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The arms market and European cooperation policies

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Pour mes grands-parents, mes parents, et mes frères
qui ont toujours été là dans les pires et meilleurs moments.

Per i miei nonni, i miei genitori e i miei fratelli che sono
sempre stati lì nei momenti peggiori e migliori.

ABSTRACT

For many years, the European Union has been a focal point of research in social science and international relations studies, attracting scholarly attention with its unique political and economic integration processes. Scholars have extensively examined the EU's institutional structures, policy-making mechanisms, and impact on member states' governance. This academic interest extends to security and defence cooperation, where the EU's efforts to develop a cohesive defence policy and joint military capabilities have come under scrutiny. Studies have explored the complexities of harmonizing national defence policies within a supranational framework, the challenges of multinational defence procurement, and the strategic implications of initiatives like the Common Security and Defence Policy (CSDP) and Permanent Structured Cooperation (PESCO). This thesis takes an active approach to investigate the evolution and complexities of European armament cooperation, mainly focusing on how collaborative efforts in the defence sector have shaped the European defence market and strategic policies. The thesis actively explores the multifaceted nature of armament cooperation, which encompasses military, political, and economic dimensions. It actively highlights how national procurements and strategic cultures present significant hurdles to European cooperation. The competitive landscape of the European defence industrial base, alongside the influence and authority of supranational European governance, is actively examined to understand the challenges and successes of joint defence projects. It then focuses on the case of the shipbuilding industry to understand the difficulties that have made multinational naval initiatives challenging to achieve.

List of acronyms:

EU - European Union

WEU - Western European Union

EEC – European Economic Community

EDA - European Defence Agency

OCCAR - Organisation Conjointe de Coopération en matière d'ARmement

PESCO - Permanent Structured Cooperation

CFSP - Common Foreign and Security Policy

CSDP - Common Security and Defence Policy

NATO - North Atlantic Treaty Organization

CNAD - Conference of National Armaments Directors

IEPG - Independent European Programme Group

WEAG - Western European Armaments Group

WEAO - Western European Armaments Organization

DTIB - Defence Technological and Industrial Base

LoI - Letter of Intent

EDF – European Defence Fund

ESS - European Security Strategy

NIAG - NATO Industrial Advisory Group

EDIG - European Defence Industrial Group

R&T - Research and Technology

CARD - Coordinated Annual Review of Defence

EPC - European Political Cooperation

MOU- Memorandum of Understanding

CNGF – Common Next Generation Frigate

FREMM - FREgates Multi-Missions

MMPC - Multi Modular Patrol Corvette

NBMR - NATO Basic Military Requirement

EEAS – European External Action Service

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Introduction

Fifty years ago, the first Panavia Tornado prototype made its first flight on 14 August 1974; its wings came from Turin in Italy, while the centre fuselage was made in then-West Germany, where they were assembled later with the front fuselage and tail sections made all across Great Britain. It would serve, without escaping criticism and polemics, in the Royal Air Force (RAF), Italian Air Force, and Luftwaffe from Yugoslavia to Iraq and with still flying operational units to this day. The program was not the first pan-European cooperation initiative in the armament industry and would not be the last. However, it did establish the idea that collaboration in this strategic but also restrictive sector was indeed possible. European cooperation in armament development is an issue that has been the centre of negotiations between states and industries, where it reshaped the European defence market with combined procurements, joint developments and sometimes failures to cooperate. Armament development is also a continent-wide prerogative that is the object of negotiations between states as a foreign affair issue but also within the structure of the European Union with a European agency specialised in the coordination of Defence and security, an institution that was difficult to imagine when the first tornado took off.

European armament cooperation, while making significant strides, is a complex and challenging endeavour. National procurements, deeply ingrained in state strategic cultures, pose a significant hurdle. The European defence industrial base, a competitive landscape, sees firms vying for new contracts. The authority of supranational European governance in defence matters is also a topic of ongoing debate, often requiring concurrence from parallel initiatives and member states. The question of armament is multifaceted: It is a military project aimed at equipping armed forces and defending national sovereignty, but it is also a political economy project organised through the state, its neighbours, and the European Union. This stake has reshaped the boundaries between the state and its capital and between national sovereignty and 'Europeanization'. Europeanization can be seen in two distinct ways: firstly, as the influence of European integration on national policies and political systems, and secondly, as a process characterised by increased interaction between European-level and domestic policy-making. It impacts both foreign policy and public management, making it challenging to coordinate yet also paramount, notably when external factors are put into the equation: war, the rise of new threats, the revolutions of warfare through IA and drones, the competition with new poles of contenders in Asia but also across the Atlantic. The topic of European armament cooperation is also the subject of polemics, as seen in the strained relations between France and Germany due to their cooperation in future strategic programs, which led public authorities to take firm positions towards them. The collaboration in armament development is a significant part of

current affairs, generating debates and tensions between nations. The intertwining of national interests and the complexities of joint defence programs often lead to disagreements and controversies, making armament cooperation a contentious and highly relevant issue in today's geopolitical landscape.

European cooperation in armament has been a subject of significant academic interest and a field that has evolved over time. Initially, European universities focused more on institutional studies, overshadowing the field of defence cooperation. However, as the European Union has expanded its security and foreign policy competencies, academic interest in European armament cooperation has grown significantly. This shift in focus underscores the evolving nature of the field and its increasing relevance. In contrast, American academic studies have frequently examined European armament cooperation through the lens of U.S. foreign policy and NATO dynamics. This perspective highlights how European defence initiatives align with broader transatlantic security interests and U.S. strategic goals. During the Cold War, scholars have analyzed the implications of European defence cooperation for NATO's operational cohesion and the overall stability of the transatlantic alliance.

The topic of European armament cooperation was selected due to its multifaceted nature and its significant impact on international relations, security, and Defence. This subject encompasses a wide range of historical, political, and economic factors that shape the current landscape of European defence integration. Understanding the drivers and obstacles of armament cooperation in Europe is crucial for comprehending the dynamics of European security, foreign policy, and the role of the European Union in defence matters. Additionally, the topic provides insights into the broader transatlantic security interests and the implications for NATO dynamics, making it an essential area of study in international relations.

The present research aims to analyse the drivers of cooperation in developing armaments in Europe. It tries to answer why the European consolidation of an armament market is an unfinished business when the first efforts toward this objective were made in the 60s'. The hypothesis leading the research implies that European consolidation faces obstacles at an institutional level, which is ruled by policy decision-making and concurrence for authority. It also wants to prove that the failure to cooperate is not solely a political issue, contradicting the idea that states are malevolent and narcissistic and that cooperation is only possible if national solutions are inadequate. It is hypothesised that issues arise at different levels of cooperation: between companies, within programs, and how they are developed. Two questions must be asked: What has led to the multiplication and dissolving of multi-national agencies, which all shared the same goal of coordination, leading to the European Union of today with its frameworks and agencies? The second question is, what is refraining states and firms from cooperating independently of the European Union? Both questions involve studying the obstacles

and drivers for this common goal. To do so, it defines two paths of analysis chosen for their relevance to the overall debate; our approach assumes that it is just as relevant to analyse this dynamic as a top-down and bottom-up phenomenon. The top-down approach highlights the institution-driven development of new coordination tools and the extension of security and Defence matters to the European Union. The bottom-up approach focuses on the market-driven imperatives that push or incentivise industrial cooperation. The former approach is well-established and has seen multiple academic additions in recent years. However, the latter is novel: It is not to say that the bottom-up approach has not seen its share of quantitative or qualitative data analysed, but applying business and market concepts is not standard practice. The main hypothesis that constructs this thesis is that it is impossible to separate economic and institutional factors during the transformation of armament cooperation. This explains the dual path approach: we assume that there are incentives and obstacles both coming from the governance, but also the firms and the relationships between them and the states, that lead to interaction between both levels.

Chapter I will describe the thesis's theoretical framework, which provides a structured way of thinking about a research question. It will also clarify the main concepts used and their relevancy in the framework. It will include the literature review, providing an overview of the leading academic works, examining the prominent positions in the matter, and identifying any theoretical gaps. It will be followed by a study of the European security and defence institutions, their establishments and dissolution, their missions and the dynamics between them in chapter II. On the other hand, while the previous chapter will be limited to a top-down approach study, chapter III will focus on the bottom-up approach: it will study the mechanics that characterise the cooperation at the private actors level and between them and states. Chapter IV will follow approximately the same path, focusing on the naval industry and a series of surface-combatant ships programs made in cooperation between various European countries, emphasising France and Italy: comments will be made about their success, failures and difficulties that arise in such level of action and decision-making. It is also an occasion to add empirical evidence to this field of academics with programs that have never been studied so far. The last chapter, chapter V, will conclude by highlighting the discoveries made during the thesis and trying to answer the leading problem and the hypothesis made.

Chapter I : Theoretical framework

1.1.State of the literature

The theoretical discussions on European integration are rooted in two influential works in European studies: Ernst B. Haas's "The Uniting of Europe: Political, Social, and Economic Forces" and N. Lindberg's "The Political Dynamics of European Economic Integration." These works introduce the concept of neo-functionalism, which suggests that international cooperation helps states coexist harmoniously through functional organisations. Rather than weakening sovereignty by dividing allegiances, neo-functionalism aims to establish a federal entity on a broader territorial basis while maintaining original sovereignty. Integration is pursued pragmatically, function by function, with the process expanding into new areas through a spillover effect. In contrast, scholars like Stanley Hoffmann critique this approach. Hoffmann, in his book "Obstinate or Obsolete? The Fate of the Nation-State and the Case of Western Europe" (1966), views the European Community (EC) primarily as a cooperative effort among states, which are rational actors governed by principles of authority and hierarchy. The resulting pooled sovereignty does not diminish the role of states but strengthens them by aiding their adaptation to international constraints, thus defining the intergovernmentalist perspective. The focus of intergovernmentalists on government actors in the 1990s led analysts to emphasise the significance of institutions, considering them as both organisations and structures. This perspective suggests that organisational forms and institutions shape the strategies of actors. Researchers can be divided into two groups: those examining formal and informal institutions and those concentrating on organisations such as governments, the European Commission, the Council of Ministers, and the European Parliament. Relational structures can be viewed as specific institutional configurations within a sector, the organisational methods of social exchanges in a defined space, or the legal frameworks that establish the rules and hierarchies among actors and political instruments. Formal organisations, including governments and EU institutions like the European Commission, the Court of Auditors, and the Council of Ministers, represent another institutional form of interest to institutionalists. At the EU level, Simon Bulmer notably theorised the neo-institutional approach in his work "The Governance of the European Union: A New Institutionalist Approach."

In parallel to this new approach, a more pronounced economic view on European integration was developed: International political economy approaches, which focus on economically rational actors, examine the political and social interactions within economic integration. These approaches are based on the hypothesis that European states aim to reduce transaction costs in an open economy context, viewing European integration as a collective effort to optimize each state's gains. A notable perspective within this framework is Andrew Moravcsik's liberal intergovernmentalism, which builds on the works

of Robert Owen Keohane and Stanley Hoffmann. Moravcsik argues that the primary actors in international politics are rational individuals and private groups, with states acting as agents to protect these groups' material and ideological interests. While central in intergovernmental negotiations, states operate primarily to defend societal preferences against the backdrop of constraints posed by other states' preferences. According to Moravcsik, European institutions are created by member states to enhance the efficiency of inter-state bargaining and provide political leaders with greater autonomy from national political pressures. This view, which frames inter-state bargaining as a contest of national interests, has sparked significant controversy. Critics, especially from institutionalist and constructivist perspectives, argue that Moravcsik's approach neglects the internal diversity of central governments and the independent roles of national actors within the European Union. They contend that European institutions such as the European Commission, the European Parliament, and the European Court of Justice are not merely tools for enhancing inter-state bargaining efficiency but have their interests and capacities to act independently in decision-making. These institutions can generate ideas and exert influence as independent actors, challenging the notion that states are the sole stage for representing European interests.

This literature review aims to provide an overview and critical analysis of European studies' most influential and relevant theories. While it does not encompass all theoretical approaches, it focuses on those significantly contributing to our understanding of European integration. While not extensively discussed, constructivism, governance theories, and the sociology of European politics offer unique perspectives that enrich this thesis. Constructivism emphasizes the role of ideas and identities, governance theories highlight the multi-level and networked nature of EU policy-making, and the sociology of European politics examines the influence of social structures and cultural norms. Together, these approaches offer a comprehensive understanding of the complex and multifaceted nature of the European Union.

