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TRENDS ON THE COMPOSITION OF PERMANENT STRUCTURED COOPERATION PROJECTS AND RELEVANT EFFECTS ON EU STRATEGIC AUTONOMY: AN INSTITUTIONALIST APPROACH

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Abstract: *The EU has gradually institutionalised its defence structures aiming at strengthening its strategic autonomy. In this framework, Permanent Structured Cooperation (PESCO) projects appear to be the spearhead of the EU's efforts to enhance its military capabilities. In this framework, this article aims to shed light on the composition of the PESCO projects in order to identify potential path dependencies that may affect the EU's pursuit of strategic autonomy. For this purpose, member states' participation in the first three waves of PESCO projects is examined using descriptive statistics supported by network analysis. The subsequent findings are analysed through the lens of institutionalism to identify potential path dependencies. Against this backdrop, it is argued that existing arrangements and predominant views shape path dependencies that generate participation trends in PESCO projects and influence EU strategic autonomy. Notably, there are two forms of path dependencies with different dynamics. The one drives the composition of various PESCO projects. This form reveals specific trends concerning Member State's decisions to join or not a PESCO project, regardless of its scope and objectives. In addition, this form of path dependency reveals a subset of member states eager to project leadership and, this way, enhance the effectiveness of PESCO projects. On the other hand, the second form of path dependencies limits the EU's potential for strategic autonomy.*

Keywords: PESCO projects, NATO, Path dependency, Autonomy.

1. Introduction

Developments in the Common Security and Defence Policy (CSDP) seem accelerated in recent years. The pursuit of the EU's strategic autonomy has been declared by the EU Global Strategy (EEAS, 2016). Also, the establishment of the Permanent Structured Cooperation

(PESCO) in 2017 signalled EU efforts to boost cooperation on defence among those EU Member States (MS) who are capable and willing to do so. Ultimately, all the MS, except Denmark and Malta, joined PESCO and committed to developing defence capabilities through collaboration within the EU framework.

Against this backdrop, this article aims at researching how PESCO projects' composition may affect EU strategic autonomy. Notably, the article adopts an institutional approach to examine whether path dependencies exist concerning member states' participation in PESCO projects and, if yes, how they affect the EU's pursuit of strategic autonomy.

Institutionalism had been extensively used in political sciences. However, the rise of behaviouralism after the Second War pushed it back and left space for the *new institutionalism* (Hall and Taylor, 1996; Peters, 1999). Aspinwall and Schneider (2000) mention that the articles of March and Olsen (1983) and Scharpf (1988) paved the way for the development of new institutionalism, which "emphasises the relative autonomy of political institutions, possibilities for inefficiency in history, and the importance of symbolic action to an understanding of politics" (March and Olsen 1983, p. 734). Hall and Taylor (1996) differentiate three formations of the new institutionalism: *historical*, *rational choice* and *sociological*. However, they underline that the main research question of an institutional analysis focuses on how institutions affect individuals' behaviour. Following the variety of institutional approaches, there are various definitions of institutions. Particularly, institutions are often conceptualised as vague as to leave space for any research or article to adopt a somehow different definition. That is why many argue that new institutionalism faces a shortfall regarding a clear delineation of what institutions are (Steunenberg and Vught, 1997).

March and Olsen (2008, p. 3) define institutions as "a relatively enduring collection of rules and organised practices, embedded in structures of meaning and resources that are relatively invariant in the face of turnover of individuals and relatively resilient to the idiosyncratic preferences and expectations of individuals and changing external circumstances". Saurugger (2014) tries to shed light on what an institution is by noting that institutions can be distinguished in formal/informal and organisations; the former set up the game rules while the latter delineates the players. Nevertheless, institutionalists agree that once an institution is established, it develops its own dynamic independently of the adopted definition. This article

adopts a broad definition in this framework -following historical institutionalism- by taking institutions as "formal or informal procedures, routines, norms and conventions" (Hall and Taylor, 1996, p. 938). Thus, PESCO projects are taken as an institutionalised process of defence cooperation. The principal assumption of historical institutionalism is that historical factors, such as past arrangements and institutionalised norms, intervene in politics. Therefore, actors' preferences result from their rational choice under constraints being imposed by past decisions. Precisely, past institutional arrangements and routines delineate the space in which actors move. In other words, their present activity is *path-dependent*. Krasner (1988) sketches how historical institutionalism enhances our understanding of evolutions related to a sovereign state and, more generally, social structures. This is because the imprint of past choices affects any political development, yet without excluding changes. To illustrate the point, once an actor subscribes to an institution or institutionalised process, it becomes difficult to go back on, at least without cost.

Having delineated the theoretical approach of this article, a question concerning the notion of *strategic autonomy* arises. Unfortunately, there is a lack of a clear definition. However, it can be more easily deduced what EU strategic autonomy *is not* from a Council's point of view (Council of the EU/General Secretariat, 2021):

- autarky, protectionism, isolationism, or unilateralism,
- mere rejection of NATO,
- limited to security and defence issues,
- constraints of EU values and interests,
- an absolute goal in itself.

Fiott (2018) discerns three different conceptual notions of strategic autonomy: autonomy as *responsibility*, autonomy as *hedging* and autonomy as *emancipation*. According to the first one, MS should take up a more significant share of the burden inside NATO. Thereby, this notion implies that MS should have the ability to carry out missions and operations autonomously without precluding other forms of dependencies on NATO and the US. However, it can be argued that as regards defence, strategic autonomy cannot be achieved as long as the EU does not develop capabilities that it owns and can autonomously decide to use.

The second notion, autonomy as *hedging*, responds to the argument above. Autonomy as hedging implies that the EU defence industry shall be forged to facilitate autonomous action on defence issues if –or when- the situations demand. At the same time, this notion does not reject dependencies on the diplomatic or economic sphere. Thereby, this notion can be seen “as a deft strategy to allow general alignment behind a hegemon, but with one eye on developing the capabilities needed for independent action” (Fiott, 2018, p. 3).

The third notion, autonomy as *emancipation*, bears maximalism connotations to some extent. This is because it suggests autonomy in all spheres. This way, this notion rejects any dependency that may constrain totally autonomous action. Therefore, it can be argued that the third notion is inconsistent with what strategic autonomy is not (Council of the EU/General Secretariat, 2021). Gray (2014) offers insights that can help someone define strategic autonomy accurately when the focus is turned to the sheer defence sector. Specifically, he suggests using the term *defence planning* to describe preparations for the defence of a polity. He argues that this is an inclusive terminology that incorporates both military and non-military aspects, design of strategies, cooperation with allies, assessments of future risks and relevant social, economic, and political activities. Therefore, *defence planning* has similarities with the notion of autonomy as *hedging* since it refers to the capability of a polity to defend itself, yet without excluding dependencies generated by cooperation with allies.

Against this backdrop, this article subscribes to the notion of autonomy as hedging because of two points. First, this notion is consistent with what strategic autonomy *is not*. Second, it leaves space for the main objectives of PESCO projects, which are defence capabilities development, research, acquisition and armaments in conjunction with enhanced operational capability (Article 1, Protocol 10 of the Consolidated Version of the Treaty on European Union). Moreover, strategic autonomy without a great range of owned capabilities available seems impossible. A credible and valued international actor can hardly stand without maintaining a full range of capabilities, following the argument of March and Olsen (1995, p. 93) that “hospitals without bandages cannot function as proper hospitals.”

In this framework, this article's primary goal is to research trends in the composition of the PESCO projects and answer whether such trends affect EU strategic autonomy, drawing on the concept of path dependencies. To this end, descriptive statistics and network analysis are used

to analyse data derived from the official site of PESCO (PESCO, 2020). Notably, data are first examined concerning each member state's overall participation. Afterwards, the focus is given to their participation regarding the distinct domain in which the PESCO secretariat has categorised the implemented projects. Finally, when deemed necessary, network analysis was utilised to examine PESCO projects' spectrum further and discover participation patterns.

However, although a state can be involved in a PESCO project as a) its coordinator, b) a full member, or c) an observer, the present analysis of the PESCO projects' spectrum focuses on coordinators and those with membership status. The parsimonious choice of focusing on PESCO member states (Pms) rather than including observers too intends to shed light on those states that could be more actively involved, at least in principle.

All in all, the PESCO projects' spectrum has generated a living community consisting of a) its participating member states and their interactions, b) the implemented projects and c) the interaction between Pms and these projects. In this regard, this article does not intend to assess how PESCO projects themselves contribute to EU strategic autonomy but instead to research path dependencies arising from –and revealed through– the composition of these projects and assess whether these dependencies affect autonomy's pursuing.

