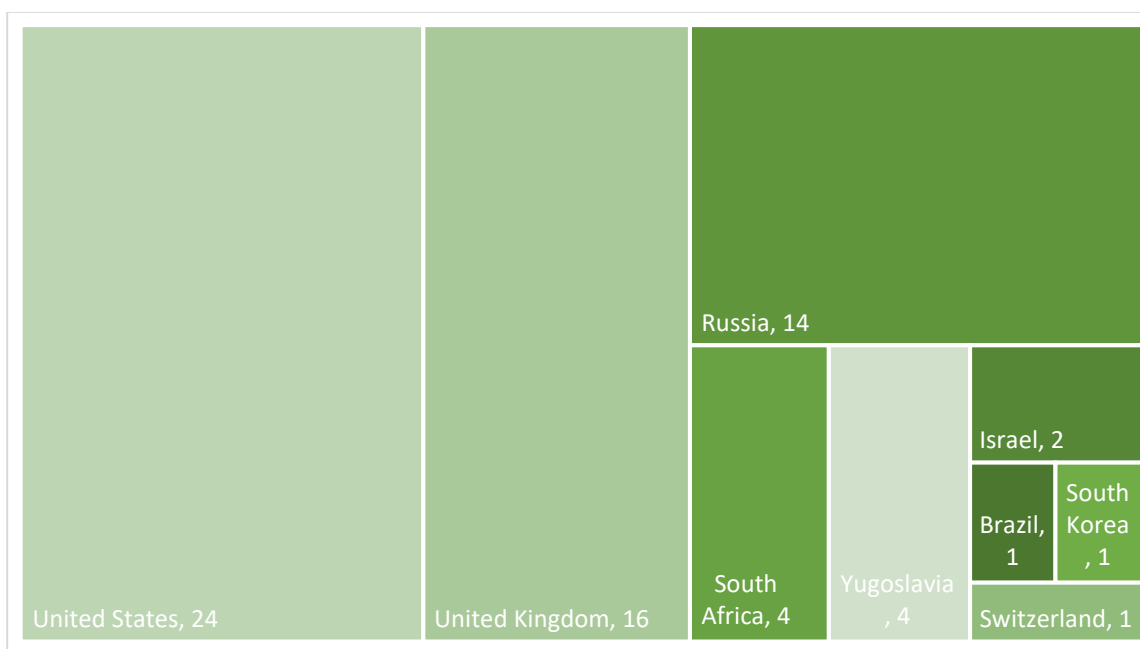
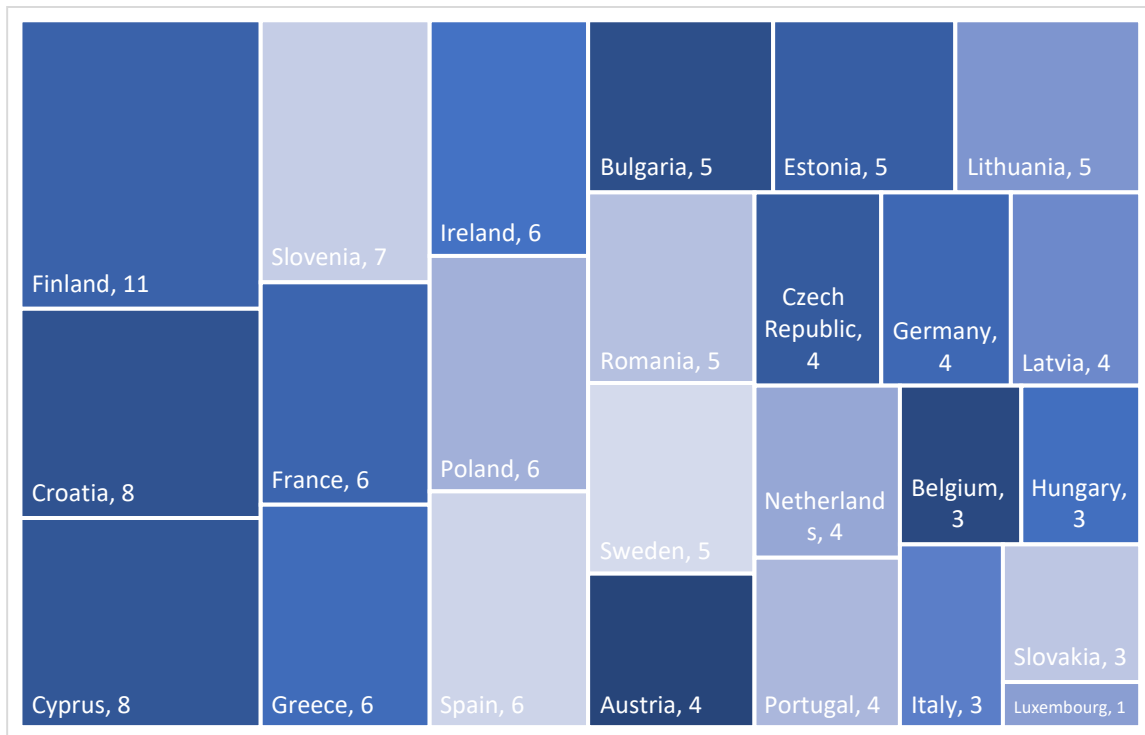


Table 5. Number of PESCO participants with land systems from non-EU sources, by country of origin



By reversing the perspective and looking at the PESCO participants with the most non-EU sources providing material, the data show that Finland ranks first, followed by Croatia, Cyprus, and Slovenia (Table 6). It should be noted that these countries were either neutral during the Cold War or at least not clearly aligned with either side. Lacking a strong domestic industrial base, they had to rely on a multitude of sources during that period to avoid becoming too closely attached to only one side for supplying their militaries.

Table 6. PESCO participants and number of non-EU countries providing military systems



D. AIR SYSTEMS

This section examines the provision of air systems to PESCO participants. The focus is on the three major non-EU suppliers of air systems to PESCO participants, the United States, Russia, and Switzerland. For the analysis, the perspective shifts from the national down to a systems view, with a focus on numbers. The aim is to identify large numbers of specific military systems from non-EU suppliers. The assumption is that with

larger numbers of systems from external sources, PESCO participants' level of autonomy decreases.

Since the number of types and roles is extensive, this chapter uses family names for different planes, subsuming different types of the same family (e.g., all F-16 types are combined in the F-16 family). Furthermore, even though the military uses civilian aircraft, the focus of this section is on military aircraft.

1. United States

The United States supplies the largest number of air systems to PESCO participants. For greater clarity an additional filter has been applied to the dataset, which sorts for systems of at least ten planes have been supplied to PESCO participants. The analysis also differentiates between planes (fixed-wing) and helicopters (rotary wing).

a. Fixed-Wing Aircraft

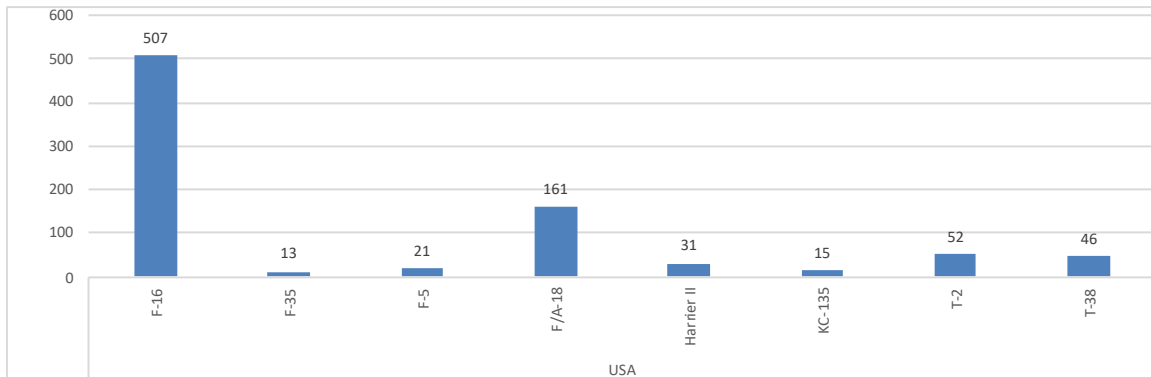
The first look considers manned fixed-wing jets and propeller aircraft. The data sets include, inter alia, specific numbers for each system: number delivered and number ordered. A large difference between both numbers indicates that a certain number of systems is still to be delivered.

The results (Table 7) reveal that fourth-generation¹⁸⁵ fighters and fighter bombers (F-16, F/A-18, Harrier II) make up most of the U.S. fixed wing jets in the arsenal of PESCO participants. The F-35 presents a special case: It is a fifth-generation¹⁸⁶ fighter bomber, which has been ordered in larger numbers by PESCO participants, with 114 planes still to be delivered. The dataset revealed that a total of 127 F-35 aircraft have been ordered by PESCO participants.

¹⁸⁵ Air Power Centre, "Pathfinder-Five-Generations-of-Jet-Fighter-Aircraft" (Royal Australian Air Force, January 2012), <http://airpower.airforce.gov.au/APDC/media/PDF-Files/Pathfinder/PF170-Five-Generations-of-Jet-Fighter-Aircraft.pdf>.

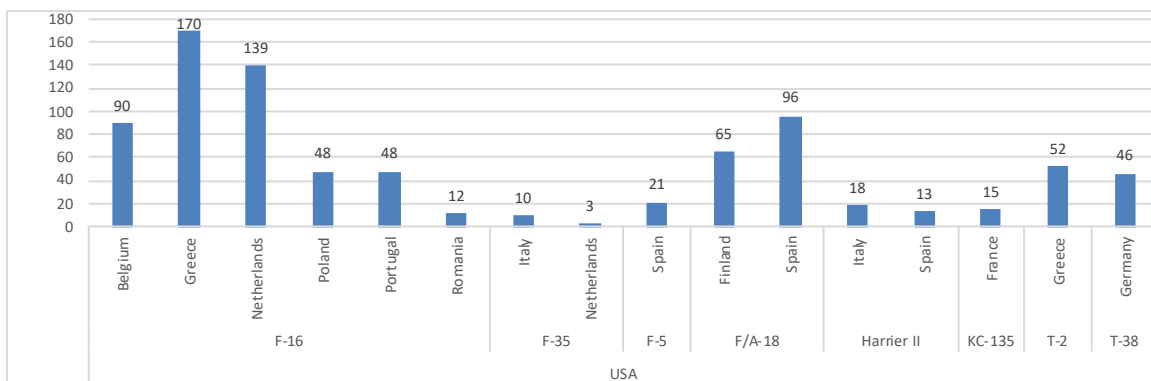
¹⁸⁶ Air Power Centre.

Table 7. United States—fixed-wing jet aircraft, with ten or more delivered to PESCO participants



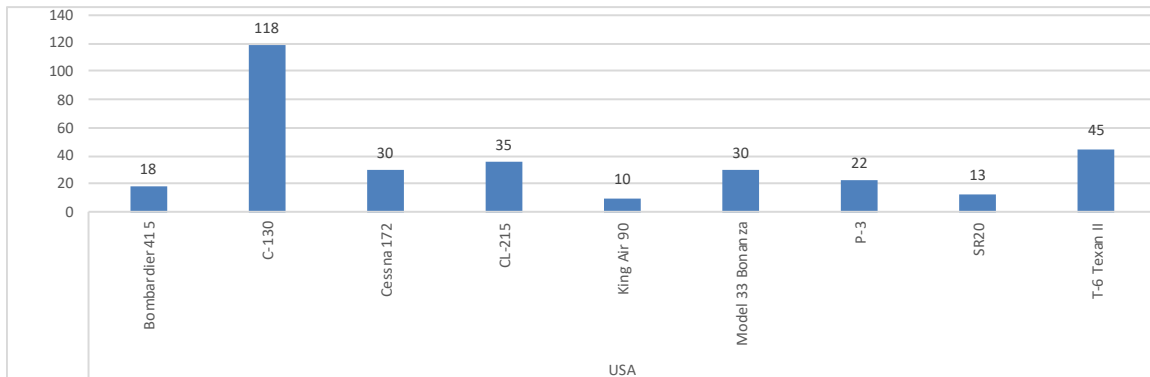
The data on the purchasers of these planes (Table 8) show that the United States mainly supplied its Cold War allies, with Poland and Romania being the sole exceptions. It is also noteworthy that only Italy and the Netherlands are acquiring the F-35, but not other major PESCO participants. The NATO allies Denmark and Norway are also buying the F-35, but they are not taking part in PESCO.

Table 8. United States—PESCO participants, with numbers of fixed-wing jet aircraft



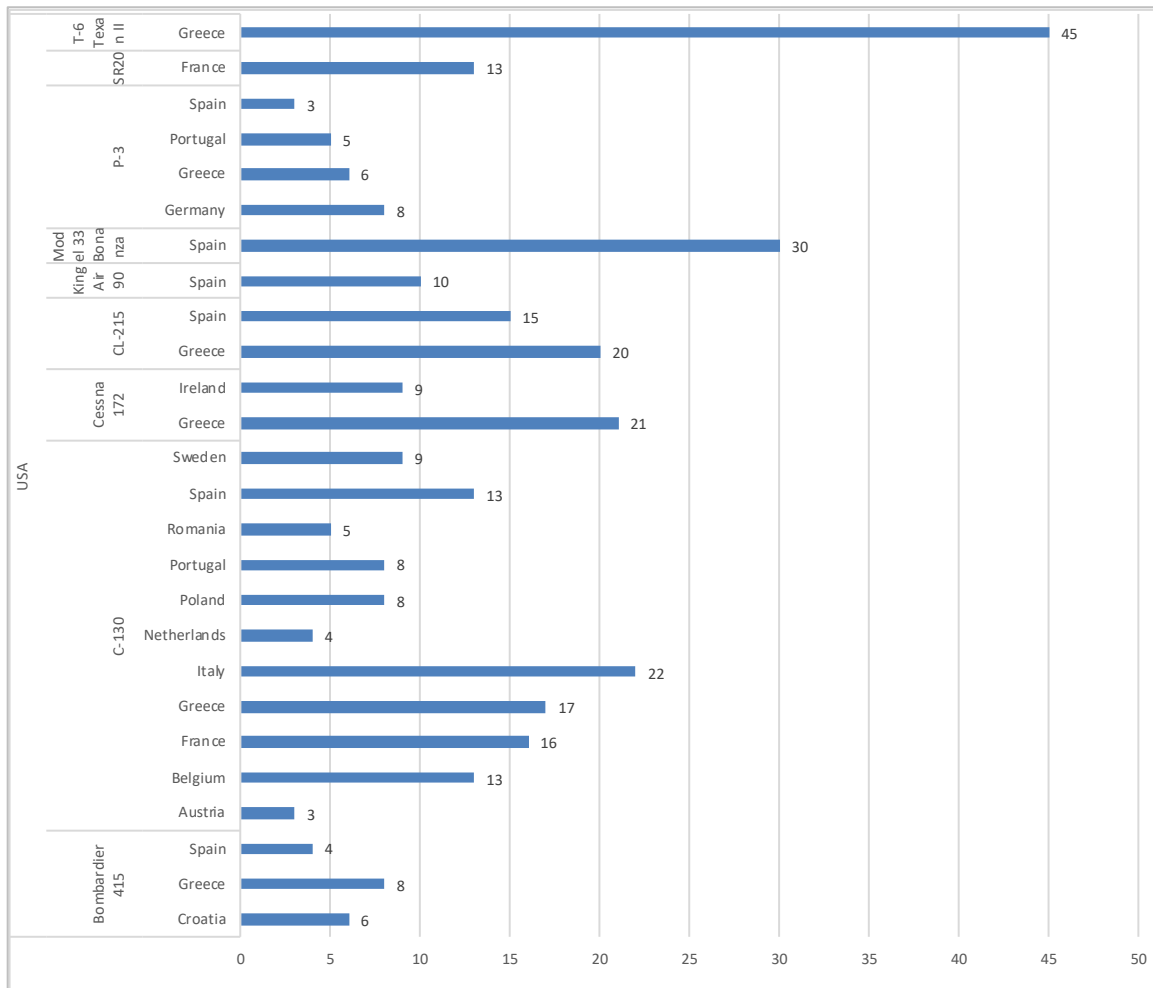
The data on fixed-wing propeller aircraft supplied by the United States (Table 9) show that the C-130 transport plane, a total of 118, is the most numerous. Of note also are the Maritime Patrol Aircraft P-3 Orion and the trainer T-6. The remaining planes in this category are largely civilian aircraft used by the military.