The traditional approach to studying European integration typically involves selecting specific theories based on the research question. Researchers might opt for a state-centered perspective, that is, the intergovernmental theory, a supranational approach, or a multi-level governance approach that examines multiple levels of analysis. The dispute between intergovernmentalists and neo-functionalists, which evolved as a dispute between neoliberals and institutionalists, highlights the epistemological difference between those who see Europeanization as the effect of European integration on domestic policy and politics and those who refer to Europeanization as a process of increased interaction between European and domestic policy processes. The Study of European defence, particularly armament cooperation, solely exist within the second principle. The reason is

straightforward : cooperation in armament has not awaited the creation of the European defence agency in the 2000' to happen ; it existed long before any European wide initiatives were established.

The work of Svein S. Andersen for the ARENA- Centre for European Studies, University of Oslo helps better understand Europeanization: his paper "The Mosaic of Europeanization: An Organizational Perspective on National Re-contextualization" published in 2004 gives a greater insight into Europeanization. Integration theories suggest that EU-level integration is driven by rational and functional efficiency needs, leading to the standardization of national institutions and practices. These theories emphasize a top-down perspective where formal authority and rational adaptation are critical, focusing on vertical integration between the EU and its sub-units. They explain variations in convergence or divergence by the extent to which national institutions align with EU decisions and legislation. However, Andersen disagrees with this premise, arguing that "much of the integration occurring at the national level is beyond the scope of traditional integration theories.". Andersen also criticize Neo-functionalism and intergovernmentalism as they only see EU integration as response to member states' need for more efficient collective arrangements. He as such proposes an organizational perspective of integration with the question " Under what conditions do we get strong integration, as standardization of organization and behaviour across countries?" From an organizational perspective, the degree to which institutions can significantly influence individuals' pre-established mind-sets and loyalties is largely determined by their organizational structure. If institutions are well-organized, with clear and effective governance, they are more likely to impact individuals' attitudes and loyalties profoundly. Conversely, poorly organized institutions may struggle to effect such changes, as their influence would be less cohesive and compelling. The organization of these institutions dictates their ability to integrate and standardize practices, thereby shaping the perceptions and loyalties of those within their sphere of influence.

Malena Britz, Associate Professor at the Swedish Defence University, and Ulrika Mörth Professor at the Stockholm University have both tried to apply organizational perspective to the armament industry in Europe. In a 2004 article "European Integration as Organizing: The Case of Armaments" where they highlight the advantage of Cross-pillar analysis with "complex relations between different paths of European integration". This approach is appropriate to our study as it enables the examination of the interaction between the market and security aspects of European integration, highlighting the dynamics between supranational and intergovernmental actors, both private and public. By applying institutionalism and its concept of how organizations become institutionalized, we can also analyse the organizational complexity within the diverse policy area of armaments while maintaining theoretical clarity. This approach is also the one of "The Political Economy of European Security" of Kaija Schilde, an Associate Professor at the Boston University Pardee School of Global Studies whose

work has helped to clarify the many dynamics existing between all actors with the prospect of European security in an organized manner.

1.2.overview of main concepts

1.2.1. state sovereignty and mercantilism

State sovereignty is a foundational principle of international law and politics, encapsulating a governing body's full right and power to govern itself without any interference from outside sources or bodies. This concept has evolved over centuries, becoming a cornerstone of the modern state system. State sovereignty refers to the authority of a state to govern itself and make decisions independently of external interference. This includes the ability to enact laws, administer justice, control borders, and conduct foreign policy. The concept emerged from the historically significant Treaty of Westphalia in 1648, which not only ended Europe's Thirty Years' War but also established the framework for modern nation-states. This treaty laid down the principles of territorial integrity and non-interference, which are essential components of sovereignty and continue to shape our understanding of it today. Internal Sovereignty: This refers to the supreme authority within the state's territory. It encompasses the power to make laws, enforce them, and administer justice. Internal sovereignty also includes the ability to maintain order and provide public services. External Sovereignty: This aspect involves the recognition by other states and international bodies of a state's independence and its right to enter into relations with other states. It includes the capacity to engage in diplomacy, form treaties, and participate in international organizations.

Sovereignty is a critical concept in national and international relations, evolving alongside the modern state and reflecting the relationship between state and civil society. sovereignty is not an absolute fact but a claim about how political power should be exercised. It is linked to national interests, independence, security, and the state's ability to enforce its will. Sovereignty is both an idea and a practice, essential to political discourse, aiming to create order in a turbulent world by distinguishing between order and chaos, security and danger, and identity and difference. Thomas Hobbes' "Leviathan" (1651) significantly advanced the concept of sovereignty. Unlike earlier theorists like Bodin, Hobbes advocated for an absolute sovereign to prevent anarchy. He proposed that individuals surrender their rights to a sovereign for security, merging the concepts of state and government and establishing the sovereign as the ultimate authority.

The state's territorial role is closely linked to its economic functions, creating legal frameworks for property and facilitating economic activities and industrial development. This involved dismantling feudal institutions, promoting trade, and adjusting taxes and subsidies to support capitalist growth.

Historically, decisive state intervention in economic affairs has been labelled mercantilism, with variations such as classical, developmental, and countercyclical mercantilism, each addressing different economic contexts and challenges. Classical mercantilism, prevalent in sixteenth- to eighteenth-century Europe, views international trade as a zero-sum game and emphasizes maintaining a favourable trade balance. Developmental mercantilism, which emerged during nineteenth-century industrialization, uses tariffs and protections to support manufacturing and economic growth. Countercyclical mercantilism, adopted during the 1930s depression, focuses on trade and financial controls to shield the national economy from external disruptions. The end of sovereignty? : the politics of a shrinking and fragmenting world

1.2.2. Defence Interest Trilemma

The dynamic European security environment has consistently shaped theoretical frameworks, often centring around a trilemma of three competing factors. This concept, similar to the well-known "impossible trinity" in international economics, emphasizes the trade-offs among achieving a stable exchange rate, controlling monetary policy, and allowing capital movement—only two of which can be accomplished simultaneously.

When applied to defence procurement, the "Defence Interest Trilemma" illustrates European nations' challenges in balancing national sovereignty, collective security, and economic efficiency. This trilemma reveals the inherent tensions in maintaining autonomous national defence capabilities, contributing to collective European or NATO defence efforts, and managing limited defence budgets.

1. National Sovereignty: This facet emphasizes the importance of maintaining control over national defence policies and capabilities to safeguard national interests independently. This often leads to investments in domestic military capabilities and procurement processes that support local industries.
2. Collective Security: This priority highlights the need for collaboration and integration among European states or NATO allies and aims to bolster the overall defence posture against common threats. Achieving collective security requires interoperability and standardization of military assets, which can sometimes conflict with national preferences and the interests of domestic defence industries.
3. Economic Efficiency: This dimension of the 'Defence Interest Trilemma' necessitates optimising defence spending for maximum effectiveness and sustainability. It often advocates for joint procurement programs, resource sharing, and the reduction of redundant capabilities among allies. However, pursuing economic efficiency can challenge national sovereignty by requiring

compromises on defence autonomy and may also impact the depth of commitment to collective security arrangements.

Navigating the 'Defence Interest Trilemma' is a complex process that involves finding a strategic balance. This balance must maintain a strong defence posture, respect national sovereignty, contribute to collective security, and remain economically sustainable. European defence policies and strategies are continually shaped by the negotiation of these competing interests, reflecting the intricate reality of contemporary defence planning in a multipolar world.

1.2.3. Global Governance and regionalism

Governance, a complex and multifaceted concept, encompasses power, control, and authority within and across nations. Its traditional definition referred to the activities of formal political institutions aimed at coordinating and controlling social relations. However, contemporary analyses extend this definition to include regulating interdependent relations without an overarching political authority, especially in international contexts. This intricate concept can be broken down into three key aspects:

1. Governance involves the mechanisms and processes of power, control, and authority and how these elements interact and evolve.
2. Good governance emphasises participation, the rule of law, transparency, accountability, and institutional integrity, ensuring that these principles guide public policies and government officials' actions.
3. Global governance refers to cooperative problem-solving arrangements on a global scale involving formal and informal institutions, rules, and practices that manage collective affairs across state, market, and civil society actors.

Building on this understanding of governance, the rise of the market and civil society introduces additional complexities, particularly at the international level. As national economies become increasingly interdependent, with accelerated trade, investment, and technology flows, the need for effective governance frameworks becomes more pressing. Economic operations rely heavily on the political, legal, and military context provided by states, highlighting the indispensable role of states in maintaining order and facilitating market operations. This dynamic underscores the governance challenges that arise from market interdependence, as market rules and international politics often reflect the interests of dominant players. Thus, there is a need for balanced governance rules that manage power and authority in the global economy.

Regionalism and integration further complicate and enrich the governance landscape. Regional integration involves intensifying relations between sovereign states, leading to stable patterns of

cooperation and institutionalization. This process diminishes the significance of state boundaries concerning sub-national flows and transactions, fostering a sense of shared identity beyond national borders. Integration promotes both unification and fragmentation, creating complex social transformations. These transformations often involve lowering internal boundaries and increasing state interactions, which can liberate energies and tensions.

Integration is driven by creating larger free trade areas, enhancing defence capacities, and responding to economic challenges. Historically, processes of integration and disintegration have shaped the world order, leading to the consolidation of nation-states and the increase in the number of independent countries post-World War II. As identities and governance structures evolve, regional integration remains significant in shaping global interactions and the political landscape. In summary, governance encompasses the regulation of power and authority, the rise of market dynamics introduces governance challenges, and regional integration shapes interactions between states, affecting political and economic landscapes. These interconnected themes highlight the evolving nature of governance in response to global economic interdependence and regional integration.

Chapter II : institutionalism and Europeanization

Armament cooperation, like most sectors of activities previously limited to state to state interaction, evolved towards an institutionalised affinity with the European Union. Yet this story wasn't without hurdles and only recently saw success with the creation of agencies specialized in the coordination and development of military programs.

2.1. From the Western European Union to the European Defence agency

Cooperation between European nations in the field of European defence has been described through the principle of "negative differenciation", in which the differences between countries create significant obstacles to integration, rather than facilitating it. In the context of the European Union's defence policy, negative differentiation has been the norm due to the varied security needs, capabilities, and political priorities of member states: Size and capability differences, economic disparities, political and strategic divergences, historical relationships and geopolitical contexts that shape each member state's approach to defence and security. European studies working with this paradigm have been kin to describe the development of the European Union as a 'system of differentiated integration': in this way it is defined by researchers that "*Rather than restricting differentiation to a temporary, accidental or non-systematic feature of European integration, we argue that differentiation is an essential and, most likely, enduring characteristic of the EU*." [1]

2.1.1. The Cold War and Inter-European cooperation – NATO, the Western European Union and its failure

The 1948 Brussels Treaty on Economic, Social, and Cultural Collaboration and Collective Self-Defence was the initial attempt to establish a common European defence policy. This treaty, signed by Belgium, France, Luxembourg, the Netherlands, and the United Kingdom, created the Western Union, which was later integrated into NATO with the signing of the North Atlantic Treaty in 1949. The Paris Agreements of 1954 saw West Germany and Italy (later joined by Greece, Spain, and Portugal) accede to the Brussels Treaty, leading to the Western Union being renamed the Western European Union (WEU). In the 1950s, alongside the European Coal and Steel Community (ECSC), an European Defence Community (EDC) was proposed but ultimately failed.

[1] F. Schummelfenning, D. Leuffen, B. Rittberger, "The european Union as a system of Differentiated Integration Interdependence, Politization and Differentiation", July 2014, p.6

The WEU played a large role in shaping defence policies and cooperative strategies among European countries. The WEU's Council, initially conceived for ongoing operation but infrequently convened, aimed at promoting European peace, security, and integration. The Secretariat-General, operating out of London until late 1992, facilitated communications between the Council and various entities, while the Parliamentary Assembly, linked to the Council of Europe, played a significant role in European defence and security through its biannual plenary sessions and reports. The Western European Union's ancillary bodies encompassed a range of specialized agencies and committees that provided substantial support to the union's defence and strategic objectives. These included the Agency for the Control of Armaments, established to oversee the regulation of weapons and to monitor specific manufacturing sectors, particularly in the context of Germany during a pivotal time in European politics.[2] Furthermore, entities such as the Standing Armaments Committee endeavoured to align military capabilities by spearheading joint production initiatives[3]. In the nascent stages of the Western European Union, the predominant European powers showcased a vision that transcended military collaboration, underscoring a drive for comprehensive European unity and cooperation. The Messina Conference[4] was particularly significant in this regard, highlighting a commitment among the six continental WEU members to deepen their integration within Europe, notably in the political and economic domains[5]. This pursuit of a 'united Europe' was further stressed during the endorsement of the Paris Agreements, where French Prime Minister Pierre Mendès France argued that building a united Europe was of paramount importance for the future of European civilization, overshadowing the military stipulations of the agreements at hand. The German Chancellor, Konrad Adenauer, similarly articulated a perspective where the WEU was deemed a politically pivotal entity, with the vision of becoming the cornerstone for the evolution of future European policy, reflecting a strategic approach where political unity was the nucleus for long-term action planning and policy implementation[6]. Arms cooperation was seen as a pathway for Europe to contribute more to NATO by sharing burdens and overcoming technological gaps.