2. The Permanent Structured Cooperation

2.1 Data analysis and notable findings

The PESCO was introduced in 2007 by the Lisbon Treaty, in Articles 42.6, 46 and the attached Protocol 10. From 2017 to 2020, three waves of PESCO projects were set up, comprised of 47 projects, while the fourth wave was planned for November 2021. PESCO was planned as both a framework and a process to offer a fertile ground for the structured defence cooperation among those EU member states with the capability and willingness to do so through relevant projects. Thereby, it can be argued that a PESCO project aims at institutionalising collaborative activities on common interest issues by introducing commitments and offering opportunities to the involved states. Ultimately, PESCO should "enhance the EU's capacity as an international security actor, contribute to the protection of the EU citizens and maximise the effectiveness of defence spending" through this collaboration (PESCO, 2020).

However, PESCO's implementation took a different shape than the one initially provided by the Treaties (Fiott et al., 2017). This change on PESCO was made so as to make it more *inclusive* and every EU member state be in the place of joining if it is eager to do so. On the other hand, this change made the effectiveness of the PESCO projects more fragile, given that there are no provisions for consequences for those member states that fail to meet their commitments. Although this may be true, the mere participation of a MS in a PESCO project constitutes an institutionalised process, which may lead to later path dependencies. Moreover, an institution may alter an actor's preferences and, thus, change his/her stance within the institution (Thelen, 1999). In this regard, even if a Pms has not appeared to be very active in its commitments to a PESCO project hitherto, the dynamics of path dependencies, if they arise, may push it for a more energetic contribution.

At first glance, France seems to be the leading power of the PESCO, followed by Italy and Spain, according to each Pms total participation in the 47 PESCO projects (Diagram 1). However, the situation has not been the same concerning the first and the second wave. In general, there appears to be a trend of declining participation for most Pms¹. These results are similar to those previously reported by Blockmans and his colleagues (2019). As illustrated in Table 1, just French and Spain have overcome the average participation in each of the three implemented project waves so far².

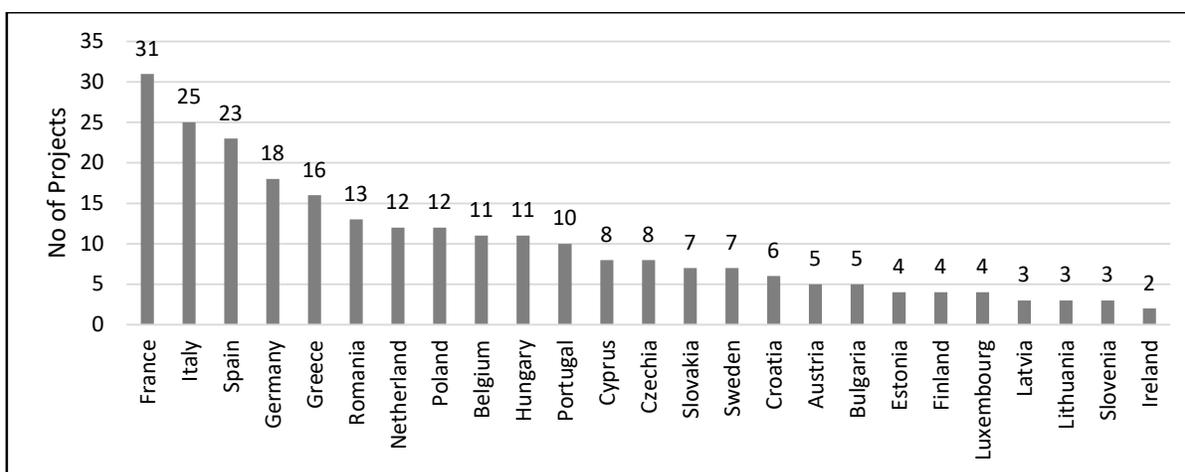


Diagram 1: Total participation in PESCO projects

¹ Comparison is between those member states that participate in more than ten projects in total, in order to exclude outliers.

² Bold gray color highlights those states that overcome the average participation per wave.

Member States	1st Wave	2nd Wave	3rd wave
France	9	12	10
Italy	15	6	4
Spain	11	5	7
Germany	7	8	3
Greece	10	5	1
Romania	5	3	5
Netherlands	7	3	2
Poland	7	2	3
Belgium	6	4	1
Hungary	5	2	4
Portugal	6	1	3
Average	8,1	4,9	4

Table 1: Participation per wave

The decreasing trend of participation across waves underlines the finite relevant resources. Generally speaking, any project needs resources: contribution in personnel and financing, inter alia. However, Pms have finite resources to offer and “no miraculous multiplication is possible” (Biscop, 2021, p. 5). These resources shall be simultaneously allocated in three levels: national, NATO (for those EU member states participating in the Alliance) and the EU. Even if these levels should avoid duplications, this does not always eventuate. For instance, different bureaucratic procedures exist for defence planning at each level; national procedures, NATO Defence Planning Process (NDPP) for members of the Alliance, Member States National Implementation Plans (NIPs) for the Pms.

Despite efforts to harmonise these procedures, they still differ in their nature and form. In that respect, every discrete level adds an extra workload for national bureaucrats. As the argument goes under Allison’s bureaucratic politics model (1969), these national bureaucrats having different views of what best serves their organisational and personal interests, may try to avoid extra workloads or direct their efforts to the level they perceive as most closely matches their views. This argument brings to the fore the capacity of an agent to act within a structure, especially within the PESCO projects where the norm of mandatory commitments’ fulfilment is deficient. The implication of this capacity is crucial for the effectiveness of any PESCO project, and in turn, in the EU’s strategic autonomy, given the institutional structures in which bureaucrats’ agency occurs. To be more precise, institutional arrangements concerning the PESCO push Pms -at a high political level- to join projects with an intention to undertake

mutually agreed commitments. However, the day-to-day development of a project is subject to national bureaucrats and specifically to military officers who often have to deal with other workloads and duties simultaneously. Moreover, they have to distribute their efforts – and the resources under their command- in the three levels stated above. The interconnection of institutional structures and agency dynamics within these structures may result in “dormant” participants, putting a project’s successful development at stake and negatively influencing the EU’s pursuit of strategic autonomy. At a later stage, national bureaucrats may become reluctant to suggest further participation in PESCO projects as long as minimum participation for their country exists. Hence, member states tend to decrease their participation in PESCO projects across waves. Nevertheless, Pms have acknowledged in the framework of the PESCO strategic review that merging or clustering existing projects may save resources by increasing synergies and preventing duplications, at least within the PESCO project’s spectrum (General Secretariat of the Council, 2020). Therefore, although Pms often have difficulties in allocating resources for their contribution to PESCO and national bureaucrats may face participation fatigue, existing arrangements push them to find viable solutions rather than abandon projects since their withdrawal cannot be without any cost. In that respect, path dependency can push for the substantive development of the existing PESCO projects, yet at a slow pace. On the contrary, opposing dependencies linked to the national and NATO level make national bureaucrats hesitant to suggest further participation in projects. Thereby, *participation fatigue* seems to slow up the pursuit of the EU strategic autonomy to the extent that autonomy prerequisites the development of various projects simultaneously. Moving to the coordinators’ sorting, France is first, followed by Italy, Germany and Greece (Diagram 2).

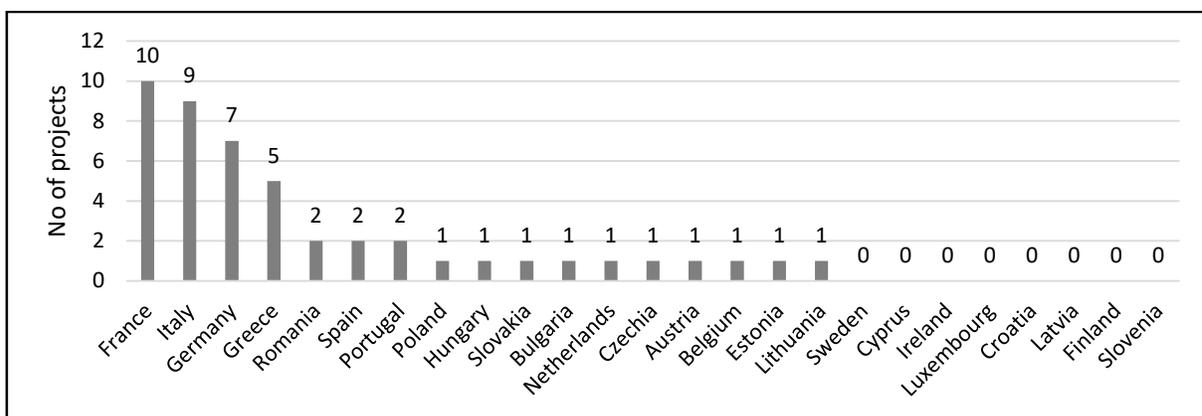


Diagram 2: Coordinators in No of PESCO projects

Nevertheless, an interesting view of the existing PESCO projects' spectrum comes to the fore when the focus is given on the number of projects that a Pms coordinates over the total number of projects in which this specific Pms participates. The following equation illustrates this ratio.