Table 9. United States—fixed-wing propeller aircraft, with ten or more delivered to PESCO participants



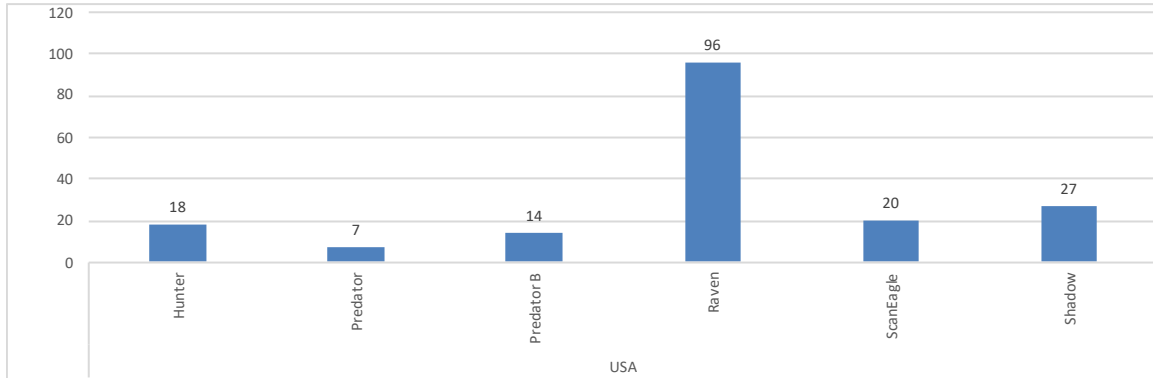
Focusing on the buyers of fixed-wing propeller planes provided by the United States (Table 10), it appears that, as with the jets, the former Cold War allies were the main recipients of these aircraft. It is noteworthy that the high number of 118 C-130 aircraft delivered to PESCO participants is widely distributed across user nations, such that no nation operates an exceptionally large fleet of these transport planes. This illustrates the high value of the European Air Transport Command in Eindhoven, which pools the air transport capacity of participating nations, making more efficient use of the aircraft.

Table 10. United States—PESCO participants, with numbers of fixed-wing propeller aircraft



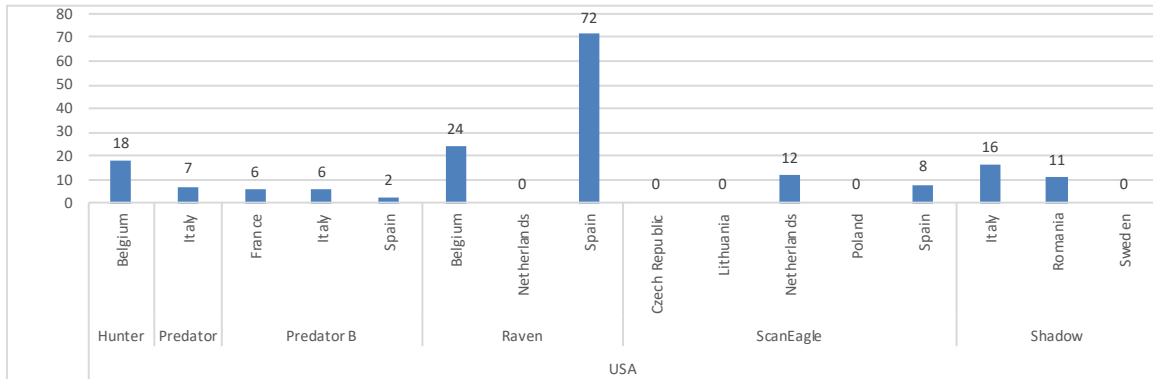
The next part of the analysis examines an increasingly important category of planes: UAS (Table 11). The United States supplies many different-sized unmanned systems to PESCO participants. The highest number is for the lightweight hand-launched Raven, followed by the Shadow and Predator B. It appears that the Predator B, the most modern of the systems just listed, is in the process of delivery, with a certain gap between delivered and ordered systems. The Predator is also the only armed UAS.

Table 11. United States—unmanned aerial systems, with five or more delivered to PESCO participants



The data on the users (Table 12) show that there are only a few main users of these systems, mainly Belgium, France, Italy, the Netherlands, Romania, and Spain. Users listed with a zero employ the system, but the dataset did not reveal numbers in use or ordered. As with manned fixed-wing aircraft, the main recipients are the former Cold War allies of the United States, with only a few exceptions, namely the Czech Republic, Lithuania, Poland, and Romania.

Table 12. United States—PESCO participants, with numbers of unmanned aerial systems



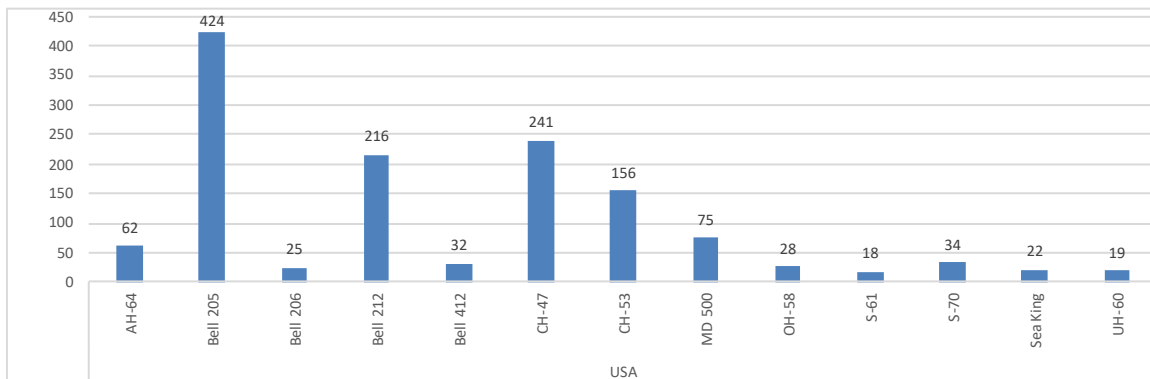
To sum up: Most of the fixed-wing planes supplied by the United States are fourth- and fifth-generation fighter bombers, tactical transport and maritime patrol planes,

and many types of unmanned aerial systems, one of them armed. The main PESCO recipients are former Cold War allied nations.

b. Rotary-Wing Aircraft

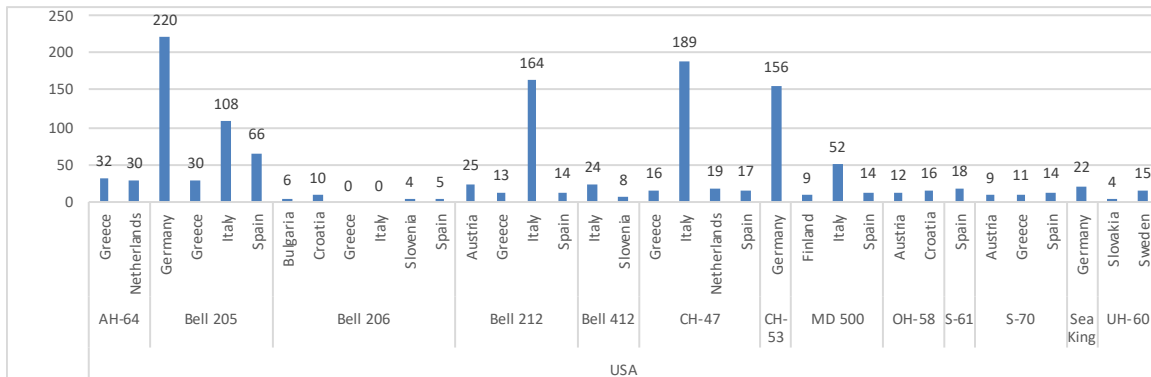
The United States also supplies a large number of rotary-wing aircraft, or helicopters, to the PESCO participants (Table 13). While many are civilian helicopters used by the military, there are many specialized military helicopters in large numbers as well, notably the heavy transport helicopters CH-47, CH-53, many Blackhawk variants (UH-60, S-70, Sea King), and the AH-64 attack helicopter family. It appears that most of the helicopters ordered have been delivered, as there are no major orders outstanding from PESCO participants.

Table 13. United States—rotary-wing aircraft, with ten or more delivered to PESCO participants



With respect to the U.S.-supplied military helicopters (Table 14) the two main users of the heavy transport helicopters are Germany and Italy, with other nations using rather small numbers of the remaining systems. These low numbers distributed over many user countries increase the operating costs for each user. This should in principle make a pooling solution attractive, but such a pooling solution for helicopters is not in use in Europe.

Table 14. United States—PESCO participants, with numbers of rotary-wing aircraft



To sum up: The United States mainly supplies many fourth- and fifth-generation fighter bombers, tactical transport planes, unmanned aerial systems, heavy and medium transport helicopters, and attack helicopters to PESCO participants. The main users of aircraft supplied by the United States are essentially the former Cold War NATO Allies.

2. Russia/Eastern Bloc

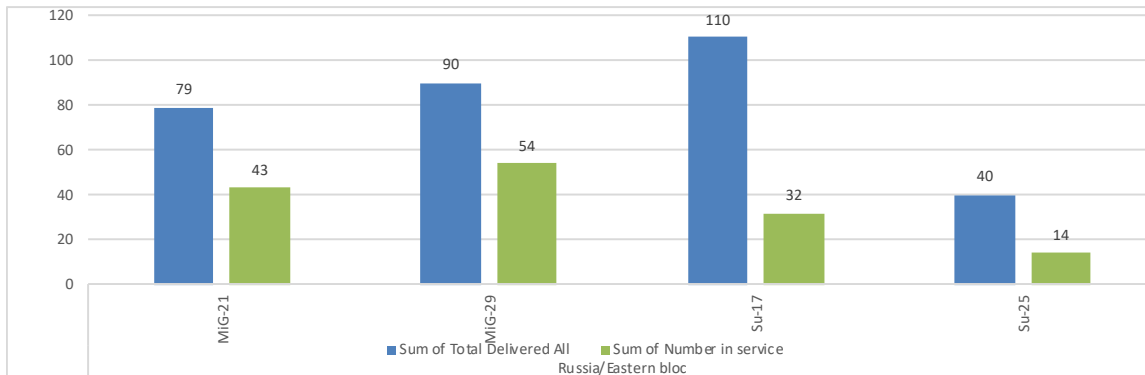
Russia and former Eastern bloc countries constitute the second largest supplier of air systems to PESCO participants. They provided fixed-wing as well as rotary-wing systems, but no UAS. Recipients are only former Eastern bloc countries. Because the Eastern bloc no longer exists, this section also shows the number of aircraft still in service. This information is of interest since it provides a background for interpreting the numbers.

a. Fixed-Wing Aircraft

The Eastern-bloc-supplied fixed wing jets in the PESCO-participants' arsenal mainly consist of second- to fourth-generation¹⁸⁷ fighters and fighter bombers (Table 15). It appears that there is no delivery in progress, unlike the fifth-generation F-35 program of the United States.

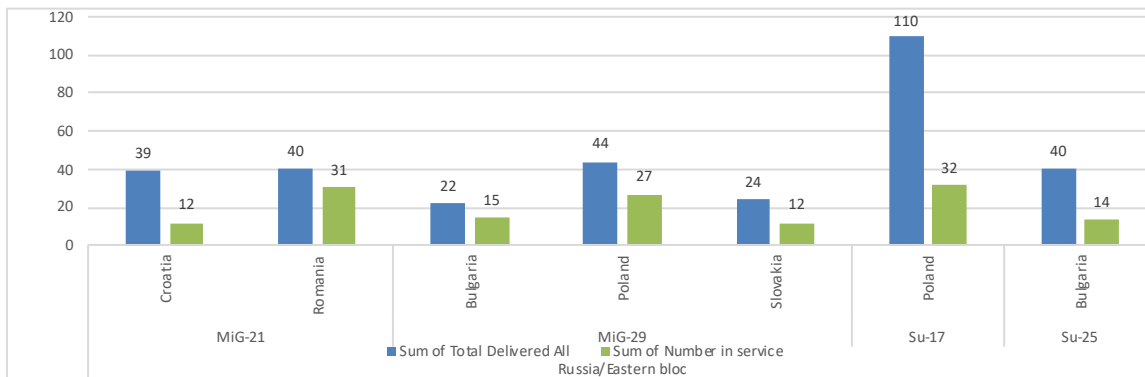
¹⁸⁷ Air Power Centre.