Yet, in the first three decades after its creation, the WEU mainly functioned as a forum for European states to discuss issues rather than as a military organization. It played a key role in promoting European integration and enhancing the relationship between Great Britain and Europe. Amid a challenging

[2] M.Cremasco, "The role of the Western European Union in European Security", October 1996
[3] A.Dumoulin, « The organisation and mode of operation of WEU", Centre for contemporary and digital History, July 2016
[4] A conference with the foreign affairs ministers of France, Italy, Luxembourg, Belgium, West-Germany and the Netherland meant to give a new breath to the contruction of the European Union after the failure of the EDC.
[5] S.Pistone, « the Messna conference and the advance of european Unification", The Federalist Political revue, 2005, p.183
[6] W. Loth, "Building Europe: A History of European Unification", august 2015

international environment, the WEU served as a link between Western European states and the United Kingdom, significantly aiding European integration and the UK's entry into the European Economic Community (EEC) in 1973. From 1973 to 1984, the WEU's activities as an intergovernmental organization gradually diminished. However, the Agency for the Control of Armaments and the Standing Armaments Committee continued their operations. The WEU's economic, social, and cultural functions were taken over by the OEEC[7] and the Council of Europe, and the political activities of the WEU Council became less relevant with the rise of European Political Cooperation. In the subsequent years, the political and institutional dialogue between the Council and the Assembly made a notable contribution to discussions on European security and defence need. However, the Western European Union's Standing Armaments Committee was largely ineffective due to U.S. preferences and European resistance to compromising their own defence industries. While the WEU managed to integrate the multilateral arms cooperation within its own structure, preventing competing systems within Europe for a time, it was eventually overshadowed by NATO itself. [8]

The end of the Armaments Committee originated from NATO's central position in armament policies. The MPSB or Military Production and Supply Board, set up under NATO in 1949, was envisioned as a supportive mechanism for NATO's emerging military commands, responsible for standardizing armaments in line with defence strategies. Its shortcomings led to the establishment of the Military Standardization Agency or MSA in 1952, which granted more centralized authority to military personnel across three branches and various working groups. This body successfully created hundreds of standard technical protocols (STANAGs) by 1956. Simultaneously, NATO expanded its scope into joint weapons production, starting tentatively with the Defence Production Board and evolving into the more robust Armaments Committee by 1958[9]. These bodies enabled military officers at national and multinational levels to propose collaborative weapon development initiatives. It is also at this time that NATO Basic Military Requirement initiative was born, to standardise NATO countries arsenals through a single procedure of competition between firms. [10]

In the early 1980s, European security concerns led to the WEU reactivation in 1984, aiming to create a "common European defence identity" and reinforce the European role in the North Atlantic Alliance. The European Political Cooperation (EPC) couldn't extend beyond economic issues, and the failure of the Genscher-Colombo initiative in 1981 prompted a search for a new consultation framework, with

[7] Organisation for European Economic Co-operation

[8] A. Bailes, G.M. Whiting, "Death of an Institution: The end for Western European Union, a future for European defence?", Royal Institute for International Relations, May 2011, p.15

[9] NATO website archive, Armament committee, the Defence Production Board (sometime named committee) was limited to research and logistic through administrative working groups. The Armaments Committee had new responsibilities over pre-production matters and a Joint Working Group on Cooperation in the Field of Armament.

[10] C. aksit, "NATO standarization - 60 years of Normative Success", August 2011

the WEU being the best option[11]. Belgian and French governments initiated a joint meeting of Foreign and Defence Ministers in Rome on October 26-27, 1984. This meeting produced the "Rome Declaration," which outlined goals like defining a European security identity and harmonising defence policies. The declaration emphasised the need to strengthen Western security, asserting that an improved WEU would enhance both European and Atlantic Alliance defence. The Rome Declaration also allowed the WEU Council to address global crises affecting Europe under Article VIII (3) of the modified Brussels Treaty. Consequently, the WEU Council planned to hold two annual ministerial meetings for Foreign and Defence Ministers.

2.1.2. Introducing more political backing in armament cooperation initiatives

All early armaments institutions shared a common technocratic spirit, were heavily influenced by military professionals, and featured minimal central governance. In contrast to the considerable sway of military personnel, political leaders and business executives had no direct input into the cooperation process. Moreover, the diminutive size of these institutions' secretariats limited the scope of international administrative functions.

The inability of the initial armaments institutions to foster adequate cooperation drove European officials to conceive new frameworks to overcome the weaknesses of the former systems. The Armaments Committee, a key first-generation entity, was dissolved in 1966 along with its associated procedures due to their ineffectiveness. New organisations emerged with the understanding that only high-level government representatives could synthesise the required political, military, and technical inputs to commence an armaments project. Political backing became more crucial than technical optimisation in armaments development. NATO's CNAD, short for Conference of National Armaments Directors, was established in 1966, and shortly after, the Eurogroup was formed, consisting solely of European members to perform similar functions. France's non-participation in these NATO-related bodies led to the creation of the IEPG or NATO Industrial Advisory Group (NIAG) in 1976, which included France.[12] [13]

During the 1970s, the Western European Union's Council activities were minimal, yet its Assembly actively fostered discussions on European defence matters. The lack of Ministerial engagement with the WEU in that era is attributed to the more pronounced role and effectiveness of other entities, such

[11] Foreign Minister Hans-Dietrich Genscher and his Italian colleague Emilio Colombo argued for the revitalization of the european community with an "European Act" which failed to gain enough momentum

[12] M. Devore, S. Eisenecker, "The Three Ages of Armaments Collaboration: Determinants of Organizational Success and Failure", September 2010, p.5-7

[13] M. Devore, "Organizing international armaments cooperation: institutional design and path dependencies in Europe", May 2012, p.444-p.447

as NATO and the European Community, in addressing the interests of individual European countries. In the late 1970s, the Soviet Union's military strength, particularly with the deployment of SS-20 missiles, challenged NATO's defence credibility. Reagan's Strategic Defence Initiative in 1983 marked a significant departure from traditional U.S. military policy and spurred European concerns about reliance on American technology. In recognising their technological and economic vulnerabilities, European nations saw the potential benefits of collaborative defence projects to streamline resources and confront rising weapons costs. By the mid-1980s, there was a broad recognition in Europe of the need for collective effort in defence to match the advancing military technologies.

This sentiment led to the creation of the Independent European Programme Group (IEPG) in 1976, aimed at coordinating European defence production, although national and commercial interests constrained progress. Toward the end of 1992, the IEPG resolved to integrate with the WEU and the NATO Eurogroup's defence organisations, a process completed by May 1993. As DeVore noted, the IEPG's initial location in Lisbon and its organisational shortcomings hindered its effectiveness in shaping the European armaments market. This issue was addressed by establishing a dedicated secretariat in Brussels and a team of permanent civil servants. All these entities shared the feature of not having extensive bureaucratic structures and being steered by elected government officials. With their tiny secretariats, these second-generation bodies primarily served as meeting coordinators for national armaments directors to explore collaboration possibilities. These directors, reflecting the preferences of their political superiors, came under greater political influence when the IEPG started convening at a ministerial level in 1984. Thus, political figures and armaments directors became the key players in launching and negotiating new defence projects, while military professionals provided technical counsel within sub-committees. Moreover, to incorporate corporate interests into armaments cooperation, NATO established the NIAG - NATO Industrial Advisory Group[14] in 1968, and later, the EDIG was formed in 1976 for the European Defence Industrial Group. Initially consultative, these industrial groups became more formally integrated into the advisory process by 1984, particularly with the EDIG's official advisory role to the IEPG. Overall, the second wave of institutions addressed the issue of nations withdrawing from collaborative defence efforts by integrating political dynamics into the cooperation framework and involving industry stakeholders. These entities (CNAD, Eurogroup, and IEPG) essentially served as platforms for facilitating dialogue among procurement officials and defence ministers, coordinated by very small central offices. This approach was based on the principle that solid political agreements were more critical to successful cooperation than meticulous management of technical or military concerns. The effectiveness of this strategy is evident in the successful initiation of new

[14] NIAG mission was to provide industry's advice to the CNAD, and other NATO Bodies as appropriate, on how to foster state to-industry and industry-to-industry cooperation within the Alliance

projects and in reducing the risk of participant withdrawal. [15] [16] Consequently, this approach led to the realisation of numerous significant initiatives, such as the Tornado aircraft, Milan missiles, and tripartite minesweepers, marking a tenfold increase in output from the era of initial armaments collaboration. Yet, the diminished focus on military expertise and the uncritical acceptance of corporate interests resulted in inefficient second-generation cooperative efforts and significant resource wastage.[17] The inefficiencies of this approach were highlighted in the early 1990s when significant cost overruns were exposed in prominent projects that are today in service and regularly end up criticized. The Tornado and Eurofighter programs stand as significant examples of the complexities and challenges inherent in multinational defence collaborations, particularly within the European context. These programs underscore the "European cooperation dilemma," wherein political consensus and economic interests often overshadowed precise military and technical requisites as the former show the difficult of joining multiple military requisite into one project while the latter is an example of the difficulties of planning and organizing the industrial share and maintenance.

The IEPG laid the groundwork for the European armaments agency proposed in the Maastricht Treaty. The Western European Armaments Group (WEAG), which succeeded the IEPG, initially comprised the same 13 members, and by 2000, six additional countries had joined, expanding the membership to 19. Despite the legacy and resources inherited from the IEPG, the WEAG's impact on armament development was limited due to its work distribution principle, disregarding cost efficiency through the principle of “Juste-retour”[18]. Its consensus-driven policy process and guaranteed project participation for all Member States also hampered progress due to varied national defence policies. These deficiencies eventually led to the creation of the OCCAR, as stated by the french Projet de loi relatif à l'organisation conjointe de coopération en matière d'armement : « *in Fact, on the institutional plan, only few limited advances have been made within the framework of the Western European Union. They are today insufficient to make relevant, at a reasonable scale, the perspective on the creation of an european armament agency* ».[19] OCCAR emerged as a solution to these challenges, with a smaller membership initially including only France, Germany, Italy, and the UK, and later Belgium.

[15] ibidem

[16] M. Devore, “Producing European armaments: Policymaking preferences and processes”, Cooperation and Conflict, Volume 49, Issue 4, December 2014

[17] Ibidem

[18] « Just retour » means the industrial return to investment in programs, leading to inefficient division of labour. The IEPG first established this principle but it’s only through the discouraging experience of the Tornado and Eurofighter programs that it became the synonym of cost inefficiency.

[19] Rapporteur Jean-Guy Branger, Projet de loi relatif à l'organisation conjointe de coopération en matière d'armement, November 1999

2.2 1990–2004: Emerging Defence Institutions and new Agendas

The European project was in a mitigated state, be it from a military-security or a political-economic perspective. The 1990' would give a new breath of initiative, trying to adjust imperative needs for cooperation with pas experience and the creation of the European Union.

2.2.1 The rise of the European union for defence matters and the Common Security and Defence Policy

The EEC, part of the European Communities, was never a prevailing place for debates and defence decisions, as the Western European Union overlooked that particular field of policies. Yet the 1990s' were a turning point for Europe: the WEU, which failed to gain decision power for neither armament nor industrial matters, went to focus on task force coordination, where it coordinated European actions in Albania and the Balkans. For the newly created European Union, its establishment was the occasion to expand its sectors of interest in defence matters. Throughout the 1990s, the European Commission sought to establish a role in governing defence industrial policy. Early in the decade, a series of communiqués emphasised the defence industry as a strategic sector, while later, in 1996 and 1997, the focus shifted to a free market perspective, first, through a report named "The Challenges Facing the European defence-related Industry, a Contribution for Action at the European Level" published in 1996 by the European commission[20]. There, the commission took strong positions to end barriers within the European armament industry but also threatened the United States with tariffs if it did not agree to reciprocal market access. It would again publish two new reports in 1996 and 1997 calling for more integration between the civilian and military market, more "spill-over" technologies, and better coordination at a European-wide level. From these positions, the EC manipulated the debate as a market and industrial matter that needed European policies and solutions that it could coordinate. While the WEU took armament issues as policy issues, the EC made "*efforts to frame common defence as a market issue, with the building blocks of this logic the decade-long effort on the part of informal defence industry institutions researching, analyzing, and promoting agenda-setting policy on the European defence industrial base*."[21] In 1997, the Amsterdam Treaty formalised defence cooperation by bringing the WEU under the EU Council's authority, specifically emphasising armaments cooperation instead of operational cooperation, with article J7.1 of the Amsterdam Treaty stating that "*The*

[20] "The challenges facing the european defence-related industry, a contribution for action at European level", Communication from the commission, January 1996

[21] K. Schilde, "The Political Development of EU Defence", The Political Economy of European Security, 2017, p.170

progressive framing of a common defence policy will be supported, as Member States consider appropriate, by cooperation between them in the field of armaments".