Equation 1: $rI_i = \text{coordinator in No of projects} / \text{Total participation number}$,
where i is a given state

These findings signify a transition concerning PESCO projects' leading power since Germany has the highest ratio ($rI_{\text{Germany}}=0.39$), whereas France falls back to fourth place. In the course of these findings, France appears to be more willing to join a project coordinated by another Pms, whereas Germany seems more approachable to other Pms to join her projects. Thereby, these findings offer a different view than the one presented by Blockmans et al. (2019), who focused more on the distinction between inclusiveness and level of ambition.

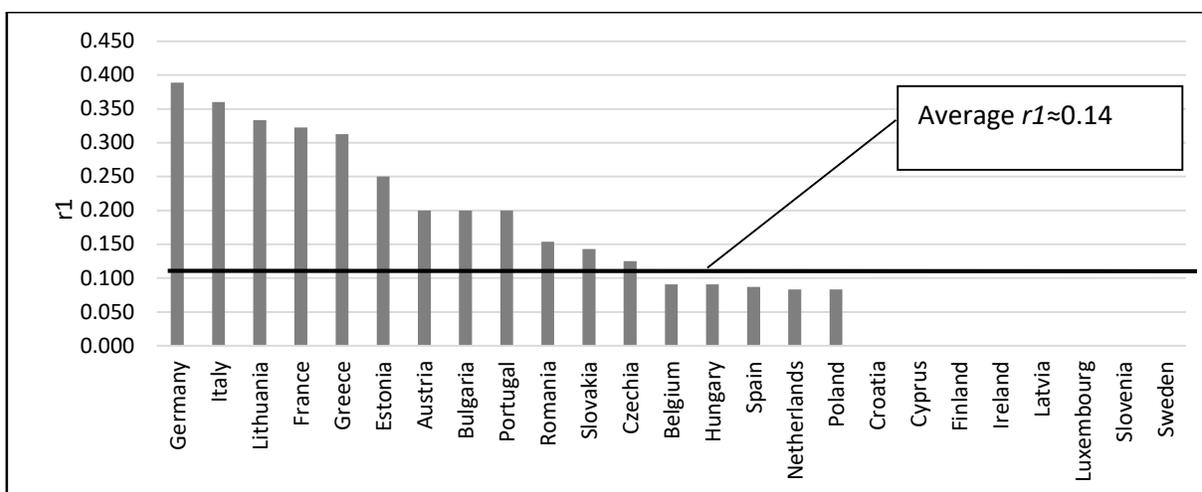


Diagram 3: Ratio rI

The above findings are corroborated by network analysis. Figure 1 offers a schematic representation of the interaction between Pms. This figure takes account of the coordinator of each project and its number of participants. In that respect, Germany, Netherlands and France are at the core of the composed network. Precisely, the closeness centrality³ of the nodes

³ Closeness centrality divides the number of nodes of the component by the sum of all distances from the analyzed node to all other nodes within the component. The node with the highest value is the most central node of its component (Berthold et al., 2008).

associated with these member states' coordinator role validates the above argument. Netherlands' node has a closeness centrality of 0.926, Germany's 0.871 and France's 0.765, whereas the average closeness centrality is estimated at 0.60. Further analysis of this interactivity was carried out to assign hub and authority scores to each node⁴ (Diagram 4). According to this, the Netherlands are placed on the top of the authority nodes, followed by Germany. The former is because the one and only project coordinated by the Netherlands, namely Military Mobility (MM), is the most populous. It is worth mentioning that the Netherlands and Germany are the only cases where their estimated authority scores clearly overcome their corresponding hub scores.

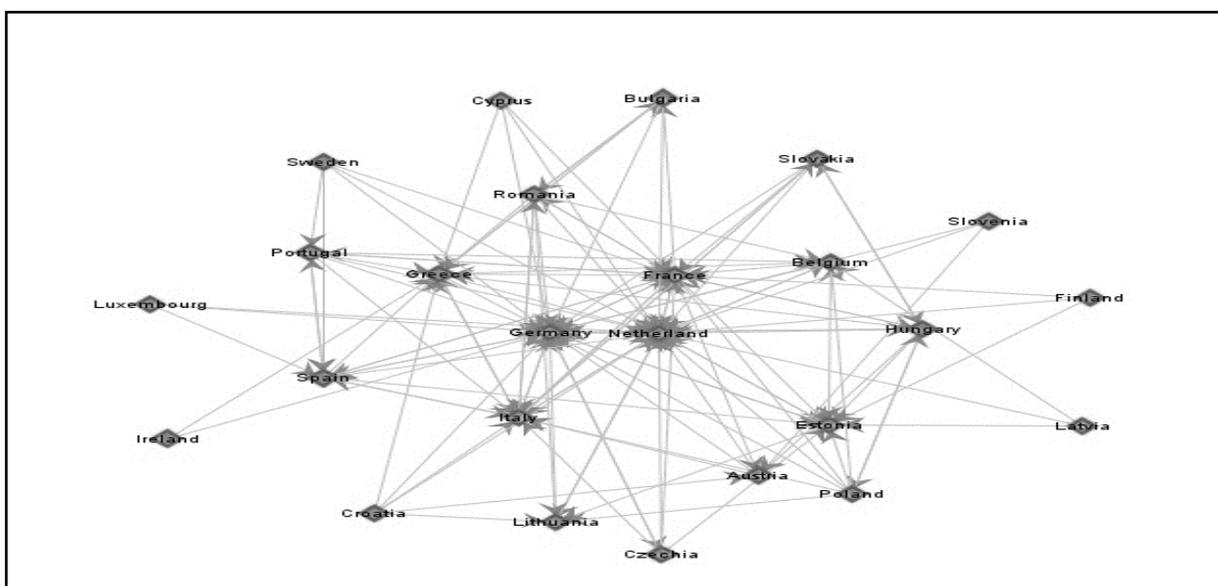


Figure 1: Member states interaction

In contrast, France's authority score is lower than her hub's. Differences in Germany's and France's scores can be attributed to the fact that a) France participates in more projects without being a coordinator than Germany does, and b) French nodes are less inclusive than those of Germany. Put it differently, projects coordinated by Germany are more likely to attract more participants than those coordinated by France, regardless of their objectives. Besides, all

⁴ The essential idea of this analysis is that a node constitutes a hub to the extent that it is linked to authority nodes. At the same time, it composes an authority to the extent that it is referenced by hubs (Berthold et al., 2008). In that respect, an authority node deems “leader” of a network, while a hub node deems “follower”.

the Pms, except Finland and Latvia, participate in at least one Germany project, indicating that Germany is perceived as a leader. The Netherlands' case sounds a little different since the Netherlands coordinate just one project, MM.

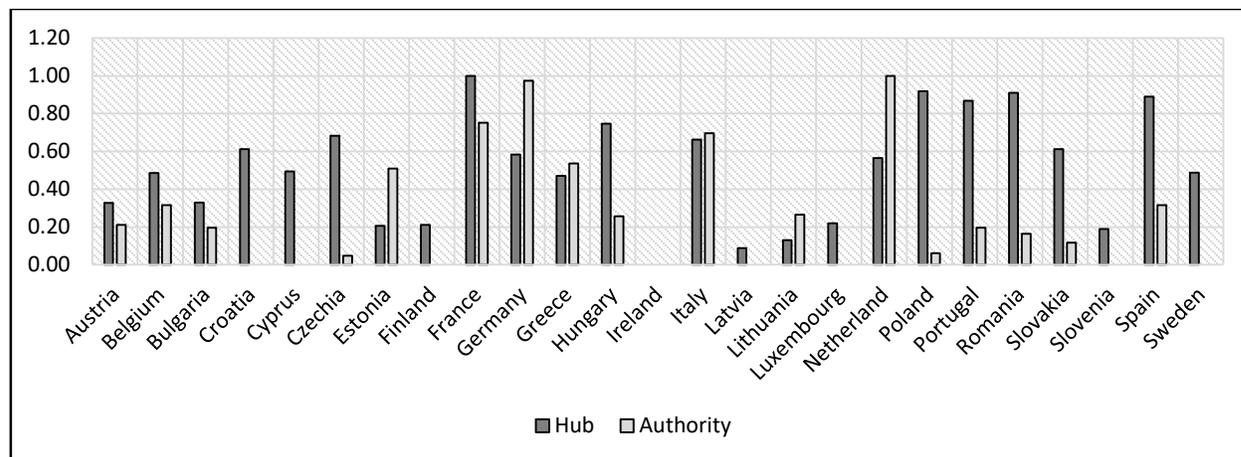


Diagram 4: Hub and authority score

A more detailed insight refers to the discrete domains in which the 47 PESCO projects are placed. These domains are:

- i) Land, which contains six projects;
- ii) Maritime, which contains six projects;
- iii) Air, which contains four projects;
- iv) Space, which contains two projects;
- v) Joint, which contains 11 projects;
- vi) Training, which contains ten projects;
- vii) Cyber-c4i, which contains eight projects.