Table 15. Russia/Eastern bloc—fixed-wing jet aircraft, with ten or more delivered to PESCO participants



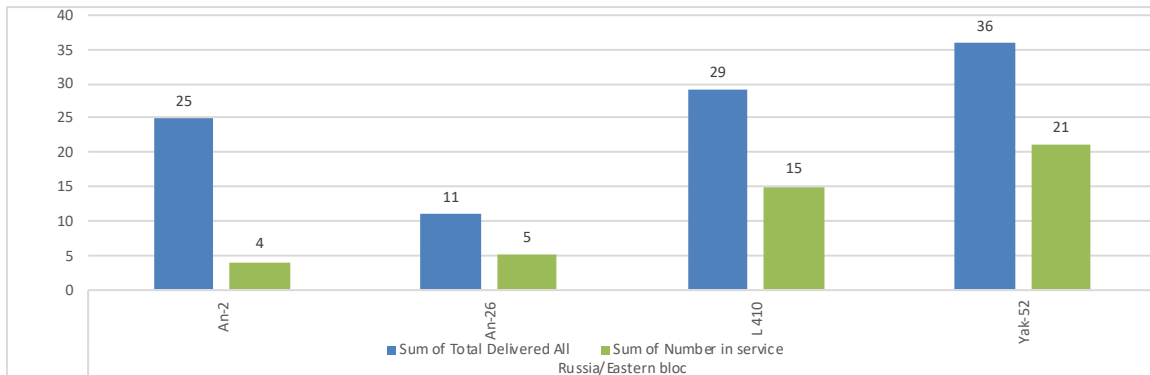
The data on the users of these fixed-wing jet aircraft (Table 16) show that only former Eastern bloc nations are still using these systems. Poland, which also maintains fixed-wing jets provided by the United States, retains the most Russian-supplied fixed-wing jets. The MiG-21s used by Romania are upgraded versions with Western avionics.

Table 16. Russia/Eastern bloc—PESCO participants, with numbers of fixed-wing jet aircraft



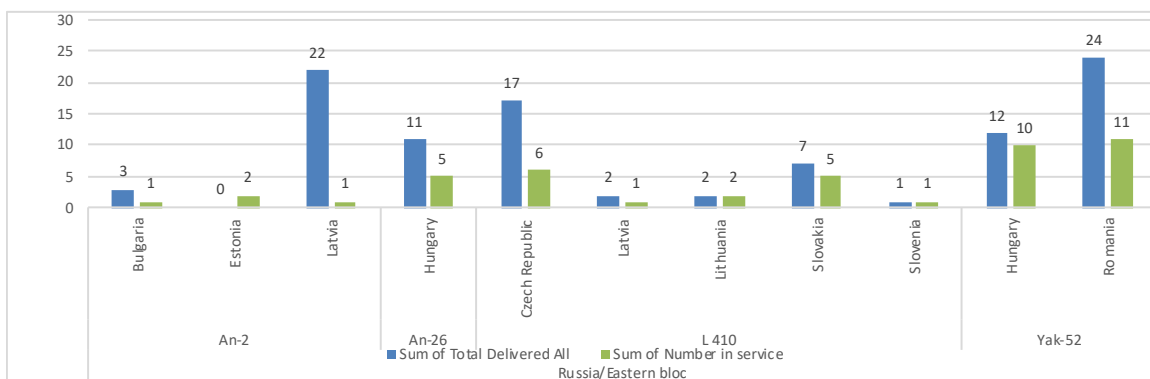
The numbers of Russian-supplied fixed-wing propeller aircraft are even lower (Table 17). The most modern of these are the An-26, a small tactical transport plane, and the L-410, a Polish-developed and now Russian-produced small transport plane. The two other planes in this category are old trainers (Yak-52) and old biplanes (An-2).

Table 17. Russia/Eastern bloc—fixed-wing propeller aircraft, with ten or more delivered to PESCO participants



With respect to Russian fixed-wing propeller aircraft, Hungary stands out as the sole user of the An-26 (Table 18). The L-410 is spread over Eastern European PESCO participants, with the Czech Republic being the main user. The older planes (An-2 and Yak-52) are used by Bulgaria, Hungary, Latvia, and Romania. Estonia uses the An-2, but the dataset did not include information on numbers.

Table 18. Russia/Eastern bloc—PESCO participants, with numbers of fixed-wing propeller aircraft

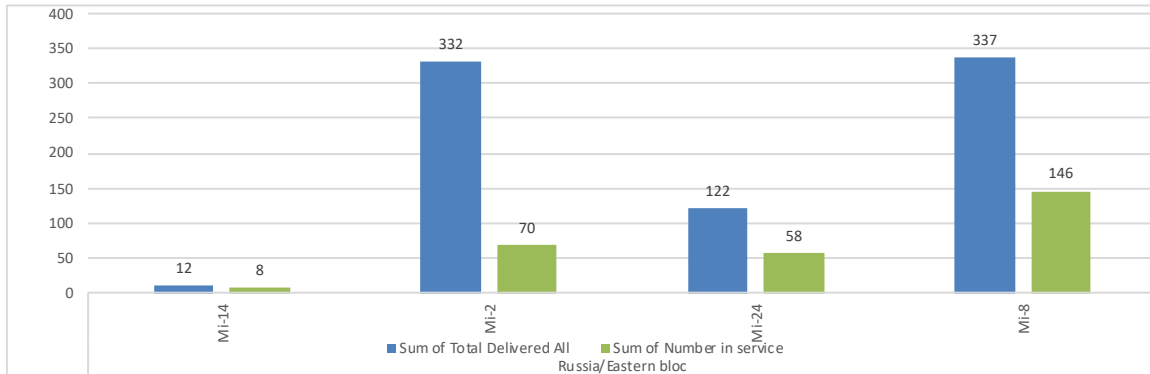


b. Rotary-Wing Aircraft

The Soviet Union, followed by Russia, provided many rotary-wing aircraft to PESCO participants (Table 19). Many of them are still in use, with some delivered in the early 2000s. The number for the Mi-8 family also includes the Mi-17 variants. It is

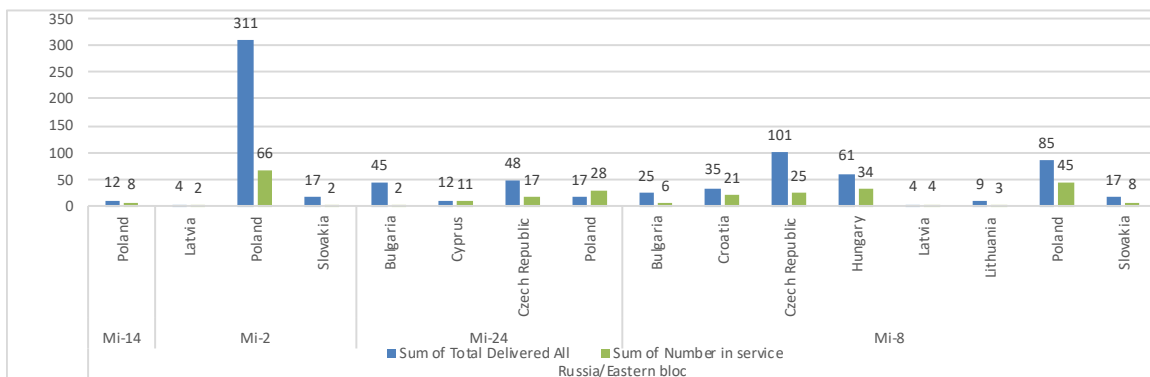
noteworthy that the Mi-2 and the Mi-8 are still represented with high numbers in the arsenals of several PESCO participants.

Table 19. Russia/Eastern bloc—rotary-wing aircraft, with ten or more delivered to PESCO participants



The data on Russian-supplied rotary-wing systems indicate that Cyprus is the only non-former Warsaw-Pact country with Russian helicopters in its arsenal (Table 20). The dataset revealed that the initial delivery to Cyprus started in 2001. It is also noteworthy that Poland is the only major user of the Mi-2. The Czech Republic and Poland are also the major users of the Mi-8, and, together with Bulgaria, of the attack helicopter Mi-24. Many Mi-8 aircraft are also spread over other former Warsaw Pact countries.

Table 20. Russia/Eastern bloc—PESCO participants, with numbers of rotary-wing aircraft

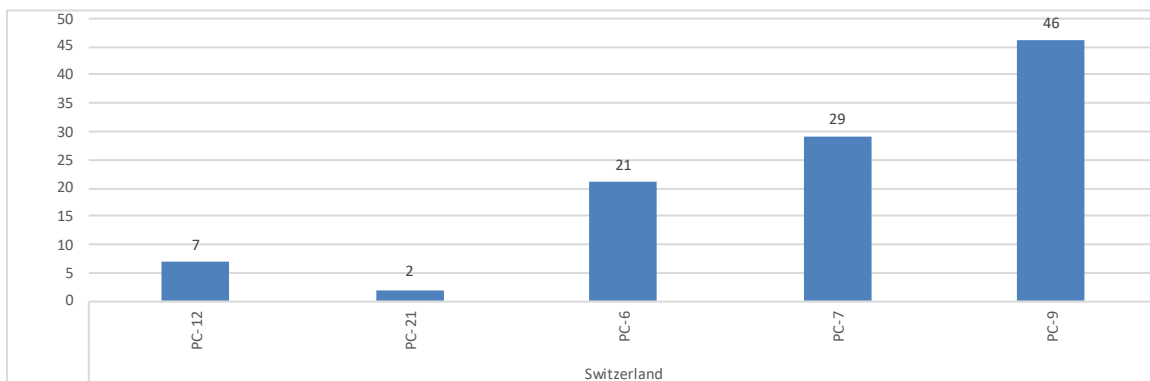


To sum up: Russia supplied mainly older-generation fighter and fighter bombers, and older transport planes to PESCO participants that were former Eastern bloc countries. Many still use Russian rotary-wing aircraft, mainly the Mi-8 and Mi-24. It can be assumed that these systems are still in use because of their reliability and relatively low maintenance costs, and the user nations do not possess large defense budgets.

3. Switzerland

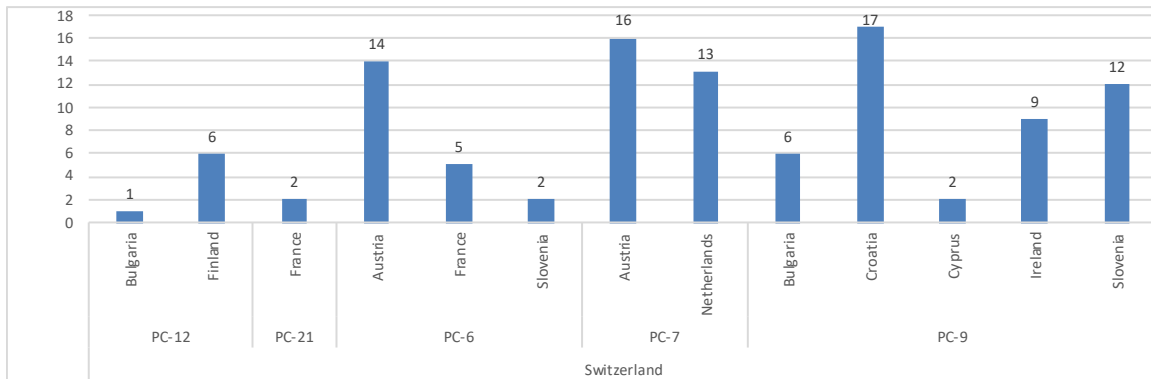
Switzerland is the third largest non-EU provider of air systems to PESCO participants. Its contribution is limited to fixed-wing propeller aircraft used for training purposes (Table 21).

Table 21. Switzerland—fixed-wing aircraft, with numbers delivered to PESCO participants



The users of Swiss-provided fixed-wing propeller aircraft cannot be categorized along the former lines of the Cold War (Table 22). Except for France and the Netherlands, it appears that the users of Swiss aircraft are smaller nations with inferior defense budgets. The newest Swiss aircraft, the PC-21, is in use only in France. It is also the only program still in delivery, with a total of 17 aircraft ordered.

Table 22. Switzerland—PESCO participants, with numbers of fixed-wing aircraft



To sum up: Switzerland has been providing smaller fixed-wing propeller aircraft for training mainly to smaller nations. France is the only country taking delivery of the most modern Pilatus aircraft in the PESCO arsenal.

4. PESCO Participants

While it is important to know which air systems are delivered by outside sources, it is equally useful to determine which systems are provided by EU sources. By comparing both sources, it can then be inferred whether systems with certain characteristics can only be provided from the outside, indicating a true obstacle to European strategic autonomy.

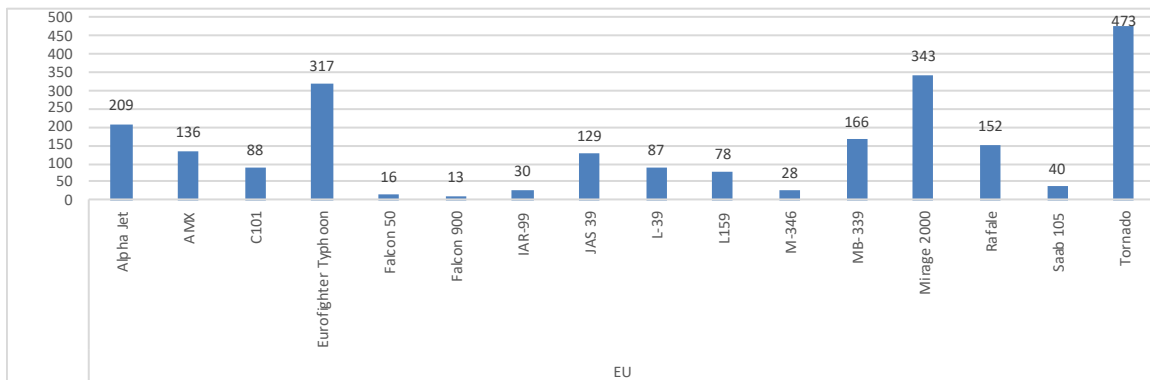
This section therefore examines EU-provided air systems, differentiated by fixed-wing jet and propeller aircraft as well as by rotary-wing aircraft. Because it is not of interest for this research to know which specific PESCO country maintains which EU-provided systems, this thesis presents only a generalized perspective.

a. Fixed-Wing Aircraft

EU sources have provided a wide variety of fixed-wing jet aircraft to PESCO participants (Table 23). Besides some civilian aircraft used by the military, it is noteworthy that PESCO participants use many different types of trainer aircraft (many of which can also be used in the light attack role). The largest numbers, however, consist of

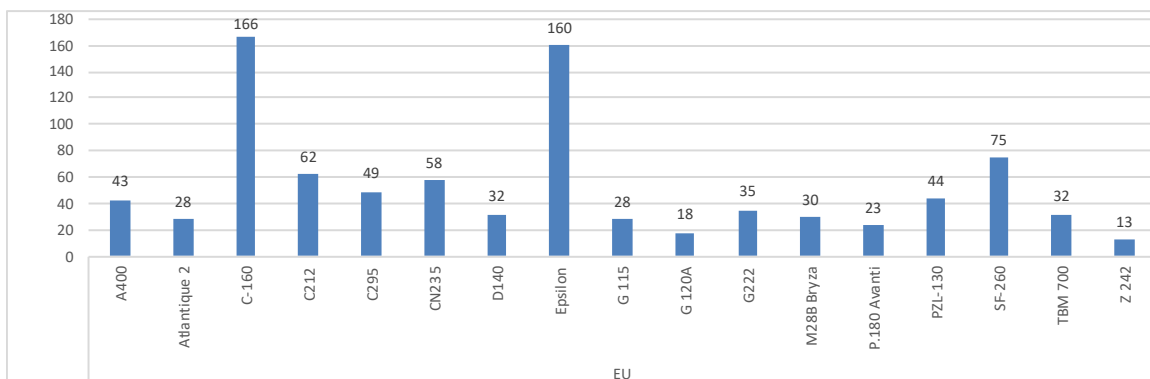
the fourth-generation fighters and fighter bombers Eurofighter, Rafale, and Mirage 2000, and the third-generation fighter bomber Tornado. It is noteworthy that no fifth-generation fixed-wing jet aircraft has been provided by EU sources.