In the end, the progression of European integration and the consolidation of defence efforts under the European Union led to a transformation of these institutions. The establishment of the European Defence Agency by the EU signalled a new era of defence collaboration and technological innovation, building on the legacy of the WEU's subsidiary bodies. This transition illustrated a move towards a more streamlined and efficient framework for defence within the evolving landscape of European Union policies and strategic interests. While the WEU) persisted until 2011, it essentially entered a period of inactivity again. An illustrative case is the 1998 St Malo Declaration between France and the UK, which underscored a preference for direct bilateral cooperation, setting a precedent for future defence collaboration within Europe, separate from the WEU's framework. By the end of the 1990s, it had become clear that numerous initiatives related to the defence industry and procurement, developed independently of the EU and NATO, were bound to fail. This was largely because the organisational frameworks underpinning these initiatives were insufficiently robust and lacked substantial support from the governments of leading European arms-producing countries. Consequently, since 1996, we saw that the European Commission has been working to align the production and trade of armaments with the broader integration of common EU markets across various sectors. This movement was part of a broader thinking: In 1992, new responsibilities were assigned to the Western European Union and the subsequent year saw the establishment of the Common Foreign and Security Policy (CFSP) as a replacement for the European Political Cooperation[22] [23]. In 1996, NATO consented to developing the European Security and Defence Identity (ESDI) within the WEU and NATO[24]. The 1998 St. Malo declaration marked a significant shift, indicating the United Kingdom's willingness to support the creation of independent defence mechanisms within the EU. This change paved the way for the evolution of the ESDI into the European Security and Defence Policy (ESDP) in 2001 with the European treaty of Nice, at which point it was incorporated into the EU framework and would again evolve as the Common Security and Defence Policy (CSDP)[25]. The modern organisation of the two policies is as such : The CFSP is aimed at preserving peace and strengthening international security. It represents the coordinated foreign policy of EU member states, focusing on diplomacy, economic measures, and crisis management. Within it is CSDP which specifically deals with the defence and military aspects. It

[22] EUR-Lex website, Summaries of EU Legislation : Common Foreign and Security Policy, January 2001

[23] The European Political Cooperation was born with the European Communitites, but saw very little use notably because of the French disengagement because the participation of the United Kingdom gave to the initiative a Atlanticist characteristic.

[24] NATO website, Relations with the European Union, last visited the 10 April 2024

[25] Permanent representation of France to European Union, "Brief Guide to the European Security and Defence Policy (ESPD), December 2005, p.10-13

provides the EU with operational capacity to undertake missions outside the EU for peace-keeping, conflict prevention, and strengthening international security, under the principles of the UN Charter. As such, the parent Common Foreign and Security Policy was established with the treaty of Maastricht in 1992 while the Common Security and Defence Policy appeared with the treaty of Lisbon in 2007.

2.2.2 The establishment of an European Defence Agency

In the 1990', Armament cooperation revolves around the WEAG and th WEAO. While the WEAG was a political group with countries represented by the respective defence ministers, the WEAO was an industrial group meant to respond to the need for multi-national programs, notably through independent defence-related research projects.[26] Already in 1993, the WEAG set up a temporary study group tasked with exploring the feasibility of establishing a European Armaments Agency (EAA). This initiative followed a declaration at the WEU Maastricht summit, subsequent to the 1992 Treaty, which highlighted the need to delve into proposals aimed at bolstering collaboration in the armaments sector, with a vision to establish such an agency. The group pinpointed several missions that an EAA could possibly undertake, and its groundwork played a crucial role in the formulation of an agreement. On November 12, 1996, in Strasbourg, France, defence ministers from France, Germany, Italy, and the UK signed an agreement built upon previous WEU proposals for intensified cooperation in armaments, as outlined in the WEU Maastricht Declaration. Although it was not yet active, a "Masterplan for the European Armaments Agency"[27] was ratified in Rome on November 17, 1998, at a ministers' meeting. This master plan was designed to establish the requisite rules, structure, and operational procedures for the EAA, setting the stage for a decision on its implementation in 2001. It was decided that the ongoing work should proceed under the supervision of the national armaments directors. The defence ministers consented to explore the possibility of assigning further responsibilities to the WEAO, decisions on which would be based on the already concluded Masterplan work. Although the EAA was never established, its conceptual groundwork laid the foundations for creating the European Defence Agency.

The European Defence Agency (EDA), established by the European Council in 2005, was designed to lead the future of armaments cooperation, focusing on information dissemination, best practices development, and European armaments market integration. The EDA's influence was augmented by its substantial staffing and an R&D budget allocated through competitive bidding, providing it with considerable industry leverage. For this purpose, its duties encompass determining operational needs,

[26] M. Devore, S. Eisenecker, "The Three Ages of Armaments Collaboration: Determinants of Organizational Success and Failure", September 2010, p.8

[27] Ministerio de defensa, "European Defence Agency : the past, present and future", February 2010

advocating for solutions to meet these needs, aiding in the enhancement of the defence sector's industrial and technological foundation, engaging in the formulation of a European policy for capabilities and armaments, and supporting the Council in assessing the advancement of military capabilities.[28] When the EDA was launched in July 2004, its primary task was to implement the European Security Strategy (ESS)[29] adopted by the EU the previous year. The EDA's responsibilities included coordinating capabilities and creating joint investment solutions to address capability shortfalls, such as heavy lift equipment and helicopters, to enhance the EU's strategic autonomy and reduce its reliance on American resources and technologies. Additionally, it was to work with the European Commission to develop technologies and markets at the intersection of civilian and military applications, including UAVs, WMD defence, and software-defined radio for civilian crisis management solutions. While the EDA's primary mission was to bolster the capabilities of member states, its wider objective was also to assist the EU in developing credible, coherent, and effective military forces with the EU Battlegroups being a crucial element of these rapid response capabilities. Its mandate, as such, while vast, was also strikingly imprecise.[30] It published in 2006 a report for "An Initial Long-Term Vision for European Defence Capability and Capacity Needs" where it described future prospects for European defence: first, through the lens of a new world where 1) "*Unless globalisation stops or goes into reverse, the world of 2025 is likely to be more diverse, more inter-dependent, and even more unequal*."[31] And 2) where "*The role of the military will be determined within a wider campaign plan that includes close consultation with other – civil – instruments of power and influence*"[32]. Based on these affirmations, the EDA called for multiple new directives for defence planners, from better interoperability within national forces, between national forces, and with civilian actors, to an european Defence Technological and Industrial Base (EDTIB) : "*The need, in short, is to accept that the DTIB in Europe can only survive as one European whole, not as a sum of different national capacities*".[33]

In 2007 it laid down a Strategic Framework for the future of the european union, recognized that national "*DTIB is no longer sustainable on a strictly national basis – and that we must therefore press on with developing a truly European DTIB*"[34]. This European Defence Technological and Industrial Base (EDTIB) strategy that it would pursue would be based on three C' : Capability-driven as in focusing on

[28]K. Schilde, "The Political Development of EU Defence", The Political Economy of European Security, 2017, p.180
[29] "European Security strategy, A secure Europe in a better world", council of the european Union, 2009
[30] K. Schilde, "The Political Development of EU Defence", The Political Economy of European Security, 2017, p.181
[31] European Defence Agency, "An Initial Long-Term Vision for European Defence Capability and Capacity Needs", October 2006, p.10
[32] Ibid, p.20
[33] ibid, p.32
[34] EDA, Strategic Framework, 2007, p.25

the compliance with military requirements, Competent, with the use of high-end technologies and Competitive, with the ability to compete within Europe but also outside against foreign entities.[35]

Despite its intergovernmental constraints, the EDA initiated several major reforms to boost European defence capabilities. Early achievements included introducing a voluntary code of conduct to enhance transparency and cross-border competition in defence procurement among EU states. Additionally, the EDA established a Joint Investment Program to invest in defence strategically R&D. this was part of a greater initiative launch by the european commission: Under the heading 'Towards a more coherent European advanced security research effort', the Commission advocated for enhanced coordination of security research.[36] The first significant project under this program was the Joint Investment Programme on Force Protection in early 2007, funded by twenty member states with €55 million, focusing on countering snipers, booby traps, and robotised detection of CBRN and explosive devices. This initiative set the stage for the EDA's broader R&T ambitions, fostering joint R&T efforts and working closely with the European Commission to harmonise with EU-sponsored security research, reaching its final form with the European Defence Fund established in 2017.[3738]

Following these initial reforms, the EDA continued to spearhead joint investment projects. In September 2007, it facilitated a collaborative technology project between Britain, France, and Sweden to develop a lightweight radar for UAVs, with €21 million contributed by an industry consortium led by Thales[39]. The EDA also brokered a joint initiative between Britain, France, and Spain to advance tactical missile technology and created a unified procurement plan for helicopters and observation satellites, exclusively involving EU defence contractors. Additionally, the EDA crafted an Armaments Strategy to address future military needs, promote interoperability, and manage the rising costs of high-tech defence equipment. The EDA's credibility grew among external actors such as NATO and the U.S. Department of Defence. By September 2009, EDA officials were discussing with the DoD about developing a new heavy-lift transport helicopter, underscoring the EDA's role as a key partner in transnational defence cooperation. That same year, the EDA received authorization to establish a

[35] Ibid, p.39

[36] Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions - European defence - Industrial and market issues - Towards an EU Defence Equipment Policy

[37] K. Schilde, "The Political Development of EU Defence", The Political Economy of European Security, 2017, p.183

[38] J. Granberg, "Joint European Investments in Defence Research and Technology An Evaluation of the European Defence Agency's Joint Investment Programme on Force Protection", 2013, p.3

[39] EDA communication leaflet, "SIMCLAIRS Innovation and technology partnership: a second call for proposals is to be held in February for competed research programmes starting in June 2011", 2009, p.1

European Framework Cooperation for Security and Defence with the European Commission, aiming to maximize synergy between defence and civil security research activities.

2.2.3 The development of a Parallel Cooperation Initiative

While establishing a coordination structure within the European Union slowly evolved to its current form, several European nations continued to innovate in bolstering their defence industries against the backdrop of decreasing budgets and competitive pressures from the US in the export markets. On July 6, 1998, six countries—France, Germany, Italy, Spain, Sweden, and the UK—executed a Letter of Intent (LoI) aimed at “Measures to Facilitate the Restructuring of European Defence Industry,"[40] leading to a Framework Agreement by 2000, ratified in 2001. Though this intergovernmental treaty operated outside the EU's direct purview, it signified a leap in European armament collaboration. The LoI specifically addressed a series of critical issues considered vital to the future of Europe's defence sector: ensuring supply security, refining export processes, bolstering research and technology, protecting intellectual property, and standardising military requirements. The primary ambition of this initiative was to establish the political and legal scaffolding needed to enable industrial restructuring, thereby forging a more competitive and formidable European Defence Technological and Industrial Base, or EDTIB. In support of this, an Executive Committee of high-ranking officials was set up, with rotating leadership among the nations involved in the LoI, convening annually to monitor progress. Concurrently, European governments sought to consolidate their efforts to enhance the armaments sector's efficiency. A milestone was marked in December 1995 when France and Germany ventured into new cooperative measures with the Baden-Baden agreements[41]. This initial Franco-German collaboration quickly garnered interest from Italy and the UK, which led to establishing the Organisation Conjointe de Coopération en matière d'ARmement, or OCCAR, through an administrative arrangement on November 12, 1996. OCCAR's mission centred on achieving a "more efficient and structured cooperation" in the armaments domain.

OCCAR (Organisation Conjointe de Coopération en matière d'ARmement, or Organisation for Joint Armament Cooperation) is an intergovernmental organisation focused on managing collaborative defence procurement programs. Its core responsibilities include managing collaborative and national defence programs assigned by its member states, developing common technical specifications for

[40] Framework Agreement between the French Republic, the Federal Republic of Germany, the Italian Republic, the Kingdom of Spain, the Kingdom of Sweden, and the United Kingdom of Great Britain and Northern Ireland concerning Measures to Facilitate the Restructuring and Operation of the European Defence Industry

[41] Rapporteur Jean-Guy Branger, Projet de loi relatif à l'organisation conjointe de coopération en matière d'armement, November 1999

jointly defined equipment, coordinating joint research activities and studies, and overseeing decisions related to the common industrial base and technologies, as well as capital investments and test facilities. As of 2024, OCCAR oversees 21 major programs (11 in 2015), such as the A400M airlifter, the Boxer armoured vehicle, the Franco-Italian multi-mission frigates, and the Tiger attack helicopter, among others.