Italy is in the first place regarding either her participation in land projects or the number of these projects that she coordinates (Appendix "A", Diagram A-1). Moving to the maritime domain, Greece is ahead of as she participates in five out of six, followed by France, Italy and Portugal (Appendix "A", Diagram A-2). When the focus turns on the coordinators, Italy precedes by coordinating two out of three projects in which she is involved. Participation in the maritime projects reveals that Mediterranean states, led by Greece, France and Italy, have an intense interest in maritime security issues. In a total number of four air projects, France and Spain are involved in three of them, followed by Czechia, Germany and Italy (Appendix "A",

Diagram A-3). The space domain consists of two projects coordinated by France and Italy. In conjunction with Germany, these two states are involved in both air projects (Appendix "A", Diagram A-4). The joint domain includes eleven projects. France precedes concerning the number of projects in which she is involved, followed by Spain (Appendix "A", Diagram A-5). The overall participation in this domain points out that most Pms are interested in joint operations. Moving to the training domain, France precedes once again, followed by Italy and Romania (Appendix "A", Diagram A-6). Greece and Romania lead the corresponding coordinator status order. Italy and Germany are found in the first place concerning participation in the cyber domain (Appendix "A", Diagram A-6). An interesting finding is the limited participation of both Estonia and Finland in the cyber domain projects, given the following factors. Regarding Estonia's case, her participation in just one project deems odd, considering her specialisation in this domain (OECD, 2019) and bearing in mind that the NATO Cooperative Cyber Defence Centre of Excellence is located in Tallinn. Regarding Finland's case, her low participation does not seem consistent with her dynamic presence in the field of hybrid threats, which are inherently linked to the cyber domain, since the European Centre of Excellence for Countering Hybrid Threat is located in Helsinki. Thereby, the cases of Finland and Estonia indicate that a project's objective may not be a primary concern when Pms decide to join or not projects.

The sectoral analysis reveals inconsistencies that limit the potential for EU strategic autonomy with attention to path dependencies arising from the composition of the existing projects. As long as the nature of modern warfare becomes complex and Revolution in Military Affairs (RMA) involves various dimensions, from land to space and cyber ones, strategic autonomy prerequisites consistent approaches across all the domains and the contribution of the experts in each field.

To put flesh on the bones of the interaction between the Pms, the focus is turned to the composition of the established projects regarding their coordinators (see APPENDIX "A", Table 1). In that respect, Spain occupies the first place in those programs coordinated by France, followed by Belgium. A vice versa examination is how member states distribute their total participation across the overall projects' spectrum. This reveals that Spanish participation in French projects covers 40% of Spain's total participation (see APPENDIX "A", Table 2). However, Belgium seems to be the most willing member state to participate in French projects

by distributing 60% of the Belgian participation. The latter indicates that participation in a PESCO project can be subject to geographic proximity. This can also be found in other cases, such as Cyprus and Greece; Czechia and Germany; Netherlands and France; Netherlands and Germany. In that respect, it can be argued that geographic proximity can shape shared views, which, in turn, may lead to common participation in a number of PESCO projects.

Italy is found in the second place regarding the number of projects she coordinates. Greece participates in 25% of Italian projects, while France follows by being present in 20 % of the Italian led projects' composition. Besides, Greece puts 45.5% of her total participation in Italian projects, and Italy drives 18.75% of her total participation in Greek projects. In the light of this relation, interdependencies and reciprocities are revealed. Reciprocity is also present in the relation between Germany and France. Thereby, a second factor for joining a project, regardless of its objective, seems to be reciprocity.

Transposing the inquiry, it is found that the total participation of Austria, Ireland, Lithuania and Luxembourg are consumed by 50% in German led projects. As for the composition of Germany led projects, France has the densest participation since she is involved in 11.3%, followed by both Italy (9.4%) and Spain. French participation in these projects is compatible with the French Strategic Review of Defence and National Security in 2017, which takes Germany as a “crucial partner in *furthering Europe’s defence and security ambitions* [italics added]” (Ministry for Europe and Foreign Affairs, 2019).

Returning to how Pms participate across the whole spectrum of the PESCO projects, there are some notable instances. For example, Belgium, Finland and Germany allocate almost half of their total participation in projects coordinated by France, similar to the case of Greece in Italian projects. This is also the case for Cyprus and Ireland concerning Greek driven projects. Against this backdrop, participation trends can be further attributed to other factors, apart from geographic proximity, reciprocity and the projects' objectives. Notably, historical bonds lead the relation between Cyprus and Greece; Belgium and Netherland constantly collaborate, as their navies have been working together since 1948 (Royal Netherlands Navy, 2021). Furthermore, extended cooperation in other fields may have boosted participation in specific PESCO projects. This seems to be the case in Czech participation in German-run projects, as the Czech Minister of Defence Lubomír Metnar have stated that “Germany is the Czech Republic’s most important

trade partner and indeed a very significant partner in the defence sector” (Šindelář and Fajnor, 2019). Germany’s and Netherlands’ interconnection within the PESCO can be seen as part of their overall defence cooperation (Federal Ministry of Defence of the Federal Republic of Germany and Ministry of Defence of the Kingdom of the Netherland, 2019).

In order to bring out more clearly the fact that a project’s objective is often taken as a secondary factor in Pms decisions to join projects, there is a look at the composition of two PESCO projects that have similarities concerning their objectives and sound mutually *supplemented*. The one is the “Cyber Threats And Incident Response Information Sharing Platform (CTIRISP)” coordinated by Greece, and the other is the “EU Cyber Academia And Innovation Hub (EU CAIH)” coordinated by Portugal. The former aims to “develop more active defence measures, potentially moving from firewalls to more active measures”, and the latter to create “an innovative web of knowledge for cyber defence and cybersecurity education and training” (PESCO, 2020). It sounds like these two projects are addressed to a common audience interested in cybersecurity issues, even if the CTIRISP belongs to the cyber sector while the EU CAIH to the training. However, the CTIRISP comprises Cyprus, Greece, Spain, Hungary, Italy and Portugal, whilst Spain and Portugal participate in the EU CAIH. Therefore, it seems that Cyprus, Hungary and Italy did not focus just on projects’ objectives when deciding to join the CTIRISP but not the EU CAIH. Profoundly, their decisions are amenable to other factors instead of the project objectives. Similar inconsistencies can be found in various other projects.

Taken together, these results suggest that various factors shape Pms' decision to join a PESCO project, regardless of the objective of the project itself. For example, geographic proximity, reciprocity, extended cooperation in other fields, and historical bonds intervene in Pms’ decisions to join projects, generating relevant path dependencies for the composition of a project. Moreover, national bureaucratic stances influence the decision of a Pms concerning its participation in PESCO projects.

2.2 Participation in PESCO projects and the pursuit of EU Strategic Autonomy

According to this article's findings, the Franco-German axis appears to be the leading power of PESCO projects; also, Italy primarily and Spain secondarily play a central role.

Germany's and France's leading role is deduced by the number of projects in which they are involved, in conjunction with the general overview of the PESCO project's spectrum since the network analysis reveals that both Germany and France constitute leaders. Nevertheless, these two Pms adopt different approaches. France projects her dedication to PESCO projects by participating in more projects (31) than any other Pms. Germany's central role in the PESCO projects' spectrum comes to the fore when someone considers the degree to which other member states participate in German led projects. When the focus is given on France and Germany's general stances vis à vis PESCO projects, France appears to be more inclusive as long as her participation extends almost to the whole spectrum of the projects, regardless of their coordinator and level of ambitions. On the other hand, Germany is more selective in her participation, given that she prefers to lead a project.

Also, differences between French and German participation exist in the sectoral analysis. French presence is constant across all the defined domains, whilst Germany is absent from the maritime domain. Therefore, assuming that this difference does not reflect any division of labour, France and Germany's participation across the seven domains does not signify relevant path dependencies that would positively affect the EU's capability to act in the full spectrum of future battles.

Be that as it may, France and Germany seem proactive within PESCO. In this vein, they compose "a subset of the PESCO states that takes the lead and *does things*", a crucial element for the effectiveness of the PESCO (Biscop, 2020, p. 3). In this regard, the Franco-German axis can motivate other Pms to become more active, especially following the Treaty of Aachen, signed by the French President and the German Federal Chancellor in 2019. According to Article 3 of this Treaty, Germany and France "shall deepen their cooperation in matters of foreign policy, defence, external and internal security and development while striving to *strengthen Europe's ability to act autonomously* [emphasis added]". Thus, the Treaty of Aachen offers a valid explanation of why these leading powers may exercise pressure to motivate their followers.