Table 23. EU—fixed-wing jet aircraft, with ten or more delivered to PESCO participants



With respect to EU-provided fixed-wing propeller aircraft, many different aircraft appear in low numbers (Table 24). Many of them are trainer aircraft (like the Socata Epsilon), but most are tactical transport planes. The only aircraft in this broad category with ongoing delivery is the Airbus A400M, with a total of 130 aircraft ordered by PESCO participants.

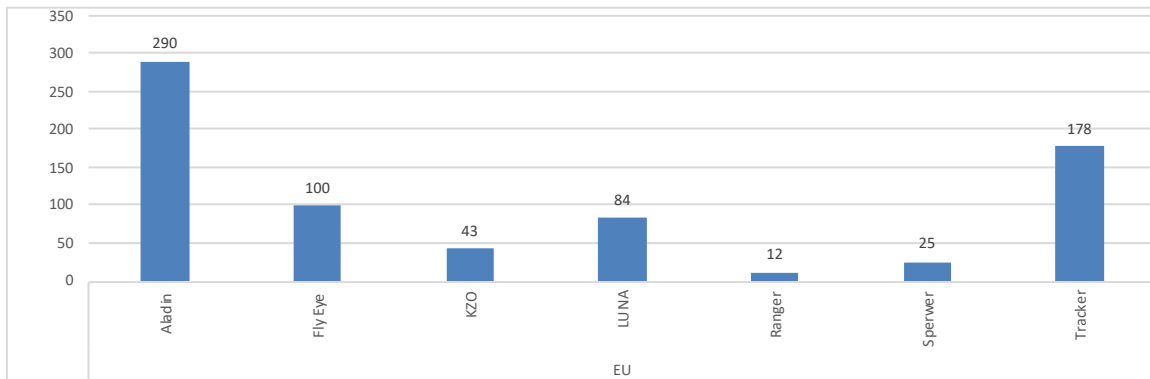
Table 24. EU—fixed-wing propeller aircraft, with ten or more delivered to PESCO participants



b. Unmanned Aerial Systems

The PESCO participants field many domestically produced unmanned aerial systems (Table 25). It is noteworthy, however, that these are mostly mini- or microdrones. Even the larger systems are tactical systems at best, with an endurance of a few hours at most. None of them is armed.

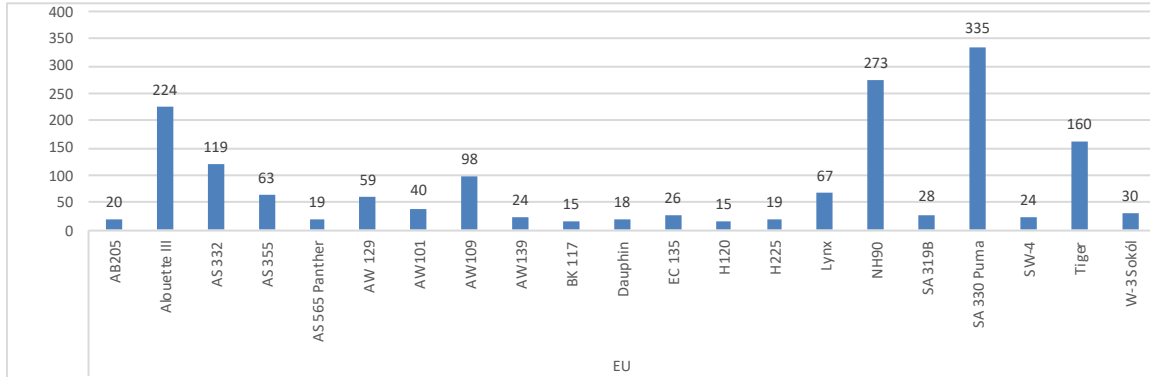
Table 25. EU—unmanned aerial systems, delivered to PESCO participants



c. Rotary-Wing Aircraft

PESCO participants operate many different rotary-wing aircraft in many different roles (Table 26). The largest numbers are the NH90 transport helicopters, which are still being delivered (with 391 ordered by PESCO participants), and the older Alouette III and Puma helicopters. Notably, there is no heavy transport helicopter provided by EU sources. Furthermore, it appears that small fleets of different types are increasing the operating cost for each user, making helicopter operations exceptionally expensive for PESCO participants. In light of the operational shortfalls discussed in a previous chapter, this might explain the unwillingness of PESCO participants to provide rotary-wing aircraft to NATO and EU military deployments.

Table 26. EU—rotary-wing aircraft, delivered to PESCO participants



5. Summary for Air Systems

The three major non-EU suppliers of air systems to the PESCO participants have provided both fixed-wing jet aircraft and fixed-wing propeller aircraft, as well as many rotary-wing aircraft. The users of these non-EU systems show that the old lines from the Cold War persist in the distribution of systems: Western European countries have been receiving air systems from the United States, and former Eastern bloc countries from the former Soviet Union and Russia.

It appears that the Russian/Eastern bloc-supplied fixed-wing aircraft, both jet- and propeller-driven, are comparatively older than their counterparts from the United States. Their numbers in the arsenal of PESCO participants, as well as their capabilities, are also much smaller. These systems will soon need to be phased out, and sometimes replaced by newer aircraft. The United States is the only major non-EU supplier of UAS.

A comparison of the air systems provided by non-EU sources and EU manufacturers suggests that the EU companies can provide most of the capabilities covered by air systems from the outside. But there are significant exceptions: European companies cannot yet provide a fifth-generation fighter bomber (like the F-35), heavy transport helicopters, and long-endurance armed UAS. For European strategic autonomy, PESCO would need to assign such systems with priority.

E. LAND SYSTEMS

The examination of land systems revealed a large variety of systems provided by non-EU sources. For further analysis, the chapter discussion differentiates tracked vehicles, wheeled vehicles, and towed systems (e.g., artillery and anti-aircraft systems).

Several challenges related to legacy systems from the Cold War era came up during the analysis. During the Cold War, the Soviet Union supplied its Eastern bloc allies with land systems, many of which were then adapted and improved by domestic state firms. It was therefore difficult to precisely attribute all variants of a land system to the Soviet Union, Russia, or the domestic defense industry. This chapter therefore uses a Russia/Eastern bloc rubric to denote such systems. When systems have been developed or introduced into service after 1991 by former Eastern bloc countries, which are now EU members, these systems are then attributed to EU sources.

Similarly, the United States supplied its Western allies with land systems during the Cold War. But this practice has changed. It appears that the United States no longer provides many land systems; rather, companies from the United States have acquired European manufacturers of land systems, which in turn supply PESCO participants. The most prominent example is General Dynamics Land Systems, which has acquired, among other corporations, the leading Spanish defense manufacturer Santa Barbara Sistema as well as the leading Austrian company Steyr-Daimler-Puch. These companies are now part of General Dynamics European Land Systems (GDELS). For analysis, systems from a GDELS subsidiary appear under the United States category.

The British BAE Systems used a similar approach. Besides providing older license-built American land systems (e.g., M113 tracked vehicles) to PESCO participants, it has acquired the Swedish manufacturer Hägglunds, which provides several land systems to PESCO participants as well.

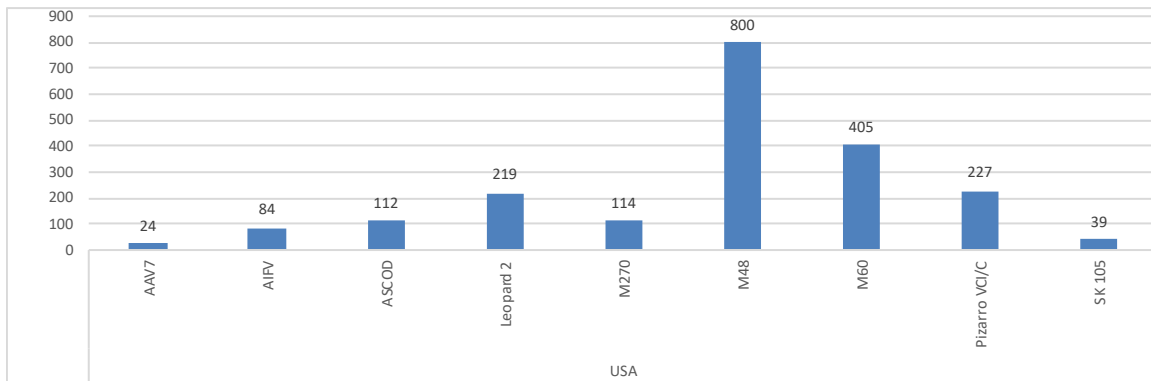
1. United States

The United States supplies PESCO participants with a large variety of tracked, wheeled, and towed systems. These systems are the subject of the following sections.

a. Tracked Vehicles

It appears that the tracked vehicles supplied by the United States to PESCO participants can be separated into two groups: older tracked vehicles built directly by American companies (AAV7 amphibious troop transport, AIFV Infantry Fighting Vehicle, M48 and M60 tanks, M270 artillery systems), and newer systems, which are produced by the European subsidiaries of U.S. manufacturers (Table 27). Examples of this include the Leopard-2 tanks and the Pizarro Infantry Fighting Vehicles (IFV).

Table 27. United States—tracked vehicles, with ten or more delivered to PESCO participants

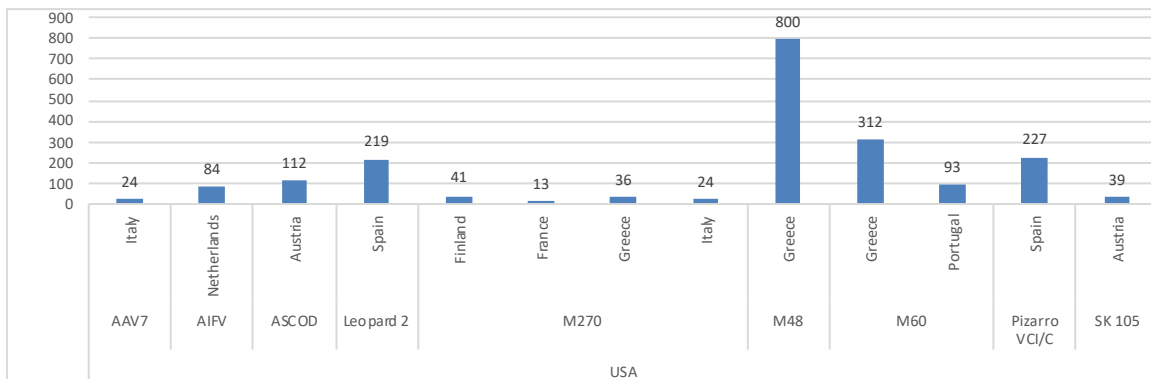


The analysis of the user countries sheds further light on the decisions by U.S. companies to acquire European subsidiaries (Table 28). The ASCOD, Pizzaro, and SK105 were Austrian and Spanish developments (as reflected by user countries), which were then acquired by GDELS. The Spanish Leopard-2E tanks were built by Spanish manufacturer Santa Barbara Sistema, which is now part of GDELS.

It appears that the modern tracked vehicles in the United States category of PESCO participants are largely European developments, whose manufacturers have been acquired by corporations from the United States.

Greece stands out as the main user of many older tracked vehicles directly provided by the United States (M270, M48, M60).

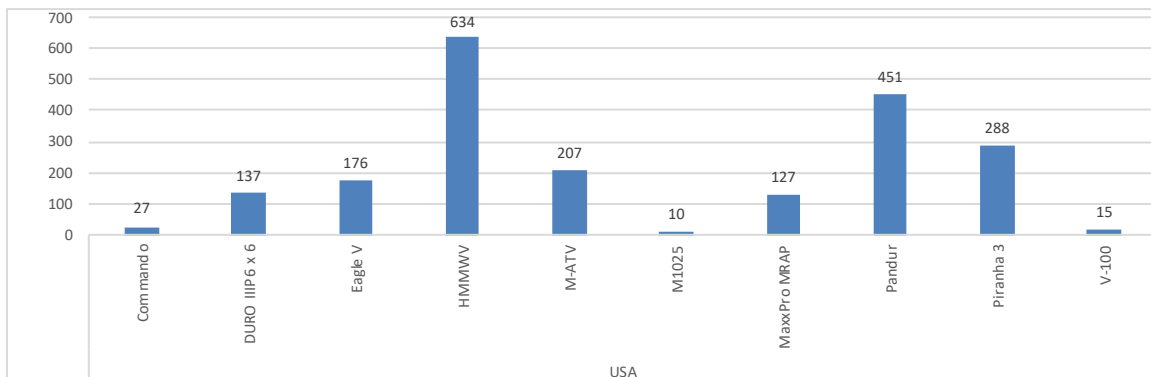
Table 28. United States—PESCO participants, with numbers of tracked vehicles