OCCAR's governance structure includes the Board of Supervisors (BoS) and the Executive Administration (OCCAR-EA). The BoS, composed of defence ministers or their delegates from member states, is the highest decision-making body within OCCAR, responsible for approving collaborative programs, OCCAR's working procedures, and significant contract awards. OCCAR-EA, led by a Director and composed of international civil servants, implements the BoS's decisions and manages day-to-day operations. It is organized into a Central Office and various Program Divisions, each overseen by a program manager.[42] Decisions within OCCAR, especially those affecting individual programs, require unanimous approval from the BoS, with founding members (France, Germany, Italy, and the UK) holding veto power over critical decisions.[43] The OCCAR Convention is supplemented by the OCCAR Management Procedures (OMP) and various internal procedures and decisions governing the organisation's program management and procurement rules. These rules emphasise transparency, competition, and adherence to EU principles, although specific exemptions such as Article 346 TFEU may apply for defence and security reasons. OCCAR's procurement rules are designed to comply with applicable laws and to respect the spirit of EU regulations and directives. Key principles include supporting the European Defence Technological and Industrial Base (EDTIB) and ensuring short- to medium-term support for member states' armed forces, with a notable move away from the "juste retour" principle towards a more flexible "global balance" approach for contract awards as stated in Article 5: " *To enable the strengthening of the competitiveness of the European defence industrial and technological base, the Member States renounce, in the areas of cooperation, an analytical calculation of the fair industrial return program by program, to replace it by seeking an overall multi-program and multi-annual balance*". [44] The French *projet de loi*[45] would define OCCAR mission five principles as follow:

- Establishing multinational integrated teams for program management, adopting advanced and efficient methodologies;

[42] OCCAR publication, OCCAR – at a glance, 2016
[43] OCCAR-EA OCCAR Management Procedure, February 2016, p.18
[44] OCCAR, convention on the establishment of the organisation for Joint Armament Cooperation, p.8
[45] Rapporteur Jean-Guy Branger, Projet de loi relatif à l'organisation conjointe de coopération en matière d'armement, November 1999

- Enhancing and developing Europe's defence industrial and technological base, including making it accessible to suppliers from the Armament Group (GAEO) of the Western European Union member states;
- Replacing the traditional concept of industrial 'just return' evaluated annually and by program, with a broader approach of a cumulative 'just return' assessed over multiple programs and years;
- Giving preference to equipment that member countries of OCCAR have collaborated on within the organization as noted in Article 6;
- Implementing a more adaptable decision-making process that allows for a qualified majority in certain scenarios, marking a departure from the strict requirement for unanimity.

In each program, the six member nations reach a consensus on integration, enabling the OCCAr to begin integrating the program with interested states, whether members or not. The progress of these programs is closely monitored by the nations involved. There is a Program Board for each project, consisting of national arms directors, which establishes the strategic framework for the program. A program committee operates at a more operational level, acting as the decision-making body where nations oversee the implementation; the OCCAr provides coordination and advice during the integration phase. Following this, nations commit to initiating a program by providing the OCCAr with a directive, termed a "program decision," to manage it. While the states may submit requests during the program's execution, they typically avoid altering specifications to sidestep expensive contractual changes.[46] Due to the extended timelines, the OCCAR might, in partnership with industry, recommend enhancements to the nations, who retain the option to decline any modifications. Perhaps most importantly is the action of OCCAR as the middle man for every participant, putting everyone at equal heigh: Unlike the "lead-nation" model pursued by the British, which centralizes authority in one nation's hands, the OCCAr structure ensures all participants are treated fairly and transparently. In the OCCAr, each member state has equal authority and access to uniform information, a stark contrast to the lead-nation approach where the primary country may restrict and select the information it shares with others. OCCAr facilitates the exchange of lessons learned from program management to prevent repeating past mistakes by setting up dedicated working groups. It also allows for the rapid implementation of new programs due to an existing framework, where only program-specific elements are negotiated while others are standardized. Compared to NATO agencies, OCCAr is more resource-efficient in terms of human resources, despite its directors managing multiple programs.

[46] OCCAR Management Procedure 1, december 2020

While OCCAR has been praised many times during its existence[47], its use by nations has been variable. The case of the failure of the French-German cooperation is striking with programs like the French-German FCAS, MGCS and MAWS. While the FCAS program for a future six-generation fighter aircraft and the MGCS for a future main battle tank face constant difficulties, the case of MAWS is a glimpse into the future of what could happen both: The Maritime Airborne Warfare System (MAWS) is a discontinued project for a maritime patrol aircraft initiated in 2018 by the French and German governments. It failed to get approval from both nations, notably because of calendar issues. For FCAS and MGCS, a notable evolution is the reticence of industrials to increase the scope to a European scale. The FCAS was solely bilateral between France and Germany, like the MGCS program, but evolved with the addition of Spain and, recently, Belgium. The MGCS, which was to see Paris and Berlin join forces to develop the replacement for the Leopard II and the Leclerc, could well be abandoned. The cause is organizational problems: if France and Germany each manage 50% of the tank with Nexter and KMW, the company Rheinmetall joined in on the work along the way. Nexter and KMW also came together to create the Franco-German company KNDS, but Rheinmetall's interference complicated the distribution of tasks. These issues have led to delays and required high-level political interventions to keep the projects on track. Despite these challenges, the FCAS and MGCS projects are considered crucial for advancing European defence capabilities, promoting industrial sovereignty, and contributing to the strategic autonomy of the European Union. The success or failure of these projects carries significant weight, not just for Franco-German cooperation but also for the broader goal of a more integrated and capable European defence posture. Both FCAS and MGCS operate outside the management or counselling of OCCAR and EDA. This is to say that at the same time, Arquus and Nexter, a KNDS company, would sign a pre-design contract with OCCAR for the VBAE (Véhicule Blindé d'Aide à l'Engagement) to fulfil the needs of the Belgian and French land forces, or Airbus and OCCAR would sign in 2022 a contract launching the development of the MALE RPAS (Medium Altitude Long Endurance Remotely Piloted Aircraft System), aiming to provide a reconnaissance drone flying at medium altitude and with great autonomy to the French, German, Spanish and Italian air forces. Behind this resistance to involve OCCAR in strategic programs exists the need to better control the return to investment: industrial and political returns, which get divided by every additional member. By promoting FCAS and MGCS programs as European projects, the return to investments of the first leading nations, Germany and France, would decrease control of the military specification, small return to national industries, and fewer options for exports – as potential European clients would be included

[47] "Memorandum submitted by the French Embassy on the Horizon Programme", Committee on Defence, UK Parliament, November 1999. "As such, the european movement of restructuring armament industries, launched in Europe, should favour the success of future cooperative programmes. Moreover, the launch of OCCAR will enable a more efficient management of cooperative programmes between our countries."

in the program. Then, a "European ambiguity" begins to form – European nations are promoting a consolidation of Europe as a defence union while limiting the number of participants to strategic programs for fundamental sovereignty issues. This "European ambiguity" already appeared between OCCAR and EDA, but even between European nations and OCCAR

Since the creation of OCCAR, consortia have been less frequent as work share would be done by OCCAR rather than the consortium. The Americans favoured this type of cooperation and lead-nations programs where one nation takes responsibility for a program. This principle goes hand in hand with the idea of a lead nation or company that should be the prime contractor. The trade smooths the management process rather than constantly negotiating, creating delays and complexity at the cost of having one agent with more decisive power than the rest. We see critics arise with and without a prime contractor: programs without one, like the Eurofighter program, have been criticised[48]. At the same time, the Franco-german SCAF program has been delayed because the French were unhappy that the arrival of Spain would give more decision power to Airbus as both Airbus Germany and Airbus Spain will work on the aircraft development and making it as such airbus as a whole a defacto prime contractor. The creation of OCCAR is the solution that would not only give the advantage of a prime contractor without the disadvantage of unbalancing the workshare but also distance itself from the uncompetitive consortium solution: in a consortium, companies are certain to get a part of the workshare and fundings, which "*meant that corporations were guaranteed contracts proportional to their state's monetary participation and regardless of their cost-efficiency*" as pointed by Devore[49].

2.2.4 The relationship between EDA and OCCAR

Early on, the relationship between OCCAR and EDA was blurry: When the European Union member states founded the EDA in 2004, its mission to improve and oversee collaborative armament projects and procurement initiatives coincided with the functions of OCCAR. Although the original intention was to position the EDA as the central hub for European armament collaboration and potentially absorb OCCAR into its structure, OCCAR continued to exist independently. This centralisation around EDA was meant to evade the phenomenon of fragmentation between all pre-existing organisations. As said in article 25.2 of the council join action of 12 July 2004 on the establishment of the European Defence

[48] R. Matthews, R. Al-Saadi, Organisational Complexity of the Eurofighter Typhoon Collaborative Supply Chain, November 2021, The eurofighter program had Eurofighter GmbH as its prime contractor, as a consortium, meaning it had to single actor with full responsibilities on it.

[49] M. Devore, "Producing European armaments: Policymaking preferences and processes", Cooperation and Conflict, Volume 49, Issue 4, December 2014, p.449

Agency[50]: "*The Agency shall develop close working relations with the relevant elements of OCCAR, the LoI Framework Agreement, and WEAG/WEAO with a view to incorporate those elements or assimilate their principles and practices in due course, as appropriate and by mutual agreement*." Yet, while the WEAG/WEAO and their functions in the EDEM, R&T cooperation, and capabilities development were successfully transferred to the EDA in 2005 and 2006, OCCAR survived. This assimilation was essential for the good functioning of the European cooperation armament initiative; as Martin Trybus pointed out in 2006, "*As a first and important step, the activities of the WEAG and WEAO were transferred to the EDA. The WEAO seized to exist on 23 May 2005. However, it is important that the assimilation of OCCAR also happens in the near future. Otherwise, establishing the EDA only contributes to the unnecessary institutional congestion, duplication, and fragmentation of European armaments policies*"[51].

Martin Trybus, Director of the Institute of European Law, highlighted that the integration of OCCAR into the EDA to form a unified, competitive, and specialised defence equipment market focused on joint armament development and procurement did not materialise primarily due to internal dissatisfactions and resistance among the OCCAR member states, despite their initial steps towards fostering European armaments cooperation within the EDA framework. This reluctance stemmed from a coalition of discontented leading states that reverted their collaborative efforts back to OCCAR upon encountering obstacles to internal reforms within the EDA, theorised by Dr J. Mawdsley in his 2008 article "European Union Armaments Policy: Options for Small States?". The impasse in reform was deeply rooted in longstanding and reignited disputes among these key states, particularly between the UK, favouring a constrained role for the EDA, and France, which envisioned the EDA evolving into a comprehensive supranational armaments agency. Additionally, persistent conflicts between more advanced (upstream) and less advanced (downstream) states over liberal cooperation practices contributed to the EDA's stagnation. This reorientation towards OCCAR was partly instigated by the influence wielded by upstream states, for whom exclusive collaboration through OCCAR presented a significant threat of exclusion to downstream states. The situation was further complicated as the efforts of downstream states to engage with the organisation were systematically thwarted by their upstream counterparts, who aimed to preserve an exclusive cooperative framework within a sector characterised by substantial distributive impacts. Ultimately, downstream states faced the risk of marginalisation unless they acquiesced to formalising the relationship between the EDA and OCCAR through an Administrative Arrangement in 2012. This arrangement delineated the EDA's function as a forum for conceptual

[50] COUNCIL JOINT ACTION 2004/551/CFSP, "on the establishment of the European Defence Agency", July 2004, p.11

[51] M. Trybus, "The New European Defence Agency: A Contribution to a Common European Security and Defence Policy and a Challenge to the Community Acquis?", October 2006, p.24

discussions and OCCAR's role in contract awarding, reflecting the intricate interplay of interests and power dynamics among EU member states in defence cooperation.[52] As such while EDA's role in the defence field was to "*facilitate the identification and preparation of new cooperative opportunities between its participating Member States*", OCCAR role was "*the management of cooperative armaments programmes, including Technology Demonstrators*"[53]: The partnership was defined as "*EDA, in close consultation with OCCAR, will identify cooperative projects and programmes initiated and prepared by EDA that may be managed by OCCAR and propose their management by OCCAR to the EDA contributing Parties.*" Biermann give three reasons to explain this "marginalisation" :

1 - The UK prioritised NATO's leading role and was wary of a robust European defence industry that might isolate them from the US defence market due to a preference for the European single market. France, with its defence market traditionally focused on Africa and emerging nations like India, was less concerned about the impact of US policies and hence supported a stronger, more autonomous European defence cooperation. As a result, while the UK's vision for a new agency was more about enhancing defence capabilities, France championed a more pronounced focus on armaments collaboration.