Moreover, even without formal rules for obliging a Pms to become more active and fulfil its commitments, relevant consultations are on the table. Notably, establishing measurable objectives with related progress indicators is examined, and provisions for closing projects have

been introduced (Council of the European Union, 2020). Hence, France and German will probably do their best to promote the effective implementation of the projects in which they participate, including their partners' motivation to avoid early closing of these projects. Besides, reputation, which will be at stake in such an early closing, shall not be ignored. In this regard, France's and Germany's central roles in several PESCO projects press them for the effective development of these projects in order to protect their reputation and be ready for potential measurable assessments. Thereby, their past choices for establishing or joining projects pave the way for realising their commitments to these projects, motivating their partners and, in doing so, boosting EU strategic autonomy to some extent.

Given the intergovernmental nature of the PESCO, the pursuit of EU funding for developing a project can be used as leverage for motivation. This way, a supranational aspect, the carrot of the co-funding from the EU's budget through the European Defence Fund (EDF), can be used to enhance the effectiveness of an intergovernmental project within PESCO and wake up "dormant" participants, if any. In general, from an institutionalist perspective, funding from the EDF to a PESCO project offers a fertile ground for later path dependencies, as long as a national industry that has gained EU funding will logically boost the development of a project and make the corresponding Pms more active. However, it shall not be neglected that the EDF does not cover the procurement phase, but it can fund up to the prototype's development stage.

The overall participation in PESCO projects reveals essential features. First, someone can find differences in how the Mediterranean states participate compared to the Central European states' participation. The second essential feature refers to participation across the three waves of projects. Third, there are significant differences between the levels of participation in the seven domains.

To begin with, findings point out that the Mediterranean states are more interested in joining PESCO projects since Italy, Greece and Spain, apart from France, have a significant presence in the whole spectrum of the existing projects. On the contrary, Central-Eastern member states have limited participation, except for Romania. This finding seems consistent with Zaborowski's (2020) argument. Notably, he mentions that these states do not truly invest in the CSDP as long as this policy does not encompass credible defence components tailored to territorial integrity. For this reason, these states have, in general, quite similar institutional

preferences concerning their defence. These preferences are oriented to NATO (Tardy, 2018) as long as they do not consider the EU "able to defend itself unaided" (Mauro and Santopinto 2017, 26).

On the other hand, the Mediterranean states' dense participation in PESCO projects can also be seen *vis-à-vis* their relations with NATO, especially concerning France and Greece. The former has always treated NATO with some caution. For instance, after the Paris terrorist attacks in 2015, France preferred invoking the TEU's mutual defence clause (Article 42.7) instead of the North Atlantic Alliances corresponding clause (Article 5). This case revealed once again France's support for an autonomous European defence policy. As for the case of Greece, her security concerns posed by Turkey, i.e. a NATO member, makes her willing for defence support by the EU and underlines the "participation problem", a well-covered issue in the literature (Smith and Gebhard 2017). In this framework, Greece's active involvement in PESCO projects, especially in the maritime domain, can be seen as a Greek aspiration for enhanced EU defence capabilities.

Taking stock of the above, one can argue that path dependencies shaping the composition of a PESCO project are linked to NATO. Notably, Central-Eastern member states' past arrangements concerning NATO drive their stances over PESCO. Similarly, although Greece's sheer security concerns are posed by her ally in NATO, i.e. Turkey, Greece remains dedicated to the Alliance due to existing commitments.

As regards the level of participation in the seven domains, someone can mention significant differences. It could be argued that there are no consistent path dependencies that would facilitate an enhanced EU strategic autonomy. However, a closer look at these domains reveals that the joint domain has attracted all PESCO member states except Ireland; the second more favourable domain is training.

In joint projects, the MM constitutes a positive paradigm of a PESCO project. This project, the most populous one, aims to simplify and standardise cross-border military transport procedures. MM seems a very successful project, given that it encompasses all the Pms except Ireland. Furthermore, as Blockmans et al. (2019) mentioned, it is essential to realise that MM is based on pre-existing initiatives from both the European Defence Agency (EDA) and NATO.

Therefore, the MM project constitutes a significant paradigm of collaboration between the EU and NATO.

The training domain offers fertile ground for developing common cultures, as long as education and training can be taken as prerequisites for building shared views. In that respect, the training domain may blunt existing cultural differences in the long term. Therefore, participation in the training domain reveals path dependencies that can enhance EU capabilities by facilitating shared views at the short-term operational level and bolstering common approaches to the long-term strategic level. Besides, shared views can make the collaboration of national bureaucrats easier, and this way, bridge their divergent stances and treat participation fatigue, at least partially. However, this domain has limited influence on EU strategic autonomy as hedging since it is difficult to directly contribute to defence-industrial autonomy.

The participation is limited to the rest five domains: land, maritime, air, space, and cyber. Remarkably, there exist fragmented participation in these five domains. This fragmentation can have a twofold causality. The first refers to the space and cyber domain, which are inherently linked to innovative technologies research. However, defence Research and Technology (R&T) spending levels continue to be insufficient for most member states (EDA, 2020). The second causality refers to the land, maritime and air domain. These domains co-formulate the traditional battlefield in which hard military capabilities are usually needed. As long as NATO remains the primary provider of hard defence, some Pms would rather not prefer to participate extensively in PESCO projects concerning these domains. In that respect, path dependencies stemming from membership in NATO and insufficient investments in R&T limit EU strategic autonomy.

Taking stock of the above, path dependencies with different dynamics exist. First, France and Germany's dedication, supported by Italy's and Spain's presence, seems to endow PESCO projects with a critical mass of willing and capable Pms. Nevertheless, concrete path dependencies that ensure autonomous action in every feature battle's theatre domain were not found. Also, various factors push Pms to join a project, regardless of its objectives. Geographic proximity, historical bonds and extended cooperation in other fields are among these factors, which may generate specific path dependencies for the composition of a project. However, these forms of dependencies did not comprehensively enhance EU strategic autonomy, as long as the objective of a project often seems to be considered complementary to other factors.

Concerning NATO, when its objectives are taken as overlapping with PESCO projects, institutional preference for the Atlantic Alliance often prevails. As a result, path dependencies linked with NATO limit the potential for EU strategic autonomy. However, when NATO is perceived as rather insufficient to deal with an ally's security concerns, as it is in Greece vis-à-vis Turkey, EU frameworks emerge as an appropriate alternative.

Different stances against PESCO projects following divergent considerations of NATO's ability to protect underline the crucial influence of the Alliance on the EU's pursuit of strategic autonomy. Also, it should not be neglected that the redefinition of the EU and NATO relations could reduce duplications and treat bureaucratic fatigue. As the argument goes, the EU shall redefine its relations with NATO to allow Union's member states to pass their path dependent choices primarily to the European defence edifice instead of NATO. Biscop (2019, p. 4) offers insight into how the EU should be placed in these relations by stating that it "should act with allies and partners whenever it can, but alone when it must". In this vein, an adaptation of Borrell's (2020) *Sinatra Doctrine* sounds to fit well with these relations' redefinition. Other stands for the *Europeanisation of NATO* to bolster EU strategic autonomy (Howorth, 2017). However, even if the EU and NATO relations are extensively covered in the literature (Smith and Gebhard, 2017), there still lacks a shared *normative* view for a mutually beneficial redefinition of this relation to un-stuck from the 1990s (Smith 2011). With these in mind, the ongoing Strategic Compass offers an excellent opportunity for the EU to deal with anything that may limit its strategic autonomy (Nováky, 2020), including its relations with NATO. Cladi and Locatelli (2020, p. 11) note that "future progress on the EU front will require an increased commitment to political cooperation and a clear conviction that gaining autonomy within NATO would not mean growing independent from it".

In any case, the pursuit of the EU's strategic autonomy should not ignore US perspectives. It is essential for both sides of the Atlantic to realise that the EU defence edifice shall be released from being adherent to American primacy within NATO. Biscop (2021) mentions a paradox: the US demands from its Allies to do more, but when the EU undertakes relevant initiatives, Washington pushes back in fear of losing its leading position in the Alliance. At the same time, the reality can make the demand for EU autonomy inevitable. As long as the USA's strategic trajectory continues turning to the Indo-Pacific area, the EU will emerge as the spearhead of NATO in Europe.

Against this background, Bull's (1982, p. 154) argument seems well timed:

"The Europeans have to recognise the force of the American claim that they should now be prepared to shoulder a greater share of the common burden of defence, while the Americans have to recognise that if this happens, they will no longer be entitled to the position of pre-eminence in decision-making which they have taken for granted in the past".

All in all, it is noticed that the Franco-German axis offers appropriate leadership for the effectiveness of the PESCO projects. However, Pms often consider various factors in joining a project, regardless of its objective. This trend has led to inconsistencies across the seven defined domains. This way, the EU becomes incapable of undertaking missions in the overall theatre of future battles, let alone developing extended technological autonomy for military purposes. These shortfalls can be attributed to the lack of central defence planning on the part of the EU, following Gray's definition. It shall be mentioned that such a defence planning could lead to the *brusselization* of the projects' design and requirements while leaving the Pms the choice of participating or not under clear commitments tailored. Also, a probable EU defence planning would facilitate the concept of EU strategic autonomy to become more precise and the relationship between the EU and NATO mutually beneficial.