b. Wheeled Vehicles

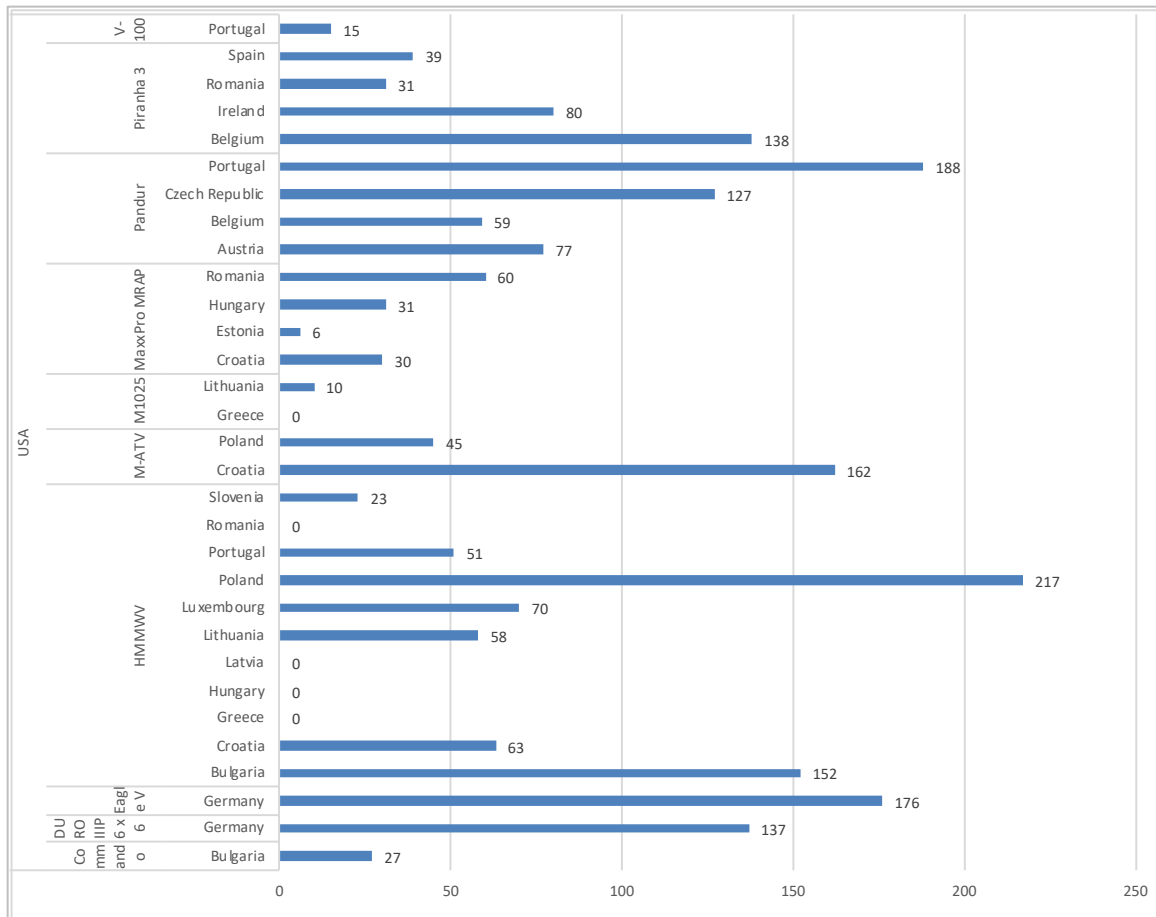
The wheeled vehicles in the United States category of inventories of PESCO participants exemplify the general U.S. approach—to acquire European manufacturers instead of supplying American vehicles directly (Table 29). The Duro, the Eagle IV/V, and the Pandur are European developments (Steyr, MOWAG), whose manufacturers are now part of U.S. corporations. The large number of High Mobility Multipurpose Vehicles (HMMWV) is noteworthy.

Table 29. United States—wheeled vehicles, with ten or more delivered to PESCO participants



It is interesting that Germany is the sole user of the Duro and Eagle vehicles from the PESCO participants (Table 30). The large number of HMMWV is distributed over many PESCO participants, mostly Eastern European countries. Greece, Hungary, and Latvia are also HMMWV users, but the dataset did not provide numbers for them. It appears that the HMMWV together with the MaxxPro MRAP (mine resistant ambush protected) have mainly been provided by the United States to enable the receiving countries to take part in the military operations in Afghanistan and Iraq.

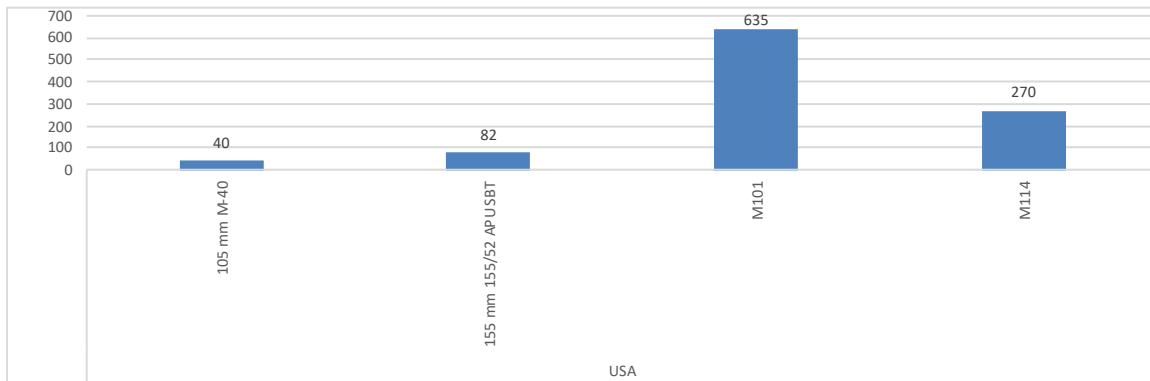
Table 30. United States—PESCO participants, with numbers of wheeled vehicles



c. Towed Systems

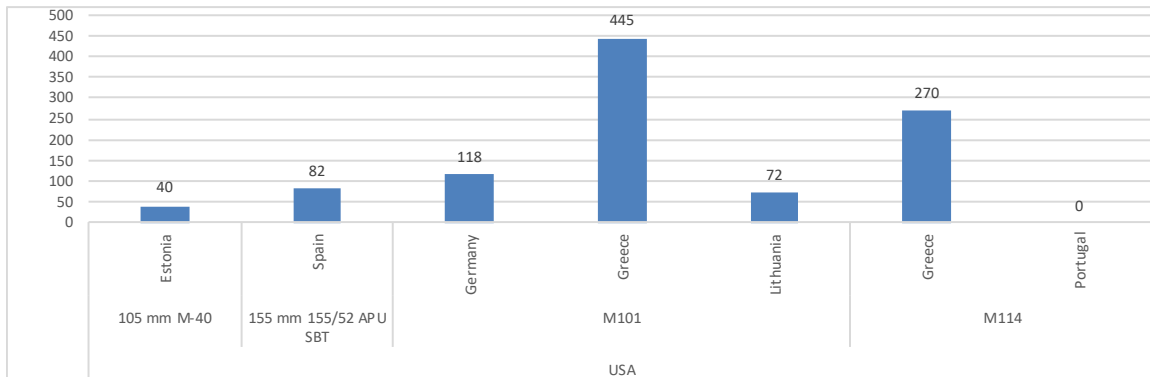
The towed systems in the United States category of PESCO participants' inventories are mostly older artillery systems (Table 31). In this category there is another example of a European-developed system whose manufacturer was acquired by a U.S. corporation (155mm 155/52 APU SBT).

Table 31. United States—towed systems, with 10 or more delivered to PESCO participants



Greece appears to be the main user of the towed systems provided by U.S. corporations (Table 32). Spain—the sole user of the 155mm 155/52 APU SBT—exemplifies the fact that this system was originally a Spanish development of Santa Barbara Sistema.

Table 32. United States—PESCO participants, with numbers of towed systems



To sum up: The U.S. company-provided land systems in the inventory of PESCO participants are older American systems, or newer European developments, whose manufacturer was later acquired by American corporations. The main actor in this field appears to be General Dynamics European Land Systems, which has taken over Santa Barbara Sistema of Spain, Steyr-Daimler-Puch of Austria, and MOWAG of Switzerland.

2. United Kingdom

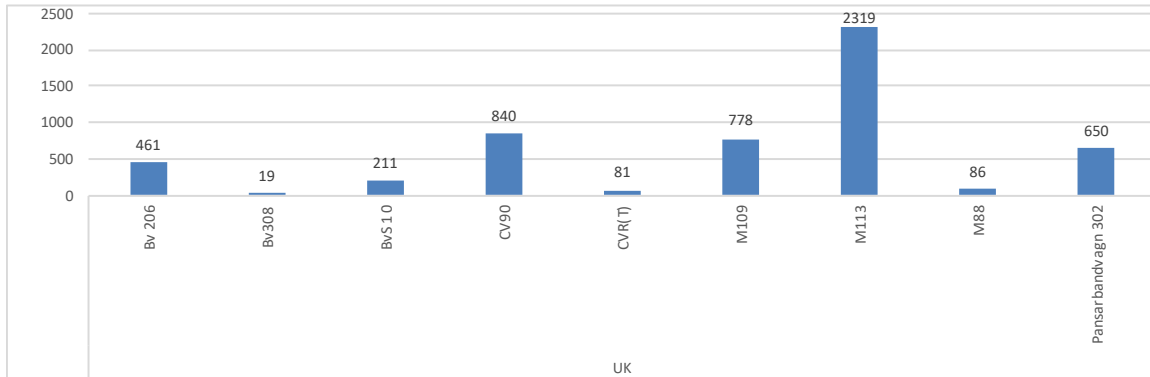
The contribution of the United Kingdom to the land systems inventory of PESCO participants consists mostly of tracked vehicles. Wheeled vehicles and towed systems are provided in much smaller numbers. BAE Systems, the main contributor, does not itself produce vehicles, but uses acquired companies for this task. It appears that Hägglunds and Bofors, both former Swedish companies, were instrumental for equipping PESCO participants.

a. Tracked Vehicles

Tracked vehicles provided by the United Kingdom to PESCO participants can be divided in two groups: older American license-built systems (M109 artillery, M113 troop transport, and the M88 recovery tank) and newer systems, whose original manufacturer was mainly the Swedish Hägglunds company, which was later taken over by the British BAE

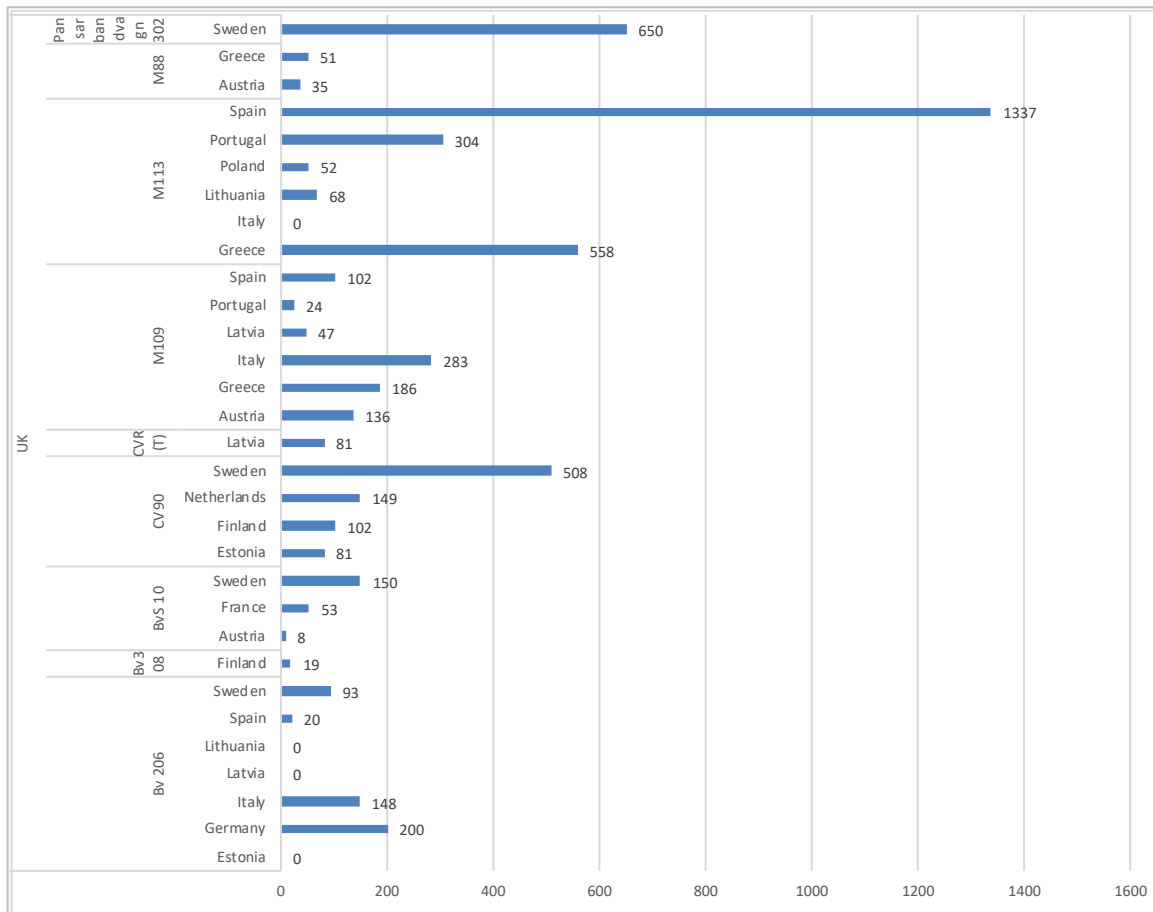
Systems (Table 33). The large number of M113 troop transport vehicles is noteworthy given that the system was originally developed in the 1960s, almost 60 years ago.

Table 33. United Kingdom—tracked vehicles, with ten or more delivered to PESCO participants



The distribution of BAE Systems European-developed tracked vehicles to PESCO participants reflects the range of the original manufacturer Hägglunds, with large numbers in Germany and the neutral Nordic countries Sweden and Finland (Table 34). The older license-built American systems are mainly in the inventories of Greece, Italy, Portugal, and Spain, with smaller numbers in Eastern European PESCO countries.