2 - The decision-making authority within the European Defence Agency's Steering Board, including a representative from each member state, allows for initiating collaborative projects. This structure empowers smaller member states to veto a project if they perceive themselves excluded from participation. Additionally, this inclusive approach means that as soon as member states express their interest in a program, they gain entry and acquire the capacity to impact the process by contributing to defining the project's specifications.

3 – The legal framework included an "emergency brake" that prevented votes if any member state objected to a decision on national security grounds. This clause greatly diminished the use of qualified majority voting, as the potential for any single member to block decisions for national security reasons encouraged unanimity as the norm. Consequently, to fulfil its mandate as an EU entity aimed at fostering convergence and inclusivity among member states, there was a tendency to initiate 'category A' projects, which require the participation of all EDA members. In contrast, 'category B' projects involve only a subset of members.

This situation has created a paradox where the downstream states, whose involvement in the Common Security and Defence Policy (CSDP) is minimal or practically non-existent, are often inclined to derail

[52] F. Biermann, "The Battle for Authority in European Defence Cooperation", October 2023, p.141-154
[53] Administrative Arrangement, "administrative arrangement between the european defence agency (EDA) and the organisation for Joint Armament Co-operation (OCCAR) concerning the establishment of their cooperation", July 2012

discussions to address narrow domestic priorities. This led to the marginalisation of the EDA saw no involvement in many projects before its official administrative agreement with OCCAR and the large difference between the EDA and OCCAR budgets. From 2005 to 2023, the EDA budget went from 21 million euros[54] to 43.5 million euros[55], doubling in a span of 18 years; for OCCAR in 2023, the operating budget is at 6 billion euros[56]. This "European ambiguity" of a European consolidation at "deux Vitesse" could lead to an even worse fragmentation of Europe.

2.3. The transformation of the European community: a cluster of groupings?

As seen, armaments cooperation at a European level succeeded through the adoption of many different institutions: some were NATO affiliated, others from the WEU, but also linked others were linked to the European Union. Eventually, states seem to have settled with two different products: the EDA and OCCAR, each with different relations with the EU and different roles within programs. Adding the PESCO only adds one more initiative, a source of a cluster of smaller government engagements, leading to a cluster of different cooperations.

2.3.1. The introduction of binding elements in European security policies – the Permanent Structured Cooperation

EU defence policy has historically been characterised by differentiation due to member states' diverse security needs and capabilities. The Permanent Structured Cooperation (PESCO) was established to foster deeper integration and cooperation among EU member states in the defence realm.[57] PESCO emerged as a flexible mechanism to overcome these differences, driven by a German push for inclusivity and a French push for ambition. The European External Action Service, the European Defence Agency, and the Directorate General for Defence Industry and Space manage PESCO, aiming to create positive integration by de-fragmenting the EU defence market through new commitments.

Literature on PESCO, public or academic, has rarely pointed out what this "structured Cooperation" is. PESCO is a set of commitments, including increased defence investment, aligning defence apparatus, mobilising forces, reducing capability gaps, and participating in joint equipment programs[58]. PESCO's 20 binding commitments are classified into five overarching categories: the level of national investment

[54] European Defence Agency 2005 Financial report, p.4
[55] EDA website publication, "A new budget for a new era: EU Defence Ministers approve EDA budget increase", November 2022
[56] OCCAR website, "our work"
[57] A. Marrone, "Permanent Structured Cooperation: An Institutional Pathway for European Defence", Instituto Affari Internazionali, November 2017, p.1-2
[58] Permanent Structured Cooperation (PESCO) website, Binding commitments

in defence equipment; the alignment of Member States' defence systems; the availability, interoperability, flexibility, and deployability of their military forces; a multinational approach to bridging capability gaps; and the use of the European Defence Agency as the framework for significant joint equipment programs. These commitments are to be achieved by 2025. To this end, each participating Member State annually submits a National Implementation Plan, which details their progress and updates their national strategies to fulfil the commitments.[59] Despite early attempts to make PESCO inclusive, it wasn't until the EU Global Strategy in 2016 that concrete steps were taken. The result is a modular approach allowing for varying levels of participation and ambition among member states, balancing inclusivity and high-level capability development. [60]

But perhaps the most important institutional change that appeared with PESCO is that it activates provisions from the Lisbon Treaty that had been inactive since 2009 and establishes a legally binding framework firmly embedded in the EU's institutional structure. Article 42(6) of the Treaty on European Union and Protocol No. 10 outline the criteria for PESCO participation, requiring member states to meet higher military capability standards and make binding commitments This makes PESCO fundamentally different from recent EU summit declarations advocating for increased European defence. PESCO includes binding commitments, a compliance assessment mechanism for participating member states, and the possibility of excluding non-compliant states. This potential for exclusion is expected to motivate member states to adhere to their commitments. PESCO is closely linked to other initiatives from the EU Global Strategy (EUGS), such as the Coordinated Annual Review of Defence (CARD). Implemented in 2018, CARD involves regular assessments of military planning by Defence Ministers and is strongly supported by the EDA. This initiative aims to address strategic capability gaps and fulfil European defence ambitions. By committing to PESCO, member states have also pledged substantial support for CARD, thereby reinforcing PESCO.[61] PESCO also complements the European Defence Fund, which provides financial backing for selected collaborative projects. To receive new funds, member states must respect PESCO commitments. In this regard, member states are permitted to propose any project, provided they notify the other members promptly before submission. Pursuant to Council Decision 2017/2315[62], the Secretariat is responsible for assessing these proposals. This assessment involves the EDA ensuring that there is no duplication with existing initiatives and the European Union Military Staff confirming that the projects align with the operational requirements of

[59] EDA, "PESCO: Putting capability development to the test", European Defence Matters, issue 18th, p.12-17
[60] S. Blockmans, D.M Crosson, "Differentiated integration within PESCO – clusters and convergence in EU defence", December 2019, p.3
[61] the Coordinated Annual Review on Defence supports Member States better to identify opportunities for new collaborative projects including PESCO projects.
[62] Council Decision (CFSP) 2017/2315 of 11 December 2017 establishes the PESCO and determines the list of participating Member States.

the EU and its member states. Once approved, member states may choose to participate, designate a coordinating country, and determine whether to allow other PESCO members to join or to act as 'observers'.

This support encourages national governments to align their military requirements and invest in joint capability development. The involvement of EU institutions in PESCO is extensive and multifaceted. The High Representative for Foreign and Security Policy and Vice President of the European Commission oversees the annual evaluation of PESCO's progress. The EDA is pivotal in supporting capability development, with member states pledging to use it as the main platform for joint capability initiatives. Acting as a PESCO secretariat, the EDA collaborates with the European External Action Service and the EU Military Committee, which provides operational support for the initiative.[63] Preparatory bodies of the Council, such as the Political Security Committee, will convene in a "PESCO format."[64] This comprehensive legal and institutional framework ensures that PESCO remains a key component of the EU agenda, regardless of shifts in national priorities. Integrating civil and military institutions fosters further initiatives and reviews, similar to the influence seen in other EU policy areas under the EUGS. The launch of PESCO stands out as one of the most significant achievements of the EUGS.

PESCO's foundational principle, as outlined in Article 42(6) TEU, permits the establishment of a permanent structured cooperation among willing Member States whose military capabilities meet higher standards and who have made stronger commitments to each other for the most demanding missions. This principle underscores the core purpose of PESCO: member states agree to increase and optimize their spending on defence training, equipment, and capabilities to enhance their ability to perform high-end military operations.

2.3.2. Cluster of cooperation within PESCO

Council Decisions (CFSP) 2017/2315, 2018/1797, and 2019/1909 defined the first three waves of PESCO projects, showcasing a vertical form of differentiated defence integration. These decisions highlight the balance between inclusivity and ambition within the projects, reflecting the level of European intergovernmentalism in defence. Member states' participation levels and strategic interests have revealed emerging clusters in PESCO project development, with some countries showing increased involvement while others exhibiting tempered enthusiasm[65]. The dynamic nature of participation

[63] European External Action Service PESCO factsheet, "Permanent Structured Cooperation – PESCO deepening defence cooperation among EU member states", December 2021
[64] G. Gotev, "EU defence ministers hold 'historic' first meeting in PESCO format", EURACTIV, march 2018
[65] S. Blockmans, D.M Crosson, "Differentiated integration within PESCO – clusters and convergence in EU defence", December 2019, p.5

includes states joining or withdrawing from projects, aiming for eventual convergence to resemble the initial inclusive wave.

The first wave included all twenty-five PESCO member states, but participation dropped to twenty-one in the second wave and fifteen in the third[66]. A detailed analysis of the figures reveals that twenty-five member states are engaged in PESCO. However, none participated in all the projects, nor has any project managed to involve all member states simultaneously. The 'Military Mobility' project is a notable exception, with twenty-four member states participating, excluding only Ireland. This case is atypical; the average project involves merely five participants. Furthermore, twenty-seven projects remain bi- or trilateral. Notably, only five projects have reached or surpassed the threshold of nine participants, which is required to activate the classic enhanced cooperation procedure.[67] The thematic scope also varied, with initial projects focusing on maritime, enabling and joint capabilities, and cyber capabilities, while subsequent waves emphasised air systems, space capabilities, and training facilities. This shift reflects the evolving strategic priorities and financial commitments required for advanced technology and industrial capacity development. Cooperation within PESCO is driven by systemic and economic factors, particularly industrial collaboration. Leading member states like France, Italy, Germany, and Spain are heavily involved in numerous projects, often collaborating in smaller groupings that benefit their national defence technological and industrial bases. Projects such as European Secure Software-defined Radio, European TIGER Mark III attack helicopter, and MALE RPAS Eurodrone highlight the role of financial incentives from the European Defence Fund (EDF) in driving participation. These collaborations enable member states to leverage expertise and resources from major multinational defence corporations, facilitating increased cooperation and project involvement across the PESCO framework.

Another method to comprehend cooperation among participating states is to analyze previous frameworks for bilateral, trilateral, and multilateral defence cooperation within Europe. These frameworks can be categorised into operational and capabilities-oriented cooperation, with further distinctions between multi-sectoral and single-sector operational cooperation. Some forms of cooperation, such as the Joint Expeditionary Force established at the 2014 NATO Wales Summit or the broader EU pooling and sharing concept, are excluded from this analysis. Several formal agreements underpin defence cooperation, including the 2010 Lancaster House Treaties, the 2019 Franco-German Treaty of Aachen, NORDEFCO, the Visegrád Countries' Long Term Vision, and the 2012 Benelux

[66] S. Blockmans, D.M Crosson, “PESCO: A force for positive Integration in EU Defence”, European Foreign Affairs Review, 2021, p.94

[67] H. Lenfant, "PESCO (Permanent structured cooperation) : A springboard towards the European defence union ?", Ghent university, Faculty of Law and criminology, 2021, p.31

Declaration. Baltic Defence Cooperation, although not formally structured, operates on a multi-sectoral basis. Pre-PESCO examples of defence cooperation include BeNeSam Naval Cooperation, Polish-German Submarine Cooperation, and Dutch-German Battalion and Air Force Cooperation, all operational but limited in scope. In terms of procurement, France, Italy, Spain, Belgium, Germany, and the UK are full members of OCCAR, which facilitates joint production and procurement of defence equipment, with the Netherlands, Poland, Lithuania, Sweden, Finland, and Turkey participating as observers in selected projects. Despite these pre-existing forms of defence cooperation, they only partially elucidate PESCO clustering. There is a notable spillover from Benelux and Baltic cooperation into PESCO, while Franco-German, Nordic, and Visegrád cooperation appears unexpectedly low[68]. This disparity could stem from divergent perspectives on PESCO's operation, particularly between France and Germany. Finland and Sweden, participants in NORDEFCO, exhibit different partner preferences: Finland aligns with the German-Dutch-Polish axis, while Sweden favours France and Spain. Within the Visegrád group, Poland partners with the Netherlands, Czechia with Germany, and Hungary and Slovakia with Italy. These partnerships may be driven by natural synergies in strategic cultures and robust integrated value chains. [69]

PESCO's twenty binding commitments aim to align strategic cultures at the EU level to address identified weaknesses in the EU's external defence actions. PESCO and CARD serve as instruments to facilitate the 'Europeanization' of the Common Security and Defence Policy (CSDP), consolidating it as a 'community of practice'.[70] Strategic culture has been a highly politicised factor, reshaping the place of the Union in relations to its member states: When in September 2017 President Emmanuel Macron suggested a European Intervention Initiative (EI2) as part of his vision of a "sovereign, united and democratic Europe" his call was one of the rises of the European Union for defence as a strategic culture; Researchers from a thinktank D. Zandee and K. Kruijver published in 2019 the Clingendael Report to evaluate the feasibility of a common strategic culture based on the European Intervention Initiative. "*Strategic culture was moreover shaped by the understanding that security involved state sovereignty and territorial integrity through the use of military instruments*."[71] Shortly before the Foreign Affairs Council on 25 June 2018, the Defence Ministers of nine EU member states (Belgium, Denmark, Estonia, France, Germany, the Netherlands, Portugal, Spain, and the United Kingdom) signed the EI2 Lol. To evaluate the potential for convergence in strategic culture among the ten EI2 countries,