4. Conclusions

The Franco-German Axis's ongoing dedication to PESCO projects seems inevitable due to their extended participation across the whole spectrum of projects. This participation creates path dependencies that can facilitate EU strategic autonomy to some degree, despite Germany and France's different approaches vis-à-vis PESCO projects. In this regard, Germany and France seem willing to project leadership, motivate their partners in PESCO projects and forge the EU defence edifice. However, despite the Franco-German Axis's dynamics for leadership and motivation, Pms often base their decision to join a project on various factors while partially disregarding its objective. This results from path dependencies that make Pms consider factors such as cooperation in other fields or cultural bonds and rather undervalue the project's objectives. In doing so, the potential for strategic autonomy is decreased. Moreover, even if the existing projects' spectrum flourishes, some domains will remain underdeveloped, according to the sectoral analysis.

Another essential path dependency arises from the existing context of the EU and NATO relations. Apart from the fact that duplications are not avoided, even if relevant efforts are being declared, many Pms see NATO as more capable of dealing with their security concerns than the EU. Notably, territorial integrity seems of vital importance for most of the EU member states. In this regard, many member states will keep on being reluctant to invest in the PESCO projects truly, until the latter becomes clearly able to contribute to their territorial protection. On the contrary, when NATO is perceived as insufficient to deal with national security concerns, a member state may resort to its European partners for support.

Taking stock of the above, it can be argued that the EU lacks of concrete defence planning – to the extent that it can be seen as a polity -, which could name threats, design means to deal with these threats and delineate relations with allies. On the condition of establishing an EU defence planning process, institutional pressures will boost Pms to adopt a more objective-oriented stance when joining projects, and the spectrum of the PESCO projects will become consistent with the notion of strategic autonomy as hedging.

For the moment, new PESCO projects shall be deemed modules added to existing projects, given the finite resources. Notably, the implementation of new projects shall be done in conjunction with merging or clustering existing projects. This way, available resources will be more effectively allocated as long as instances of duplications will be rarer, at least within the PESCO projects' spectrum. As a result, Pms will fulfil easier their existing commitments. Extended participation in the training domain can positively impact this process by building shared views and treating diverging bureaucratic perspectives. However, this domain can hardly enhance defence-industrial autonomy.

All in all, the EU has gradually institutionalised its defence structures aiming at strengthening its strategic autonomy. In this framework, PESCO projects appear to be the spearhead of the EU efforts to enhance its military capabilities. Nevertheless, Pms often seem to overlook the ultimate contribution of the projects in which they participate to the EU's strategic autonomy. Moreover, it shall not be neglected that path dependencies related to NATO constitute an inhibitory factor that shall be treated pragmatically. To sum up, the existing PESCO projects' spectrum generates specific path dependencies that can partially enhance the effectiveness of some PESCO projects by offering appropriate leadership, but it does not seem

able to forge the EU's capacity for autonomous action in the absence of concrete central planning. The ongoing Strategic Compass offers the EU the opportunity for such a comprehensive approach. Nevertheless, such an approach prerequisites political will so as ends and means to be clearly defined and agreed upon, thus, paving the way for path dependencies stemmed from the EU defence edifice and pushing it to the desired level of autonomy.

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APPENDIX "A"