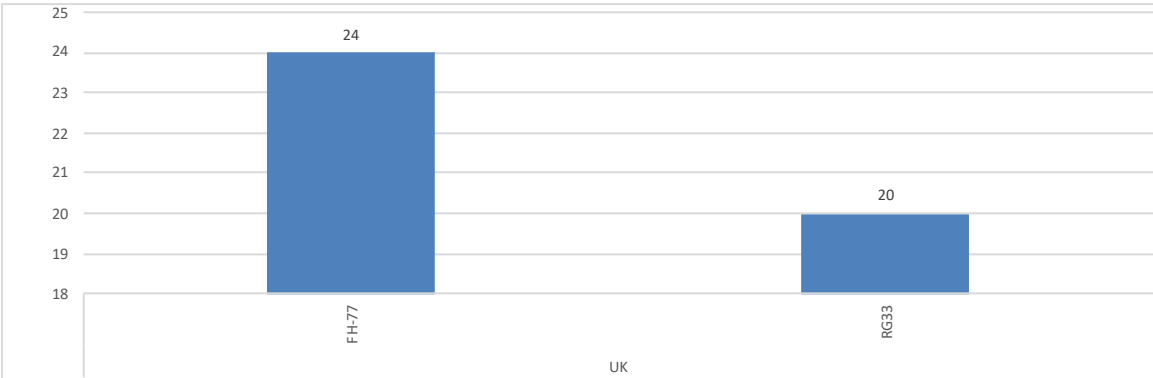
Table 34. United Kingdom—PESCO participants, with numbers of tracked vehicles



b. Wheeled Vehicles

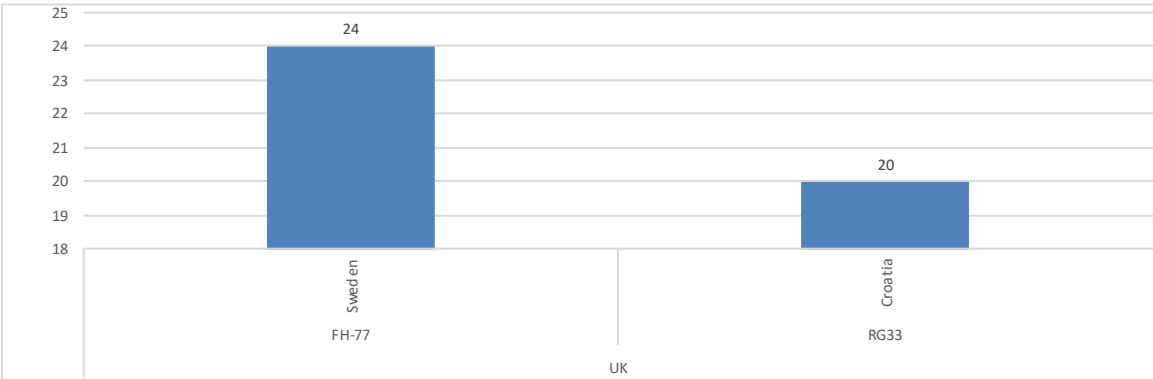
Both wheeled vehicles families supplied by the United Kingdom to PESCO participants are developments from companies that have been acquired by BAE Systems (Table 35). While the FH77 (field artillery) was developed by Bofors of Sweden, the RG33 (mine protected infantry transport) was developed by Land Systems OMC of South Africa.

Table 35. United Kingdom—wheeled vehicles, with ten or more delivered to PESCO participants



There are two user countries of wheeled vehicles supplied by BAE Systems to PESCO participants: Sweden and Croatia (Table 36). It appears that Sweden uses the FH-77 because it was supplied by the formerly Swedish company Bofors. The extremely low numbers of wheeled vehicles as compared to tracked vehicles provided by the United Kingdom to PESCO participants clearly show that the main contribution of the United Kingdom to PESCO participants is in the field of tracked vehicles.

Table 36. United Kingdom—PESCO participants, with numbers of wheeled vehicles



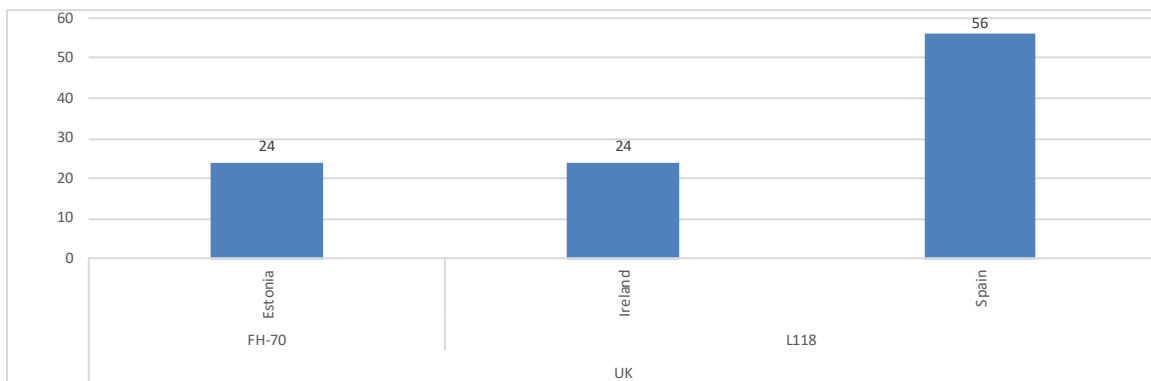
c. Towed Systems

Since the numbers of British-supplied towed systems of PESCO participants are low and there are only two PESCO users, they have been combined in a single table

(Table 37). They exemplify the fact that the main British contributions to the inventory of PESCO participants in land systems are tracked vehicles, and not wheeled vehicles or towed systems.

The FH70 artillery system was jointly developed and produced with Germany and Italy. Therefore, more FH70s will appear in the PESCO participants rubric.

Table 37. United Kingdom—towed systems, with ten or more delivered to PESCO participants



To sum up: The main British contributions to the inventories of PESCO participants consist of tracked vehicles, older license-built American and more modern, European-developed ones. BAE Systems, as the dominant British corporation in this domain, provides these land systems by using acquired European companies. It appears that this is similar to the approach of American corporations, with General Dynamics Land Systems acquiring European companies and incorporating them into General Dynamics European Land Systems, rather than selling original United States-built systems.

3. Russia/Eastern bloc

As previously noted, during the Cold War the Soviet Union supplied its Eastern European allies with many systems. These allies then further developed and adapted the systems for their particular purposes. This category therefore lists not only systems provided originally by the Soviet Union and later Russia, but also the domestic

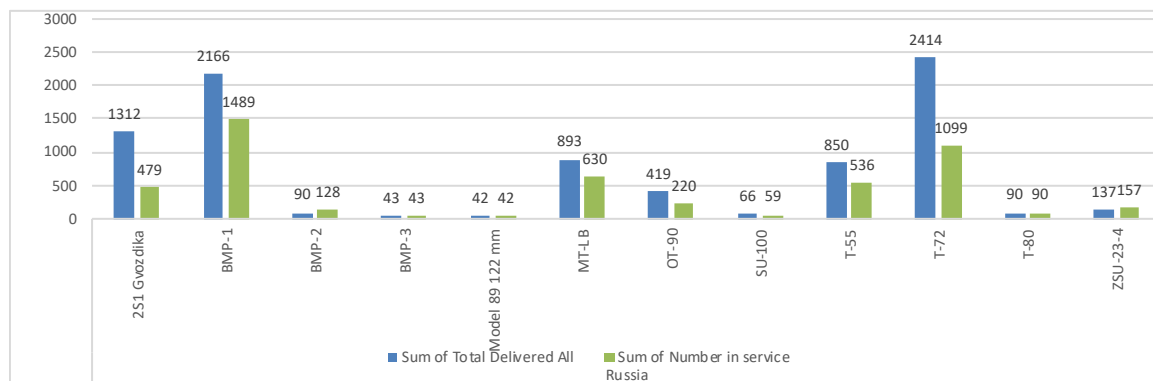
derivatives, as long as the development and introduction into service occurred before 1991, the year in which the Soviet Union broke apart.

For these vehicles, the number of systems still in service has been added, given that the delivery ended at least 30 years ago. If such systems are still in use in large numbers, their existence provides further background for analysis.

a. *Tracked Vehicles*

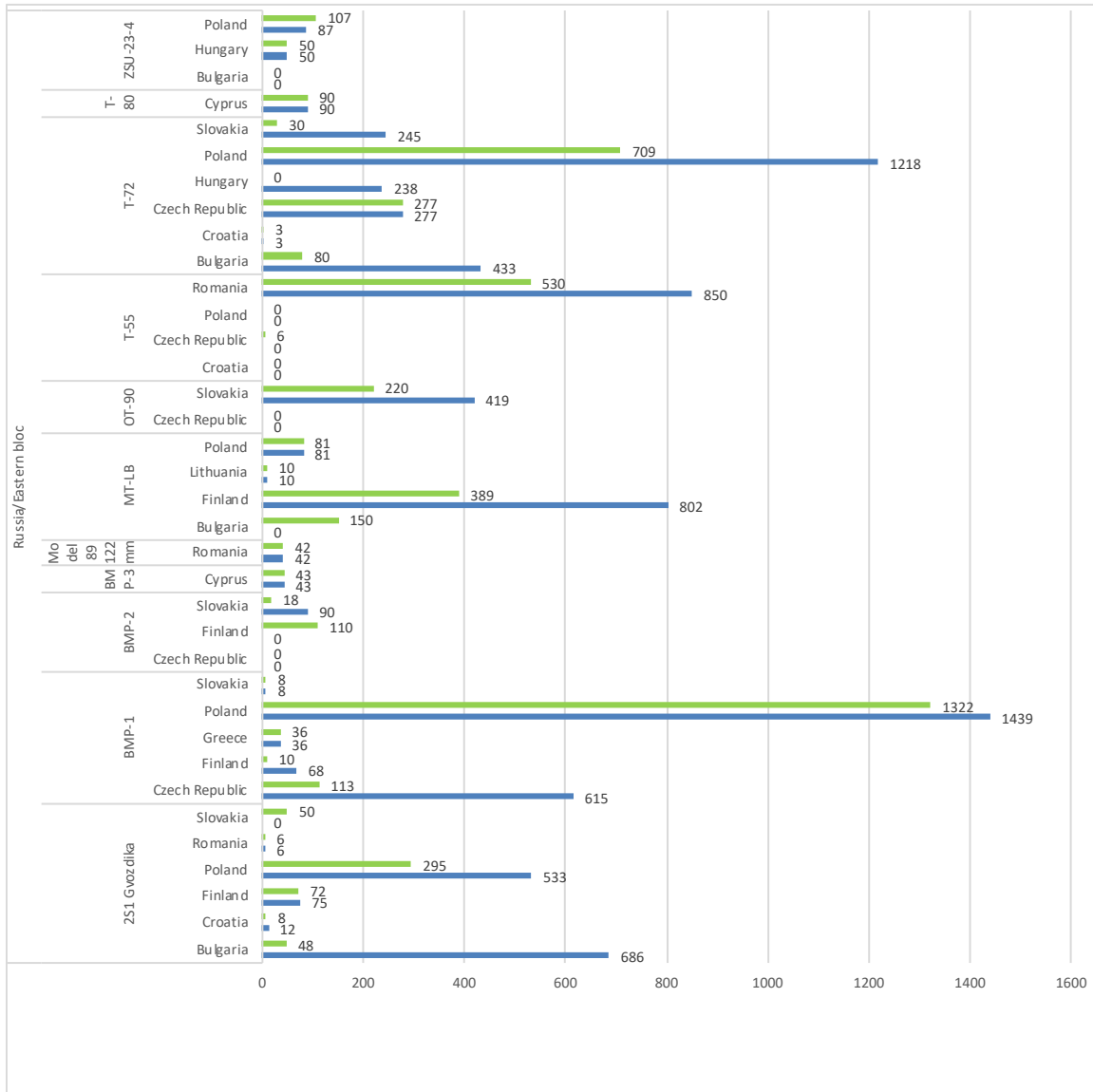
There are still many tracked vehicles of Eastern bloc origin present in the inventories of PESCO participants (Table 38). They range from anti-air (ZSU-23-4) to artillery (2S1, Model 89) to infantry fighting vehicles (BMPs, MT-LB, OT-90) to main battle tanks (T-55, T-72, T-80). The SU-100 is a tank-destroyer from the World War II era.

Table 38. Russia/Eastern bloc—tracked vehicles, with ten or more delivered to PESCO participants



The users of these tracked vehicles reflect their Eastern origin: Except for Cyprus and Finland, all of them are former Eastern bloc countries (Table 39). There appear to be four main users: Bulgaria, Poland, Romania, and Slovakia. Even though the numbers are decreasing, Eastern-bloc tracked vehicles are still in sustained use in the user countries.

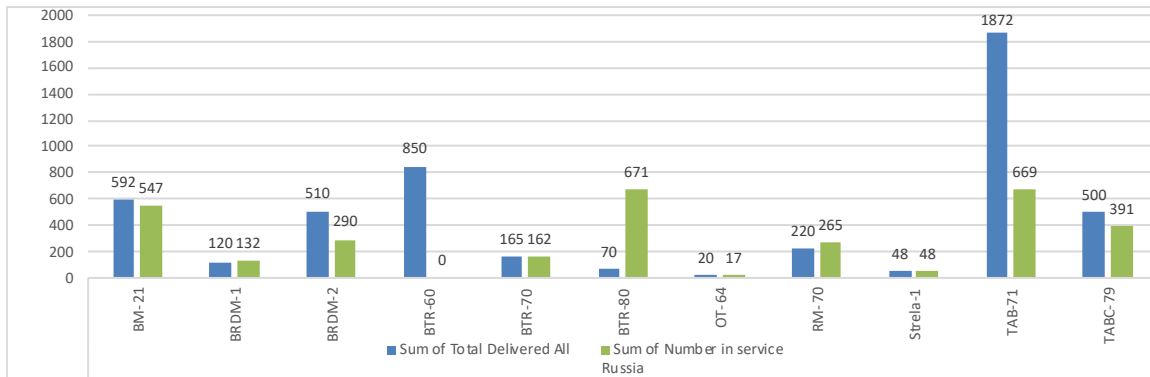
Table 39. Russia/Eastern block—PESCO participants, with numbers of tracked vehicles