[68] Blockmans, D.M Crosson, "Differentiated integration within PESCO – clusters and convergence in EU defence", December 2019, p.19
[69] S. Blockmans, D.M Crosson, "PESCO : A force for positive Integration in EU Defence", European Foreign Affairs Review, 2021, p.98
[70] Ivi, p.99
[71] D. Zandee, K. Kruijver, "The European Intervention Initiative Developing a shared strategic culture for European defence", Clingendael Report, September 2019, p.6

the author analyses and compare them based on five key elements at the political-strategic, doctrinal, and military-behavioural levels[72]: (1) the objectives for using force; (2) threat perceptions; (3) decision-making models; (4) the application of coercive methods; and (5) historical practices. The willingness to participate in operations across the force spectrum varies significantly among EI2 nations. France, the UK, and, to varying extents, Belgium, Denmark, Estonia, and the Netherlands form a subgroup inclined towards high-end crisis management operations. Conversely, Finland, Germany, Spain, and Portugal prefer low-end crisis management operations. Threat perception also differs notably. Estonia and Finland prioritise threats from the East, while France, Portugal, and Spain consider instability and conflicts in Africa as their foremost security concerns. The other EI2 countries, including Denmark, Germany, the Netherlands, and the UK, increasingly recognise the threat from the East as significant. Decision-making models exhibit further variation. France, the UK, Belgium, Finland, and Portugal have minimal parliamentary influence over decisions to engage in crisis management operations. In contrast, Denmark, Germany, and Spain mandate parliamentary approval for such decisions, though Denmark and Spain have expedited decision-making processes. Estonia and the Netherlands also require significant parliamentary involvement, but both have provisions for fast-track decision-making when necessary.

Finally, the authors claim that geographic differences are motives for clustered cooperation. Countries such as the Czech Republic, Croatia, Bulgaria, and Estonia form stronger partnerships with neighbouring or nearby countries. High levels of cohesion are particularly evident among the Baltic and Balkan states. Geographic considerations also influence the scope of cooperation; for instance, all states involved in maritime capabilities projects are seafaring nations, which is logical from both practical and industrial perspectives. However, some components or competencies, like Hungary's river minesweeping fleet for the Danube, are not strictly maritime. Another prime example is the European patrol corvette, which regroups most of the seafaring nations of Europe in a single common program to adopt new multi-role corvettes[73]. Additionally, linguistic and cultural proximity may further explain the robust cooperation between Belgium and France, Belgium and the Netherlands, and especially between Greece and Cyprus within PESCO[74]. This research concludes that "*Having spurred 47 projects in its first two years, PESCO presents a microcosm of differentiated integration*"[75]. The variations in participation are evident both in the project clusters and in the pairings of countries within projects across different clusters; various collaborative clusters are determined by factors that unite and differentiate

[72] Ivi, p.20-22
[73] OCCAR website, programmes, Multi Modular Patrol Corvette
[74] S. Blockmans, D.M Crosson, "PESCO : A force for positive Integration in EU Defence", European Foreign Affairs Review, 2021, p.101
[75] S. Blockmans, D.M Crosson, "Differentiated integration within PESCO – clusters and convergence in EU defence", December 2019, p.23

participants, primarily of a structural and economic nature. Significant factors that explain the alignment of member states include industrial cooperation and integrated supply chains but also cultural. Furthermore, the clustering phenomenon is influenced by the foreign policy orientations of member states, their levels of ambition in international security policy, their readiness to deploy military force, and the extent of decision-making authority granted to the executive branch in military-security matters. Cluster theory has been well alimented by research in the last decade, driven by an increase in multilateral agreements with expanded, both in quantitative and in qualitative terms.[76] What these researches showed is that operational clusters through military formations and defence-equipment clusters existed in parallel with one another, but the latter was particularly linked to the former.

2.3.3. bottom-up mobilisation of private defence actors at the European level

Local actors often rely on informal mobilisation to lobby EU policy-making either by directly addressing EU institutions or indirectly via transnational, national and regional channels. Subnational mobilisation in the European union has been the focus of many research papers, looking at the dynamics of organisations, private entities, and people to shape the politics of the union without having to rely on traditional representation and election mechanisms, establishing a pattern of multi-level governance: the European integration has fundamentally transformed the national state in Europe and "has led to a European polity, not an international regime, where the supranational institutions have independent influence on European policy-making."[77] Since the Commission envisaged the creation of funding schemes for security-related research in the early 2000s, the industry has become an increasingly crucial actor in shaping the Common Security and Defence Policy (CSDP). Defence companies have benefitted from funding provided by initiatives launched under the CSDP umbrella by playing this role.

The first direction connection between private entities from the defence sector and European institutions came from the Kangorou group. Made in 1979, it included members of the European Parliament (MEPs), commission and council representatives, business and defence industry leaders, and academics with the motto, "free movement and security," which reflects their aim to enhance European unity through common projects. The group's main goals, still active, are to fully implement the internal market, ensure the euro's stability, and develop a common European security and defence policy[78]. Yet, we would have to wait until the 1990 defence crisis for the European Union, through its

[76] S. Biscop, "Differentiated Integration in Defence: A Plea for PESCO", EU60: refounding europe, the responsability to propose, Istituto Affari Internazionali, February 2017, p.7-9
[77] L. Hooghe, "The European Union and multi-level governance in Practice, Patterns of Subnational involvement: expansion, divergence, complexity", May 1995, p.176
[78] Kangourou group website, who we are

commission, to incorporate security matters as market issues. As already mentioned, this move helped strengthen the position of the commission as a source of dialogue and policy-making in that matter. The commission then decided to encircle itself with experts in the matter: it established in 2003 the Group of Personalities on Security Research, a European Commission advisory group of senior executives from leading European defence companies, representing the most influential firms in the sector:[79] CEOs of Airbus Group, Finmeccanica, Indra, MBDA to name a few but also politicians and military officers.[80] Its 2004 report "Research for a Secure Europe" promoted that a "'S*ecurity Research Advisory Board' should be established to draw strategic lines of action to prepare the research agenda of an ESRP [European* Security-Research Program*] as well as to advise on the principles and mechanisms for its implementation."*[81] This research initiative "*should take advantage of the duality of technologies and the growing overlap of security functions to bridge the gap between civil and defence research*", a dual-use strategy that became more popular in the 2000' and promoted both my industrials and European workers. Finally, the report called for a more proper working group meant to coordinate the establishment of an ESRP, which came to light with the European Security Research Advisory Board, also made of high-profile personalities from the industry and politics. Eventually, policies would result as Horizon funding programs would be launched in 2014, starting with Horizon 2020 (2014–2020) and Horizon Europe (2021–2027)[82]. All in all, such research initiatives, which cumulated with the European Defence Fund, should be seen as the orientation of the European project towards greater supranational involvement in a previously intergovernmental field that was defence policies, but also an opportunity for bottom-up agents in pursuit of more research funds and less boundaries.

In a December 2021 working paper for the Carnegie Europe thinktank, the researcher R. Csernatoni explains that "*It is possible to regard the creation of public-private stakeholder and organized interest groups as an ingenious method, spearheaded by the commission, for managing and co-shaping policymaking processes together with the defence industrial sector*".[83] He explains how 1) relations between the European Commission and interest and advisory groups have been well normalised 2) how the strategy of dual-use helped "*framing of technological innovation provides an important loophole and backdoor in the EU's Framework Programmes*." And 3) that this initiative signalled the success of a "cross-fertilisation" between civil, science and expertise, and security technology and

[79] Communication from the commission to the council, the European parliament, the European economic and social committee and the committee of the region, "security research, next step", p.14
[80] A. Missiroli, "the case for an EU-funded defence R&T programme",European institute for security studies, February 2016
[81] Communication from the commission to the council, the European parliament, the European economic and social committee and the committee of the region, "security research, next step", p.11
[82] European commission website, Horizon Europe
[83]R. Csernatoni, "The EU's Defence Ambitions: Understanding the Emergence of a European Defence Technological and Industrial Complex", December 2021, p.30

interests. It is no surprise that the most prevalent lobbying groups were the ones of the aerospace industry, like ASD lobby group representing European Aeronautics, Space, defence and Security industries, or the High-Level European Advisory Group on Aerospace, set up in 2002 already calling for more research pooling to help the industry stay competitive, with its "Strategic Aerospace Review for the 21st Century (STAR 21)" estimating that "€100 billion is needed over the next 20 years for European aerospace research and technology, funded from public and private sources"[84]. Their industry was the most prone to dual-use technologies, notably with the next-generation European Medium Altitude Long Endurance Remotely Piloted Aircraft Systems (RPAS), which was singled out in 2013 as a critical capability and technology area for dual-use R&D funding opportunities. Since then, the chain of events leading to aerial surveillance technologies being prioritised has been questioned, and "whether this decision came from the strong influence of a technologically competitive European aerospace industry advocating for a more streamlined approach to the production of technologies such as RPAS."[85]

[84] European Advisory Group on Aerospace, "Strategic Aerospace Review for the 21st century STAR 21, Creating a coherent market and policy framework for a vital European industry", July 2002, p.25

[85] R. Csernatoni, "The EU's Defence Ambitions: Understanding the Emergence of a European Defence Technological and Industrial Complex", December 2021, p.33

Chapter III : defence firms and states: a driving interplay for cooperation

3.1. An historical overview of European policy procurements

The process of ordering and acquiring military hardware, commonly called “procurement,” has undergone severe changes from the beginning of the Cold War to its end and afterwards. Armies do not procure armaments the same way and must consider new political trends and the globalisation of the world’s economy, leading to challenges and opportunities.

3.1.1. The Cold War and the establishment of National Armament agencies throughout Europe

World War 2 was a traumatic experience for Europe, not only with the human losses and destructions but also the industrial and institutional transformations that occurred through it. After its end, European states reorganised their military industries to fulfil their nations' future needs better. Two elements nourish this transformation: first, as Europe’s civilian infrastructure needs to be rebuilt, its military infrastructure must also be reconstructed. The ports need to be cleared of the remnants of scuttling and bombings, which did not disappear for nearly ten years. Damaged factories must be repaired, as Allied bombings particularly targeted them, and they need to be upgraded both technically and scientifically to ensure their efficiency for later use. Secondly, from 1950, with the outbreak of the Korean War, the beginning of what characterises the second half of the century can be dated: the East-West confrontation and the "Cold War". Budgets increase, military objectives in terms of the number of divisions deployed in the field are multiplied, and military imperatives result in a large series of military equipment. Also, the end of World War 2 saw the deployment of extremely high R&D-intensive technologies like nuclear weapons, radars or Jet engines, which meant that future programs would be proportionally more expensive compared to the low technology of pre-war procurements and would, as such, require extensive economies of scale. As such clear armament policies and agencies capable of implementing them must be defined.

During the first decade is established a series of civil administrations to lead these new prospects. In France, the armament sector and the acquisition system were reorganised by the creation of the ministerial delegation for armaments, which would later become the General Directorate of Armament

(DGA). The modernisation policy implemented by General de Gaulle aimed to streamline the construction of military equipment, inheriting regional arsenals and national services (like the gunpowder industry, historically under the monopole of the state) and giving it as such industrial activities, and to reform the defence sector through measures to ensure the country's autonomy and technological excellence in armament production.[8687] In Germany, the Hauptabteilung Rüstung (General Delegation for Armement, known as HRü) is established, responsible for the planning and coherence of armament policies, as well as the Bundesamt für Wehrtechnik und Beschaffung (Federal Office for military technicalities and logistics, known as BWB)[88], the technical body in charge of the execution phase of the programs. The political primacy within the military framework is evident through the roles of the general staff and the Generalinspekteur, the highest-ranking officer. Since the 1970, the Generalinspekteur has been stripped of authority over the armed forces: Articles 65(a) and 115(b) of the Grundgesetz (the Basic Law or constitution of the Federal Republic) dictate that during peacetime, the Federal Minister of Defence holds command over the Bundeswehr. This command shifts to the Federal Chancellor when a state of defence is declared[89]. These provisions underscore the principle of civilian political oversight of the military. In Italy, changes would happen later, as it is only in 1965 that the Ministry of defence established a new institution: the General Secretariat of Defence and National Armaments Directorate, or Segretariato Generale della Difesa e Direzione Nazionale degli Armamenti and had the role of unifying the technical-administrative areas of the Army, Navy and Air Force into a single joint force entity. The Secretary General of Defence, whose appointment is at the president's discretion and has always been an officer of the military, is also obligated to have two deputy general secretaries, at least one of whom is civilian. Each will have a limited number of departments under his responsibility, with one notably having authority under the "Industrial Policy and International Relations", "Coordination of Armaments Programs" and "Technological Innovation" Departments with as such a strong influence over industrial defence policies. The creation of the agencies represents a centralisation and strengthening of state intervention in the armament sector[90]. their statutes highlight the need for a concentration of authority and resources to implement a rational armament production policy, particularly for the most modern weapons. Their authorities and activities span state and industrial domains, overseeing all acquisition processes from design to

[86] T. Kausal, G. Humily, T. Taylor, P. Roller, "A Comparison of the Defence Acquisition Systems of France, Great Britain, Germany and the United States", Defence systems management college, September 1999, p.26-27

[87] S. Constantinos, "Armaments cooperation in Europe: an example of Europeanization ?", Research Institute for Europea and american studies, November 2008, p.15

[88] C. Hoeffler, « Les réformes des systèmes d'acquisition d'armement en France et en Allemagne : un retour paradoxal des militaires ? », Revue internationale de politique comparée, January 2008, p. 136

[89] T.D Young, "Emerging German National Command and Operational Control Structures", Strategic studies institute US army War college, August 1992, p.2

[90] Ministero della Difesa website, « Il Segretariato Generale della Difesa e Direzione Nazionale degli Armamenti »

production, with many enterprises still public. A strong incentive is made to balance the military nature with civilian personnel and to establish them as an intermediary between the government, military, and industry, translating military needs into armaments through their highly qualified engineers and strong industrial connections.