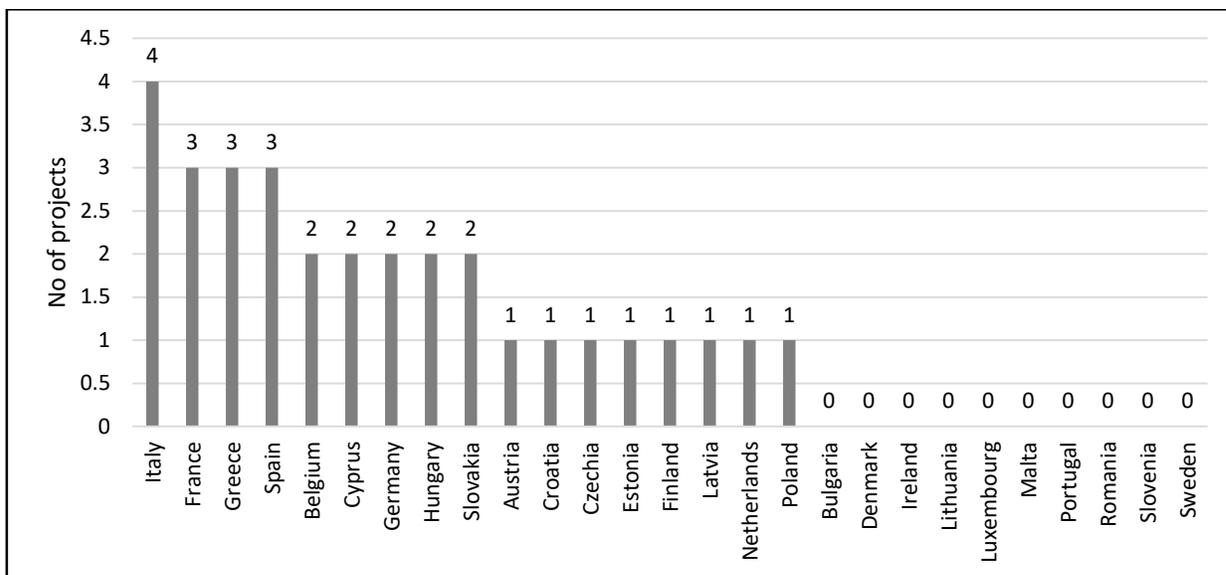


Diagram A-1: Participation in Land projects

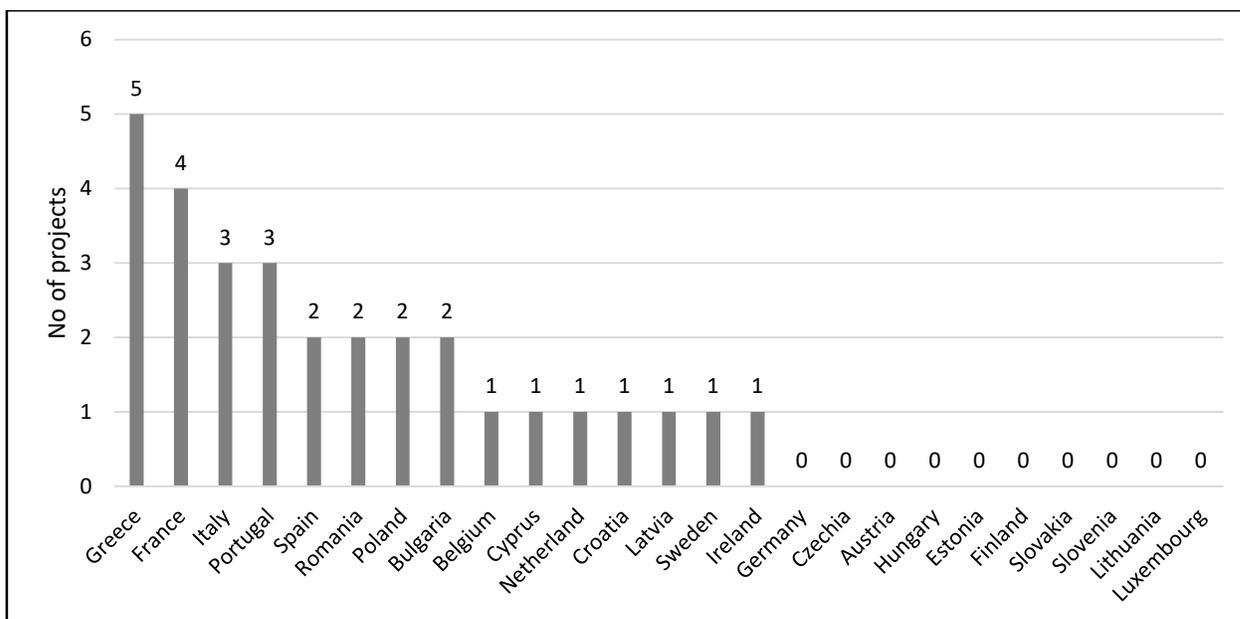


Diagram A-2: Participation in Maritime projects

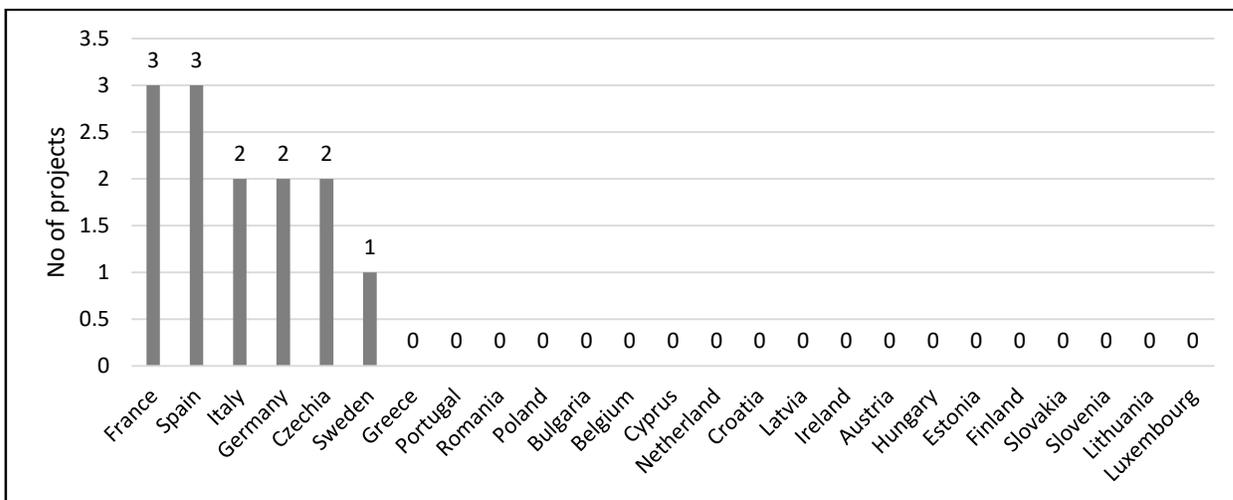


Diagram A-3: Participation in Air projects

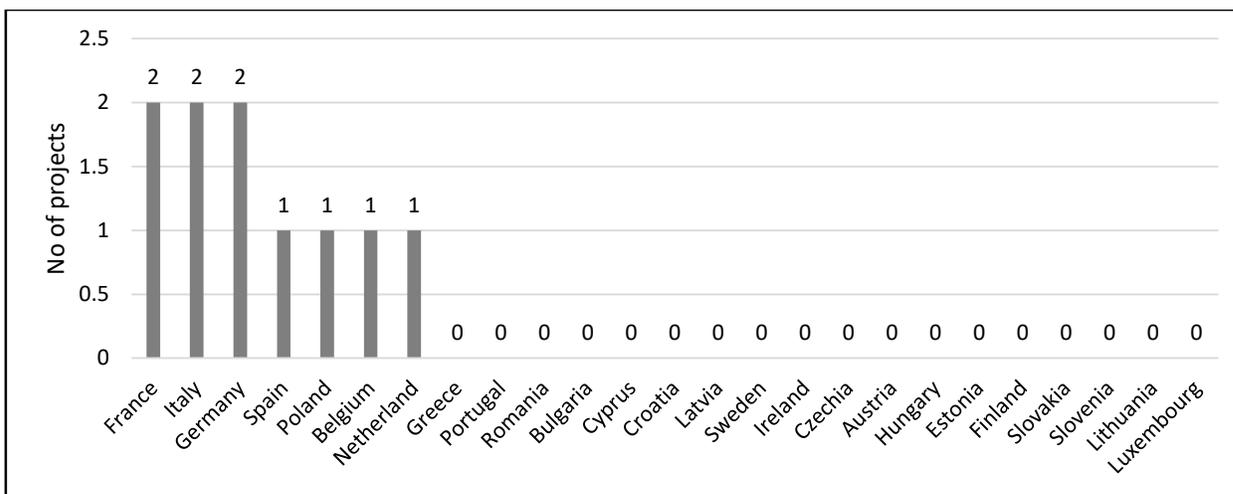


Diagram A-4: Participation in Space projects

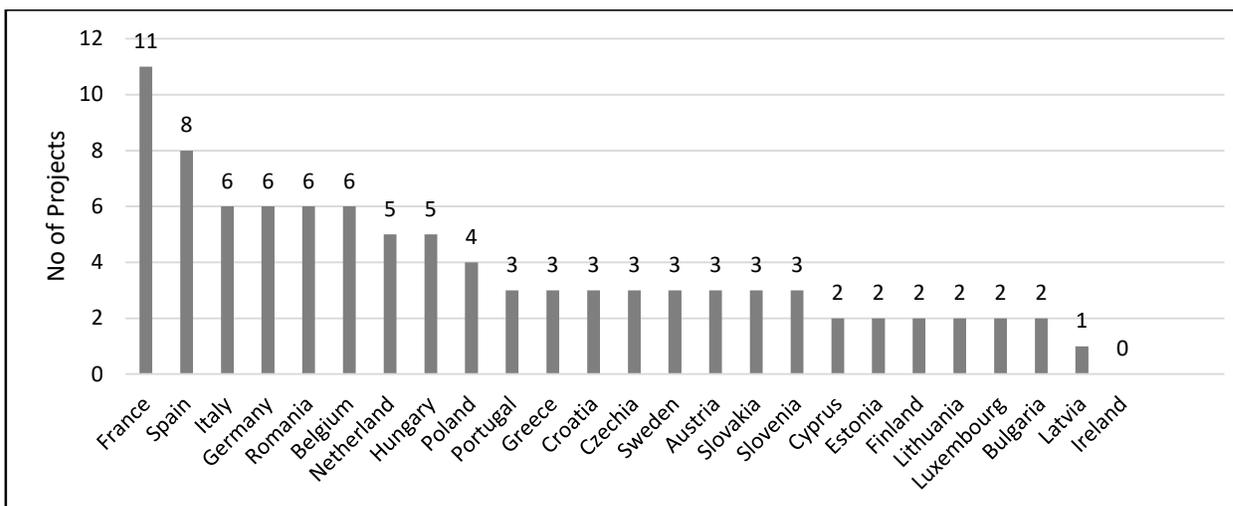


Diagram A-5: Participation in Joint projects

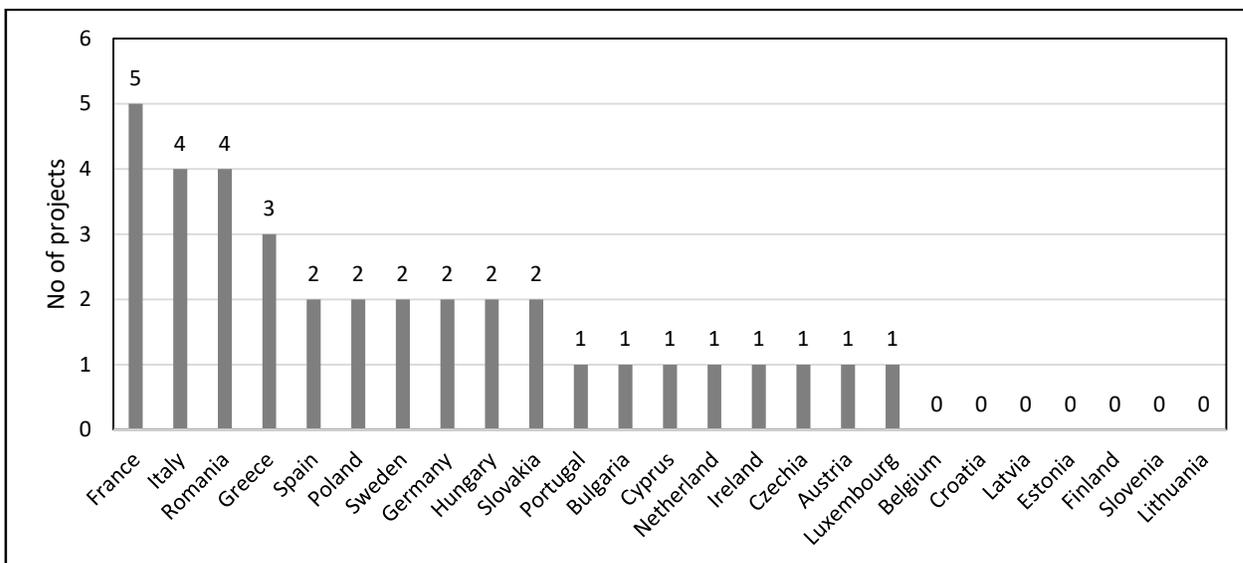


Diagram A-6: Participation in Training projects

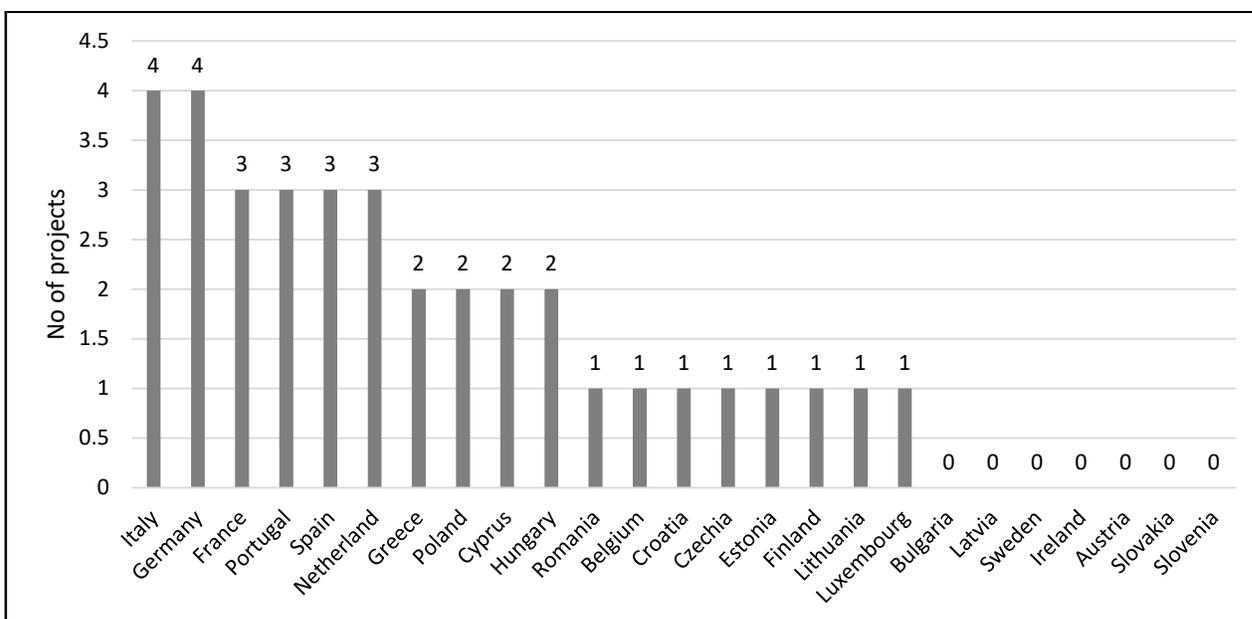


Diagram A-7: Participation in Cyber projects

Participation	Coordinator																
	Germany	Italy	France	Greece	Romania	Austria	Belgium	Bulgaria	Czechia	Estonia	Hungary	Lithuania	Netherland	Poland	Portugal	Slovakia	Spain
Austria	3.8%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	0.0%	0.0%	0.0%
Belgium	3.8%	0.0%	14.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	0.0%	0.0%	4.3%	0.0%	0.0%	0.0%	0.0%
Bulgaria	1.9%	0.0%	0.0%	6.7%	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	0.0%	0.0%	0.0%
Croatia	1.9%	5.0%	0.0%	6.7%	0.0%	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	4.3%	0.0%	0.0%	0.0%	0.0%
Cyprus	3.8%	0.0%	2.4%	26.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	0.0%	0.0%	0.0%
Czechia	5.7%	5.0%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	0.0%	0.0%	4.3%	0.0%	0.0%	0.0%	0.0%
Estonia	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	4.3%	0.0%	0.0%	0.0%	0.0%
Finland	0.0%	0.0%	4.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	0.0%	0.0%	4.3%	0.0%	0.0%	0.0%	0.0%
France	11.3%	20.0%	0.0%	6.7%	50.0%	25.0%	0.0%	33.3%	0.0%	10.0%	25.0%	0.0%	4.3%	0.0%	25.0%	0.0%	28.6%
Germany	0.0%	5.0%	12.2%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	10.0%	25.0%	0.0%	4.3%	0.0%	0.0%	0.0%	14.3%
Greece	5.7%	25.0%	0.0%	0.0%	0.0%	0.0%	16.7%	33.3%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	0.0%	0.0%	0.0%
Hungary	5.7%	0.0%	2.4%	6.7%	0.0%	25.0%	0.0%	0.0%	0.0%	10.0%	0.0%	0.0%	4.3%	100.0%	0.0%	50.0%	0.0%
Ireland	1.9%	0.0%	0.0%	6.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Italy	9.4%	0.0%	9.8%	20.0%	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	0.0%	50.0%	14.3%
Latvia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%	0.0%	0.0%	10.0%	0.0%	0.0%	4.3%	0.0%	0.0%	0.0%	0.0%
Lithuania	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	0.0%	0.0%	0.0%
Luxembourg	3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	0.0%	0.0%	14.3%
Netherland	7.5%	5.0%	7.3%	0.0%	0.0%	0.0%	16.7%	0.0%	0.0%	10.0%	0.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland	3.8%	5.0%	7.3%	0.0%	0.0%	0.0%	16.7%	0.0%	0.0%	10.0%	25.0%	20.0%	4.3%	0.0%	0.0%	0.0%	0.0%
Portugal	1.9%	5.0%	4.9%	6.7%	0.0%	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	0.0%	0.0%	14.3%
Romania	5.7%	5.0%	4.9%	6.7%	0.0%	0.0%	16.7%	33.3%	0.0%	0.0%	0.0%	20.0%	4.3%	0.0%	0.0%	0.0%	0.0%
Slovakia	3.8%	5.0%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%	4.3%	0.0%	0.0%	0.0%	0.0%
Slovenia	1.9%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	0.0%	0.0%	0.0%
Spain	9.4%	10.0%	19.5%	6.7%	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	0.0%	0.0%	4.3%	0.0%	50.0%	0.0%	0.0%