b. Wheeled Vehicles

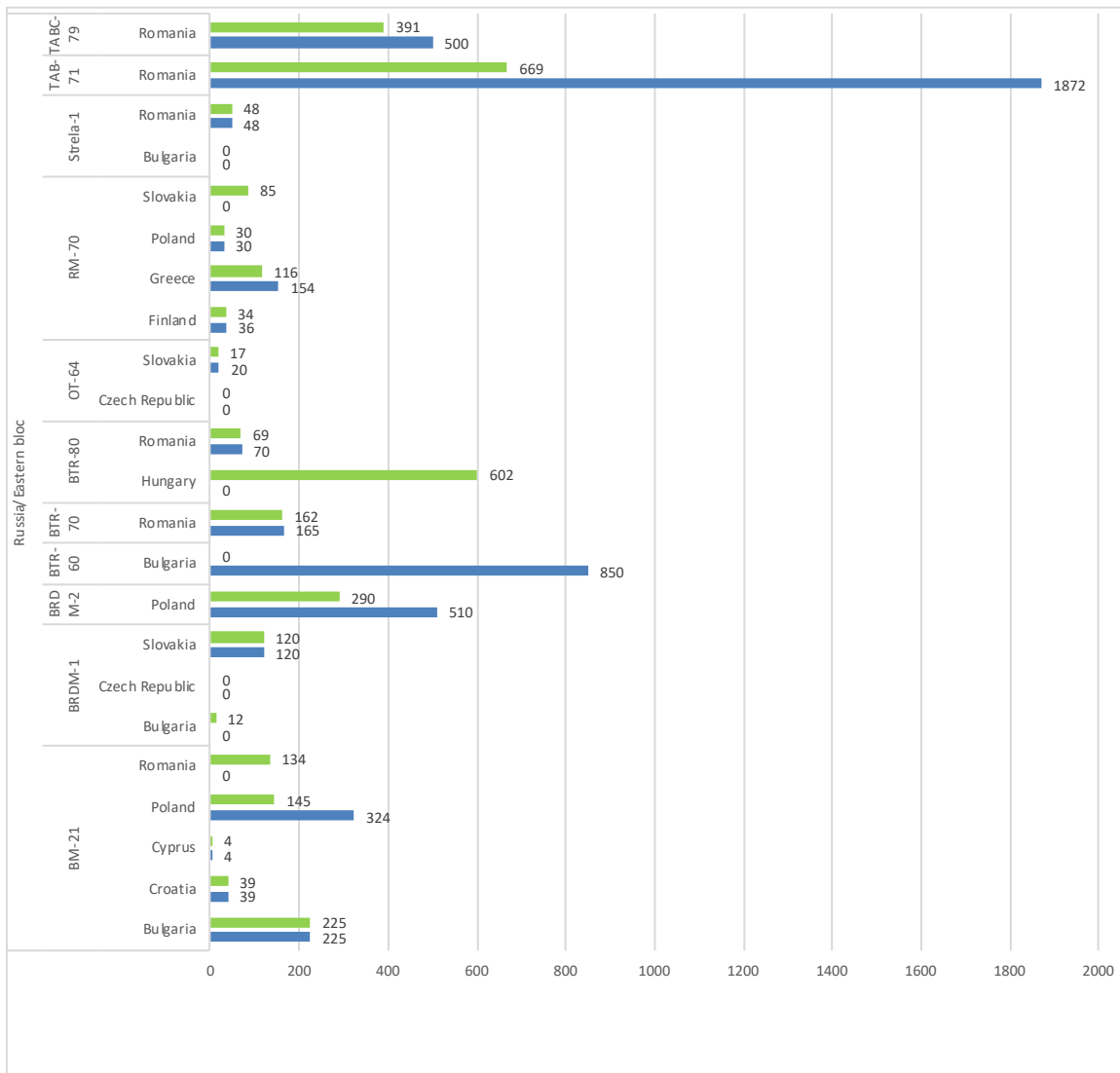
There are, as with tracked vehicles, many wheeled vehicles of Eastern bloc origin in the inventories of PESCO participants (Table 40). They cover a wide range, from rocket artillery (BM-21, RM-70) to reconnaissance (BRDM), to personnel carriers (BTR, OT-64, TAB-71, TABC-79), and to air defense (Strela 1).

Table 40. Russia/Eastern bloc—wheeled vehicles, with ten or more delivered to PESCO participants



The user range of these vehicles reflects their Eastern bloc origin: Except for Cyprus and Finland, only former Eastern bloc countries among PESCO participants use them (Table 41). The main users are Bulgaria, Poland, and Romania.

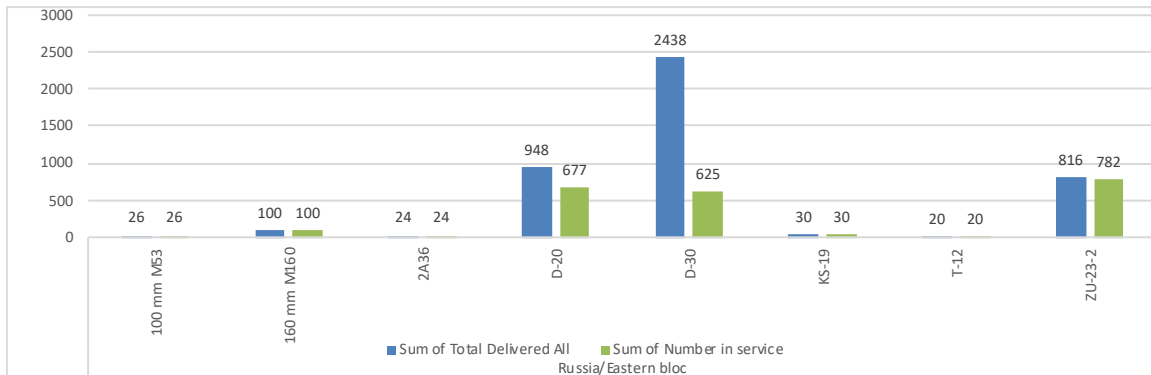
Table 41. Russia/Eastern bloc—PESCO participants, with numbers of wheeled vehicles



c. Towed Systems

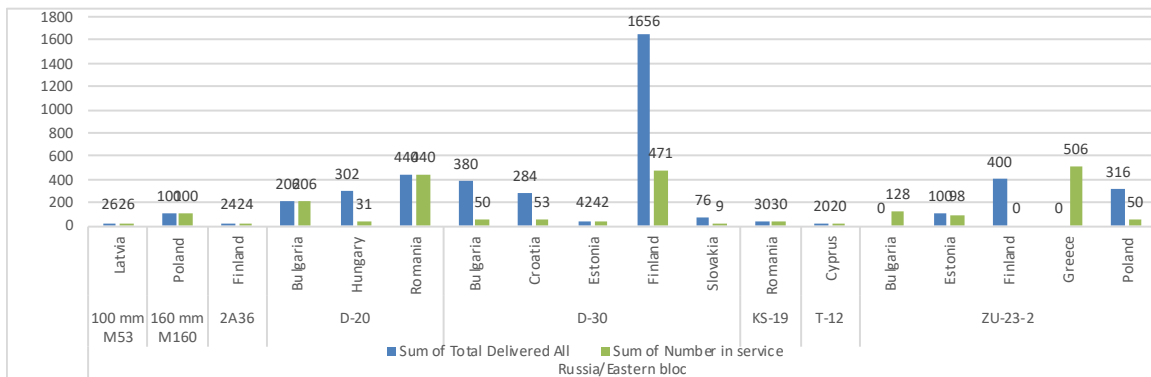
PESCO participants also possess many Eastern-bloc towed systems (Table 42). They range from anti-tank guns (100mm M53, T-12), to heavy mortars (160mm M160), to field guns (2A36, D-20, D-30), and to air defense (KS-19, ZU-23-2). The variety of systems is large. Nevertheless, the D-20 and D-30 field guns are clearly the most dominant in number.

Table 42. Russia/Eastern bloc—towed systems, with ten or more delivered to PESCO participants



The Eastern-bloc towed systems are, just like their tracked and wheeled vehicles counterparts, present in the former Eastern bloc countries, with Finland as the sole exception (Table 43). Finland, somewhat surprisingly, possesses the highest number of the D-30 field guns, even though only 471 are still in service.

Table 43. Russia/Eastern bloc—PESCO participants, with numbers of towed systems



To sum up: Land systems provided by the Soviet Union, Russia, and the Eastern bloc are still present in the inventories of PESCO participants, even though the systems are mostly limited to former Eastern bloc countries. These are mainly older systems present in decreasing numbers. Even though domestic firms are adapting and improving

them, it appears that these systems will soon reach the end of their usefulness due to limitations in design.

4. PESCO Participants

After identifying which tracked and wheeled vehicles and towed systems are provided to PESCO participants by non-EU sources, it is useful to analyze which systems are provided by EU sources. Such a comparison makes it possible to find out whether there are systems and capabilities that can only be provided by non-EU sources, indicating an obstacle to a European strategic autonomy.

Since for this chapter it is not of interest to know which specific PESCO countries are using which particular EU-provided systems, only a generalized perspective is provided here.

a. *Tracked Vehicles*

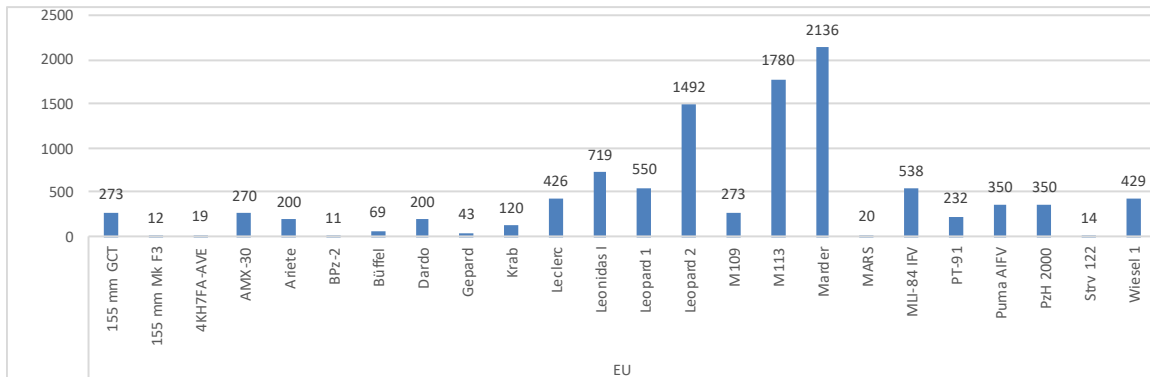
PESCO participants use a high number of EU-produced tracked vehicles (Table 44). Some of them are license-built American systems (M109, M113, M48), although most of them are European developments. It seems that Krauss-Maffei Wegmann of Germany and Nexter of France take the pride of place. They provide a whole range of systems, from main battle tanks to infantry fighting vehicles, and artillery. Smaller systems, like the airborne-capable Wiesel tank, and specialized recovery systems, like the Büffel, are also part of their portfolio.

It appears that EU companies can deliver all required tracked vehicle-based capabilities to PESCO participants. Unlike fixed-wing jet aircraft, where the F-35 represents a capability that cannot be provided yet by EU companies, such a gap does not exist in the category of tracked vehicles. Quite on the contrary, it seems that non-EU corporations are acquiring European companies to improve their own capabilities.

The variety of EU-provided tracked vehicles is high. Given that non-EU suppliers also provide tracked vehicles to PESCO participants, it seems that PESCO participants operate a high number of comparatively small fleets of different vehicles from various

manufacturers. The result is that economies of scale cannot be used by PESCO participants, leaving them with high maintenance costs and degraded interoperability.

Table 44. EU—tracked vehicles, with ten or more delivered to PESCO participants

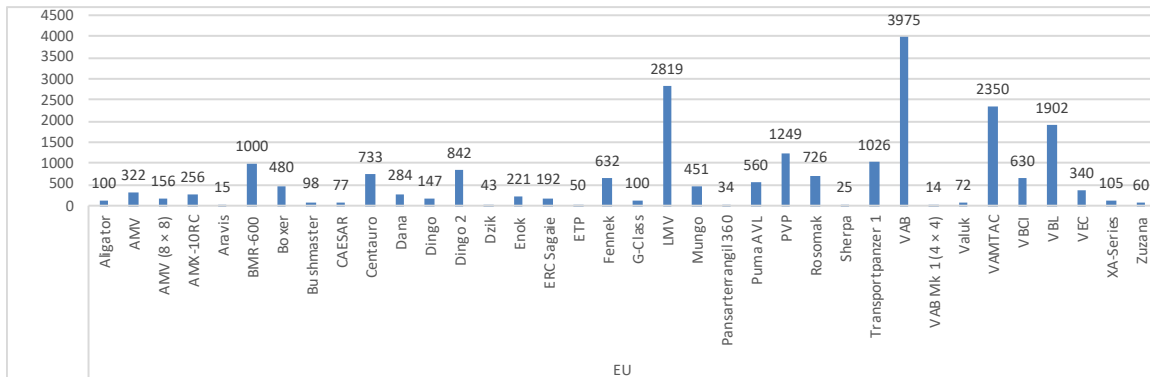


b. Wheeled Vehicles

The category of EU-supplied wheeled vehicles in the inventories of PESCO participants largely reflects the picture of tracked vehicles (Table 45). The high number of different vehicles indicates a high number of different producers. It is striking to see that this variety in vehicles is accompanied by comparatively low numbers of most of them. Again, with non-EU sources providing additional wheeled vehicles, the issue of small fleets with high costs and degraded interoperability is exemplified.

As with tracked vehicles, it seems that EU sources can provide all required wheeled vehicle-based capabilities. There is no technology gap between EU- and non-EU providers in these domains. Given that non-EU companies are acquiring European manufacturers, it seems that European corporations are attractive targets for take-over because of their technological competitiveness.

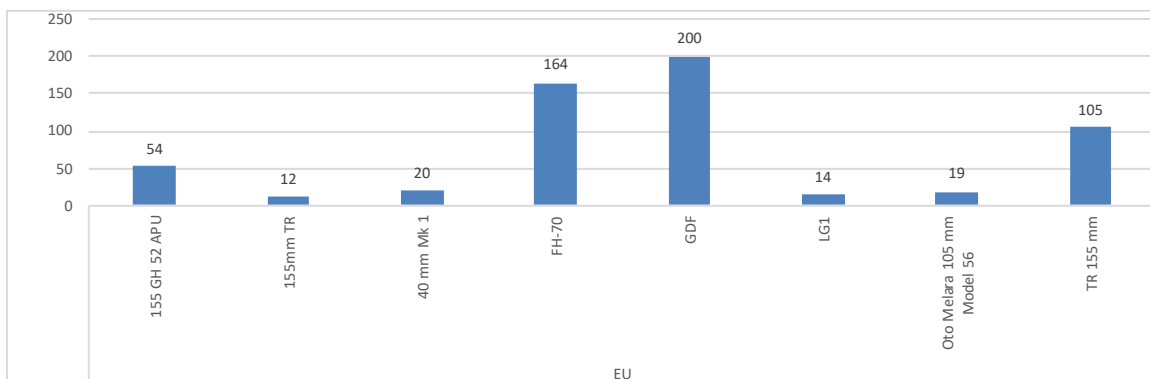
Table 45. EU—wheeled vehicles, with ten or more delivered to PESCO participants



c. Towed Systems

EU sources provide PESCO participants with towed systems (Table 46). When compared with tracked and wheeled vehicles, the numbers appear exceedingly low. Since non-EU sources provide low numbers of towed systems as well, it seems that the expeditionary operations since the early 1990s did not rely largely on towed capabilities, which mostly are artillery or air-defense systems. It remains to be seen whether the focus on collective defense will bring towed systems back into the good graces of military procurement agencies.

Table 46. EU—towed systems, with ten or more delivered to PESCO participants



5. Summary for Land Systems

The three major non-EU suppliers (the United States, the United Kingdom, and the Russia/Eastern bloc) of land systems to the PESCO participants provided tracked vehicles, wheeled vehicles, and towed systems. As with the result of the analysis of air systems, the former Cold War divide is also visible in land systems, with Eastern bloc material almost exclusively present in former Eastern bloc countries. The older Eastern bloc material is still in use in these countries, but the numbers of these systems are decreasing. It can therefore be concluded that these systems will need to be replaced soon.