Sweden	3.8%	0.0%	4.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	25.0%	0.0%	14.3%

Table A-1: The total composition of the PESCO projects per coordinator

Participation	Coordinator																
	Germany	Italy	France	Greece	Romania	Austria	Belgium	Bulgaria	Czechia	Estonia	Hungary	Lithuania	Netherland	Poland	Portugal	Slovakia	Spain
Austria	50.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%
Belgium	20.00%	0.00%	60.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00%	10.00%	0.00%	0.00%	0.00%	0.00%
Bulgaria	25.00%	0.00%	0.00%	25.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%
Croatia	16.67%	16.67%	0.00%	16.67%	0.00%	16.67%	0.00%	0.00%	0.00%	0.00%	0.00%	16.67%	16.67%	0.00%	0.00%	0.00%	0.00%
Cyprus	25.00%	0.00%	12.50%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.50%	0.00%	0.00%	0.00%	0.00%
Czechia	42.86%	14.29%	14.29%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.29%	0.00%	0.00%	14.29%	0.00%	0.00%	0.00%	0.00%
Estonia	33.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	33.33%	33.33%	0.00%	0.00%	0.00%	0.00%
Finland	0.00%	0.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%
France	28.57%	19.05%	0.00%	4.76%	9.52%	4.76%	0.00%	4.76%	0.00%	4.76%	4.76%	0.00%	4.76%	0.00%	4.76%	0.00%	9.52%
Germany	0.00%	9.09%	45.45%	0.00%	0.00%	0.00%	0.00%	0.00%	9.09%	9.09%	9.09%	0.00%	9.09%	0.00%	0.00%	0.00%	9.09%
Greece	27.27%	45.45%	0.00%	0.00%	0.00%	0.00%	9.09%	9.09%	0.00%	0.00%	0.00%	0.00%	9.09%	0.00%	0.00%	0.00%	0.00%
Hungary	30.00%	0.00%	10.00%	10.00%	0.00%	10.00%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00%	10.00%	10.00%	0.00%	10.00%	0.00%
Ireland	50.00%	0.00%	0.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Italy	31.25%	0.00%	25.00%	18.75%	6.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.25%	0.00%	0.00%	6.25%	6.25%
Latvia	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	33.33%	0.00%	0.00%	33.33%	0.00%	0.00%	33.33%	0.00%	0.00%	0.00%	0.00%
Lithuania	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	50.00%	0.00%	0.00%	0.00%	0.00%
Luxembourg	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	25.00%
Netherland	36.36%	9.09%	27.27%	0.00%	0.00%	0.00%	9.09%	0.00%	0.00%	9.09%	0.00%	9.09%	0.00%	0.00%	0.00%	0.00%	0.00%
Poland	18.18%	9.09%	27.27%	0.00%	0.00%	0.00%	9.09%	0.00%	0.00%	9.09%	9.09%	9.09%	9.09%	0.00%	0.00%	0.00%	0.00%
Portugal	12.50%	12.50%	25.00%	12.50%	0.00%	0.00%	12.50%	0.00%	0.00%	0.00%	0.00%	0.00%	12.50%	0.00%	0.00%	0.00%	12.50%
Romania	27.27%	9.09%	18.18%	9.09%	0.00%	0.00%	9.09%	9.09%	0.00%	0.00%	0.00%	9.09%	9.09%	0.00%	0.00%	0.00%	0.00%
Slovakia	33.33%	16.67%	16.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.67%	0.00%	16.67%	0.00%	0.00%	0.00%	0.00%
Slovenia	33.33%	0.00%	0.00%	0.00%	0.00%	33.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	33.33%	0.00%	0.00%	0.00%	0.00%
Spain	25.00%	10.00%	40.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	0.00%	0.00%	5.00%	0.00%	10.00%	0.00%	0.00%
Sweden	28.57%	0.00%	28.57%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.29%	0.00%	14.29%	0.00%	14.29%

Table A-2: Distribution of each member state's total participation per coordinator