The contributions of the United States and the United Kingdom to the land systems inventory of PESCO participants can be divided in two groups: older, license-built American systems (e.g., the M113 family), and newer systems, which were developed by European companies and later acquired by U.S. or British companies. The most prominent examples are General Dynamics European Land Systems of the United States and BAE Systems of Great Britain.

Comparing the land systems provided by non-EU and EU sources, the analysis finds no trans-Atlantic technology gap in this domain. European manufacturers are perfectly capable of delivering the required capabilities to PESCO participants. Indeed, it seems that non-EU corporations are trying to acquire European companies for their technological capabilities.

It can be concluded that in the field of land systems the EU does indeed possess a genuine level of strategic autonomy. Looking at the approach of non-EU manufacturers, the biggest threat to European strategic autonomy in land systems could come from losing European companies to outside competitors, notably American corporations. This can only be addressed by increasing the acquisition programs of PESCO participants, and by enlarging the European companies, thus increasing the hurdle for outside takeover

attempts. In view of the merger of KMW of Germany and Nexter of France to KNDS (KMW+Nexter Defense Systems) it seems that this is already happening.¹⁸⁸

F. PESCO AND NON-EU PROVIDED AIR AND LAND SYSTEMS

This chapter now examines the various PESCO projects to determine whether they contribute to European strategic autonomy, given the results of the analysis of the provision of air and land systems.

1. Air Systems

PESCO contains three programs under the heading “Air, Systems.”¹⁸⁹ These are a European Medium Altitude Long Endurance Remotely Piloted Aircraft Systems (MALE RPAS), European Attack Helicopters Tiger Mark III, and counter-unmanned aerial systems.

A comparison of these projects to air systems provided solely by non-EU sources shows that only the MALE RPAS project delivers a genuinely new capability that was previously not available from EU sources.

The other gaps in aircraft systems that cannot yet be filled by EU sources (fifth-generation fighter bomber, and heavy transport helicopters) are not part of PESCO. This means that significant gaps in the aircraft inventory of PESCO participants will remain as long as they rely solely on EU sources. For a fifth-generation fighter bomber or heavy transport helicopters PESCO participants must turn to systems provided by the United States. This dependence on U.S. suppliers means that PESCO, as currently envisaged, will not deliver European strategic autonomy in the air systems inventory.

Three PESCO participants have apparently decided to develop a next-generation aircraft system outside of PESCO, with France, Germany, and Spain participating.¹⁹⁰

¹⁸⁸ KNDS, “About KNDS,” Decades of Expertise in Land Defense, 2019, <https://www.knds.com/about-knds.html>.

¹⁸⁹ Council of the European Union, “Permanent Structured Cooperation (PESCO) Updated List of PESCO Projects - Overview.”

¹⁹⁰ Michael Gubisch, “Spain Joins Franco-German FCAS Fighter Programme,” February 15, 2019, <https://www.flightglobal.com/news/articles/spain-joins-franco-german-fcas-fighter-programme-455828/>.

Such an approach would indicate that PESCO is not seen as the right venue to develop such cutting-edge technology. It is hard to see how PESCO can deliver a genuine level of strategic autonomy when major participants are circumventing the alliance for important projects that could deliver genuinely new capabilities.

2. Land Systems

PESCO contains several projects under the “Land, Formations, Systems” headline.¹⁹¹ These programs encompass a “Deployable Military Disaster Relief Capability Package,” an “Armoured Infantry Fighting Vehicle/Amphibious Assault Vehicle/Light Armoured Vehicle,” an “Indirect Fire Support” (EuroArtillery), an “EUFOR Crisis Response Operations Core” (EUFOR CROC), an “Integrated Unmanned Ground System” (UGS), and an “EU Beyond Line of Sight (BLOS) Land Battlefield Missile System.”

Since the analysis revealed that EU sources can deliver all current technologies in land systems, PESCO is not required to close a technology gap in this domain. But it was also revealed that PESCO participants operate a high number of different tracked and wheeled vehicles as well as towed systems. The main benefit of PESCO in land systems appears to be to contribute to a higher level of European interoperability. Such interoperability would be maximized if many PESCO participants took part in these land systems projects, and if the participants then acquired the developed systems to replace older ones. But not many PESCO countries take part in these programs. The “Armoured Infantry Fighting Vehicle” project consists of three participants (Italy, Greece, and Slovakia). The “EuroArtillery” is developed only by Slovakia and Italy. The “Land Battlefield System” is only developed by Belgium, Cyprus, and France. It is also surprising to see that France and Germany, despite their strong industrial base for producing land systems, are not participating in most of the land system projects. It can be concluded that these countries want to develop new systems, as announced by KNDS

¹⁹¹ Council of the European Union, “Permanent Structured Cooperation (PESCO) Updated List of PESCO Projects - Overview.”

on its homepage,¹⁹² but separate from PESCO. This approach will seriously undermine PESCO as the main collaborative effort of the EU to improve the development of military capabilities.

G. CONCLUSION OF THE INVENTORY PERSPECTIVE

The analysis of the inventory of PESCO participants in the categories of air systems and land systems revealed that these countries already rely heavily on EU manufacturers for equipping their militaries.

But additionally, PESCO participants still operate many air and land systems from non-EU sources, with the United States, the United Kingdom, Russia and the former Eastern bloc, and Switzerland as main contributors. This large variety of different suppliers and systems is one of the reasons for the lack of efficiency in military capabilities among EU members. Many small fleets of different systems create high maintenance costs for the user and degrade interoperability when deployed with other nations.

The result of the analysis also revealed that a clear distinction exists between the realms of air and land systems.

Although EU companies are highly capable, they cannot yet deliver a fifth-generation fighter bomber, like the Lockheed F-35. They can also not yet provide a heavy transport helicopter, like the CH-47 or CH-53. Moreover, there is not yet a large armed UAS to be had from EU companies. This technological gap between U.S. producers of such systems and their European competitors indicates that for a genuine level of European strategic autonomy such systems should be developed by European companies under the PESCO umbrella. But PESCO only provides one such project: the MALE RPAS. PESCO does not include projects for a fifth-generation fighter aircraft nor for a heavy transport helicopter. At the same time, France, Germany, and Spain have decided to jointly develop the Future Combat Air System outside of the PESCO framework. It is

¹⁹² KNDS, “KMW and Nexter Join Forces on Main Ground Combat System,” June 20, 2018, https://www.knds.com/sites/default/files/img_knds/fichier_presse/KMW%20and%20Nexter%20join%20forces%20on%20Main%20Ground%20Combat%20System.pdf.

unclear why this decision was taken, but as a result, the ability of PESCO to contribute to a true European strategic autonomy in the field of air systems is seriously undermined.

The category of land systems is different. The results of the analysis revealed that European manufacturers can deliver advanced and capable systems to their customers. PESCO is not needed to close a technological gap between European and non-EU manufacturers. It appears that in the field of land systems the challenge is to keep European companies independent and not let them become subsidiaries of so-called “third countries.” General Dynamics European Land Systems is one example of the approach of American companies to acquire European companies rather than develop and provide U.S.-built land systems. This fact might have been the driving force behind the European Commission’s decision to limit financial grants of the EDF for the development of military capabilities to EU-only companies.¹⁹³ It appears that in the field of land systems the EU has already acquired a certain level of strategic autonomy, which is now threatened by outside competitors.

¹⁹³ European Commission, “EU Budget for 2021-2027: Commission Welcomes Provisional Agreement on the Future European Defence Fund.”

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VI. CONCLUSION

The aim of this thesis was to determine whether the Permanent Structured Cooperation contributes to the strategic autonomy of the European Union in security and defense policy. In other words, is PESCO providing a coherent effort to achieve “strategic autonomy,” or is it just a collection of miscellaneous initiatives under one umbrella? Is PESCO likely to pursue only temporary political results, or does it manifest the potential to overturn the transatlantic order?

The premise was that the EU does not yet possess this strategic autonomy, because (1) the members do not want the EU to be strategically autonomous, (2) the EU member states do not possess all the military capabilities required to act autonomously, and (3) EU member states are dependent on non-European sources to equip their militaries.

The thesis turned first to the political perspective and analyzed political statements and speeches by politicians from the EU and from PESCO participating nations. The analysis also took the participation in the 34 different PESCO projects into account. The thesis then focused on the operational perspective by evaluating information from different European military deployments, with an emphasis on operational shortfalls on the part of the EU countries. Then the identified operational shortfalls were compared to the various PESCO projects to determine whether PESCO addresses them, completely or in part, to increase the strategic autonomy of the EU. Then the thesis addressed the inventory side of PESCO by examining the military inventories of PESCO participants, focusing on systems supplied from non-EU sources. The result was then evaluated against the different PESCO projects to determine whether PESCO contributes to European strategic autonomy by replacing systems from non-EU sources with systems from EU sources.

The political perspective has shown that the 25 PESCO participants do not expect or want the European Union to take over the core mandate of NATO, namely the collective defense of Europe. They generally regard PESCO as an instrument to

strengthen the European pillar within NATO by improving the military capabilities of the European allies. PESCO is also viewed as an excellent opportunity for industrial gains.

The participation in PESCO projects is largely in line with the political statements of political leaders. Countries that expressed strong support for the EU improving its military capabilities also took part in more projects than countries skeptical about a strong role for the European Union in security and defense policy and prefer NATO to that end. It was striking to see that countries with a Russian border or otherwise situated in close proximity to Russia generally expressed their support for NATO, whereas countries in Central and Western Europe were more supportive of a strong role for the EU in security and defense policy. Consequently, the political perspective supports only a limited strategic autonomy for the European Union, with a view to crisis management within Europe or in its neighborhood.

The analysis of EU military deployments in different missions and operations has revealed several capability shortfalls on the part of the European countries. These shortfalls are documented in the strategic, operational, and tactical spheres. The most important shortfalls are in air lift, with an emphasis on outsize cargo, air refueling, and unmanned aerial systems for intelligence, surveillance, and reconnaissance (ISR). When compared with the different PESCO projects, it appeared that many shortfalls are indeed addressed by PESCO, wholly or in part. It could also be shown that EU member states had already launched several initiatives, even before PESCO, to address capability shortfalls. Examples of capability shortfalls covered by PESCO projects or other initiatives include a permanent operational headquarters possessing a constant planning capability, and the EU Medical Command, which comprehensively addresses shortfalls in the medical support to operations.

But significant gaps in the capabilities of EU member states remain. Most importantly, the most referenced and documented shortfalls, air lift and air refueling, are not part of PESCO, but rather of other initiatives, like the Multinational Multi Role Tanker Transport Fleet and the Strategic Airlift Capability. Even though these initiatives provide some improvements, they cannot compensate for the general lack of assets on the part of the Europeans. To illustrate, in address the shortfall in air refueling, the MMF

provides for eight tanker aircraft for participating nations, whereas the U.S. Air Force is currently acquiring 179 tanker aircraft to replace one-third of its tanker fleet. Even if EU members add their organic tanker aircraft, their numbers remain extremely small. This huge gap in capabilities between European countries and the United States demonstrates clearly that the EU member states remain dependent on outside support for conducting military deployments. Since the United States operates the largest fleets of tanker aircraft and strategic air lift assets, it is the United States that the Europeans will continue to turn to for support. From an operational perspective, PESCO improves several military capabilities of its participating nations, but it does not provide for European strategic autonomy, not even in crisis management operations, let alone the collective defense of Europe.

The analysis of the inventories of PESCO participants revealed that even though many use systems from EU sources, they also operate many air and land systems from non-EU sources. The most prominent suppliers from outside the EU are the United States and Russia/the Eastern bloc for both air and land systems, the United Kingdom¹⁹⁴ for land systems, and Switzerland for air systems.

The inventory perspective showed that a distinction must be made between air and land systems. Although EU companies cannot yet deliver fifth-generation aircraft like the U.S.-built F-35, heavy transport helicopters, and armed unmanned aerial systems, such a technological gap does not exist for land systems. Here European manufacturers can deliver all required capabilities. In fact, it appears that American and British corporations are acquiring European companies to stay competitive in the land sector.

For genuine European strategic autonomy, two different approaches are necessary: European companies must be enabled to deliver cutting-edge technology in the air sector, and they must be guarded against take-overs by “third countries” in the land sector. But PESCO contains a project for an armed UAS, and none for fifth-

¹⁹⁴ In this thesis, the United Kingdom has been categorized as a non-EU source, even though it still is an EU member state. Since the United Kingdom is slated to leave the EU in 2019, and it also is a major supplier of land systems to PESCO participants, it made sense to categorize the United Kingdom as non-EU to come to meaningful results.

generation aircraft or heavy transport helicopters. Therefore, it does not provide for European strategic autonomy in the air sector.

PESCO does contain, however, several projects for land systems, which are not needed from a technological perspective. Nonetheless, such projects might contribute to a consolidation of European manufacturers, protecting them against outside take-overs, and thereby keeping the EU autonomous in this sphere.

It must be noted that several European countries have decided to develop major systems in the air as well as in the land sector outside of the PESCO framework. These are the Future Combat Air System¹⁹⁵ and the Main Ground Combat System.¹⁹⁶ Such decisions show that PESCO is not seen as the only framework for developing needed military capabilities. This, in turn, seriously degrades the impact of PESCO on European strategic autonomy, making PESCO appear as just another program for collaborative development rather than a coherent and comprehensive one-stop shop. From an inventory perspective, PESCO can contribute to decreasing the European Union's dependence on non-EU suppliers, especially in the land sector. In the air sector, PESCO does not contribute to European strategic autonomy, because it does not contain projects for closing the gap between European companies and American manufacturers of fifth-generation aircraft and heavy transport helicopters. This means that PESCO participants are still dependent on non-EU sources for such systems.

Nevertheless, the Permanent Structured Cooperation is an important step in improving the military capabilities of its participants. Together with the Coordinated Annual Review on Defense and the European Defence Fund it has excellent potential to make the participants much more capable in military matters. But it does not close the most important operational shortfalls, nor does it contain the projects needed for true independence from non-EU sources. Most importantly, the PESCO participants do not want the EU to be strategically autonomous in the sense of becoming a European NATO responsible for the collective defense of Europe without the United States.

¹⁹⁵ Gubisch, "Spain Joins Franco-German FCAS Fighter Programme."

¹⁹⁶ KNDS, "KMW and Nexter Join Forces on Main Ground Combat System."

It appears that PESCO's goal of European Union "strategic autonomy" is more a political buzzword for "selling" PESCO than a guiding principle for it. But even if PESCO "only" contributes to an improved military posture for European defense establishments, this in itself will represent progress.

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