The directions taken by these entities were clear: consolidate the industries to coordinate them better, and incentivise them to the civil market and exportations. Each nation has its own set of characteristics at the end of the war, so each takes a different approach to achieve these objectives. In France, the aerospace industry is already concentrated into a few entities, some private like Dassault, and others under state holding like Nord Aviation, which is the result of the merger of a dozen firms since the 1936 law on the fabrication of war materials. For land arsenals, much of the efforts are made through the Direction des Etudes et Fabrications d'Armement (DEFA), which would later become the Groupement Industriel des Armements Terrestres or GIAT, under the hierarchy of the DGA. In the United Kingdom, British Aerospace was the only survivor of a series of nationalisation and then mergers in the industry, beginning already with the British Aircraft Corporation (BAC), the result of a merger of Vickers-Armstrongs (Aircraft), the Bristol Aeroplane Company, English Electric Aviation Ltd. and Hunting Aircraft in 1960. Then, in 1966 the government came "*to the conclusion that the national interest would be best served by a merger of the airframe interests of B.A.C. and Hawker Siddeley into a single company in whose equity the Government would take a substantial minority interest*",[91] ending in a new partial merger between elements of the two companies. Finally, on April 29, 1977, BAC, the Hawker Siddeley Group, and Scottish Aviation were nationalised and combined to form British Aerospace (BAe). This new entity was established as a statutory corporation under the Aircraft and Shipbuilding Industries Act of 1977 and resulted in 16 years of efforts to rationalise the aircraft industry in the United Kingdom. In Italy, most of the industry was coordinated by Istituto per la Ricostruzione Industriale, a state holding which participated in much of the consolidation toward new state entities like Italcantieri, which would become Fincantieri and Finmeccanica, later renamed Leonardo. This reorganisation would be called the "IRI formula"[92], not strict nationalisation but a restructuration of activities between fewer entities, all partially owned by IRI.[93]

In consequences, the participation of the state into these activities would greatly increase at that time. It was also at that time that NATO sponsored programs began to appear, with very little success as

[91] UK parliament website, Aviation, Volume 736: debated on Monday 21 November 1966

[92] For more infos the following book is recommended : P. Bianchi, "The IRI in Italy: Strategic role and political constraints", December 2007

[93] Part of the greater « Italian economic miracle » of the 1960'. The IRI, created by Mussolini in 1933, maintained control over large parts of the economy, including heavy industry, telephone services, air transport, and highway construction. Therefore, the "economic miracle" was not driven purely by market principles; government agencies played an essential role in its development.

industrial supervision of the agencies meant that job creations and investments through national policies where more important than strict military rationalisation between European armies. Under this paradigm, very few significant cooperative programs succeed. From 1945 to 1980, the sole example of a proper cooperative program is the SEPECAT Jaguar, a Franco - British designed military aircraft whose single-seat version is intended for ground attack and the two-seater version for advanced training, with 600 units built. But even this case isn't perfect: In May 1965, a memorandum of understanding was signed to connect the Jaguar project with a more important variable geometry aircraft (AGV) project. However, by June 1967, France chose to withdraw from the AGV project. This decision led British partners to feel that the AGV was abandoned in favour of Dassault's Mirage G project, as it is suggested that France's decision was influenced by industrial policy, particularly the protection of SNECMA's interests[94]. States were very inclined to complicate procurement decisions just for the sake of industrial returns: for example, when the British made the decision to buy American-made F-4 Phantoms fighter jets, they still insisted on involving as much as possible British engineers and workers in the program. British jet engine, British radar, British-made rear fuselage section (to adopt the larger Royce Roll engines), and British electronic support systems would all be shipped to the US for assemblage in McDonnell's factories[95]. These changes would multiply the unitary cost by three, reducing 400 aircraft planned to 170 ordered. Aircraft were more expensive and less efficient, but industrial returns had to be made.

Overall, outside of small military programs, cooperation through programs rarely occurred, and in parallel, neither did mergers, considering the ever-expanding presence of states on their national companies.

3.1.2. From Collaboration to Cooperation: the United States influence on European Procurements

In the initial decades following World War II, the United States played a pivotal role in revitalising the West European defence industry, which had been left either exhausted or in ruins. This effort was largely driven by the need to counter the looming Soviet threat, underscoring the strategic and security imperatives underpinning the transatlantic alliance during the Cold War era. At the beginning of the Cold War, the position of the United States was one of power and large influence over many nations.

[94] Y. Droit, « L'European Fighter Aircraft : le rendez-vous manqué de la coopération aéronautique européenne 1978-1985 », Histoire, économie & société, April 2010, p.105
[95] W. Michael, "Preparing for the Phantom", Flight, September 1967

The United States established itself quickly as a factor of investment in the ruined European economies and, as such, also played a large role in the development of their armament industries.

From the Cold War's onset and the establishment of NATO, there has been a spectrum of collaboration between the United States and Europe in the realm of armaments. This cooperation began first in the form of licensing agreements for U.S. military systems in Western Europe during the 1950s and 1960s: During the 1960s, several American military systems were license-produced by European nations as part of the transatlantic defence cooperation. European armies were still using World War Two weaponry sold by the US, as it was more convenient than shipping them back. For countries like Germany or Italy, which lost much of their industrial output, this solution was a way to efficiently spend money on industries and add credit to their forces. The F-104 Starfighter, developed by Lockheed, is a prime illustration of a U.S.-designed aircraft licensed for production within Europe, with extensive manufacturing undertaken by nations such as Germany and Italy. [96]

From the simple logic scheme of under-license production appeared the model of integrated coproduction in the 70s'; Fully integrated coproduction, in which each participating nation purchases the same system and produces parts of each other's units.[97] the main example is the F-16 Falcon. While European nations were still out of the development phase of the fighter jet, they were largely included in the production scheme. In fact, to satisfy European industrial objectives like employment, development of an aeronautic production base, and control over the maintenance and upgrades of their future aircraft, the F-16 program featured coproduction through three main assembly production lines and other secondary dedicated processes across the US and Europe. In particular, to illustrate this multinational production flow, the German Fokker would produce the flaps and flaperons of the airframe.[98] The American General Dynamics would manufacture the wings and horizontal tails while SONACA/S.A.B.C.A in Belgium and PER USDEN in Norway would make the rest of the fuselage like the fins or the forward fuse (the "nose" of the plane). Fokker, US General Dynamis and SONACA manufacturing plant would each have their own assembly line, using the parts of all their associate partners and putting them together to make the final product, the F-16 fighter Jet. In total, Fokker and S.A.B.C.A would each deliver 175 aircraft, while General Dynamics would assemble 850 airframes[99]. As such, European nations would be partially responsible and integrated into the US domestic market as

[96] H. Kanter, J. Fry, "Cooperation in development and production of NATO weapons : an evaluation of tactical missile programs", Institute for Defence Analysis, December 1980, p.2-3
[97] J.E. Goodby, "Transatlantic Cooperation In Developing Weapon Systems For NATO - A European Perspective", Report to the Congress, March 1979, p.2-3
[98] C.R. Frasier, "International Armaments Cooperation : A case study of the F-16 Agile Falcon codevelopment program", Air Force Institute of Technology, September 1989, p.42
[99] M Rich, W. Stanley, J. Birkler, M. Hesse, "Multinational Coproduction of Military Aerospace systems", RAND, October 1981, p.100-103

some of their parts would end up in US Air Force aircraft or the US-sold aircraft to foreign nations like Pakistan. Yet, the F-16, be it from a co-production program, would still largely be American, as solely developed by American companies, and all of its essential sub-systems like the Radar, the onboard electronics, the engine, or even the weapons allowed to arm the aircraft, mainly if not all Americans.

Throughout the 1980s and 1990s, transatlantic cooperation witnessed significant evolutions, be it coming from the US or for new models of collaboration. Firstly, It was also the evolution of the US policy on this subject, also prompted by the trade deficit in that sector concerning the Europeans, which pushed the army to look more closely at what EU armed industries. like with the creation of a special administration meant to test and evaluate foreign weapons to see if they could enter service into the US armed forces: The (FWE) program, created in 1981, and the NATO Comparative Test (NCT) program introduced later[100]. These programs, overseen by the Office of the Undersecretary of Defence for Research and Engineering, assess non-U.S. weapon systems for compliance with American military standards. Both the FWE and NCT aim to reduce redundant research and development efforts, enhance Reciprocal Support Agreements (RSI), and foster technology sharing with allied countries.[101] This development would end a controversial piece of American legislature, the “Buy American act” (BAA): The Buy American Act is a piece of legislation requiring the U.S. government to prefer U.S.-made products in its purchases. In the context of the defence sector, this means that the U.S. Department of Defence is generally required to buy American-made goods and services, including defence equipment and armaments unless specific exceptions apply. The Act's purpose is to protect American industries and jobs by giving a preference to domestic goods while still allowing for certain goods to be purchased from foreign sources when necessary, such as when a product is not available domestically in sufficient quantity or quality, or when it is in the interest of national security to procure from foreign sources. There are waivers and exceptions to this policy, which may involve international agreements, the need for interoperability with allies' forces, or cases where domestic purchasing would result in unreasonably high costs or insufficient quality. The BAA had been subject to and discussion regarding its impact on international trade and the defence industry's global supply chain. The development of the FEW and NCT would put a consequent obstacle to using this act, notably because the US Ministry of Defence's responsibility would be questioned. However, these administrations would never accept large and strategic European products into service. All the weapons tested were relatively minor, politically speaking: assault rifles, grenades, artillery shells… Secondly, transitioning towards government-to-government, to coproduction like aforementioned, to finally joint development

[100] A. Volkman, "International armaments cooperation handbook", office of the director international cooperation, November 2004, p.117

[101] Audit Report, "foreign weapons evaluation in the department of defence", Department of Defence, February 1992, p.6

programs. This shift was largely driven by the escalating costs of advanced military technologies and the imperative for nations to maintain sovereignty in strategic domains. Collaborative efforts between governments facilitated a more equitable distribution of work across industries across the Atlantic, allowing for sharing financial burdens and technological expertise. This model of cooperation ensured that nations could safeguard their strategic interests and autonomy and supported the defence industries on both sides of the Atlantic by providing them with substantial projects and a platform for innovation and growth. The F-35 Lightning II is a paragon of international collaboration in the defence sector, developed and produced by a consortium of nations led by the United States.

One noticeable coming was the development of a short-lived doctrine, the family of weapons concept: In 1978, the U.S. Defence Science Board (charged with solving industrial, technical and national security problems for the Secretary of Defence) proposed the "family of weapons" concept to reduce redundant development efforts across nations by promoting early-stage collaborative planning rather than joint production. This approach aimed to cut development costs, standardise weapons on the battlefield, and allow parallel production. Weapons would be categorised with shared development responsibilities; for instance, the U.S. and Canada would develop one variant of air-to-air missiles, while European countries would develop another.[102] The policy mandated licensed manufacturing and restricted sales outside NATO. Applied briefly through a 1980 memorandum, the U.S. was to develop the AMRAAM missile, and Europe the ASRAAM. However, this strategy failed as the U.S. upgraded the Sidewinder, and Europe developed the Meteor missile instead.

Eventually, the more European NATO allies recovered economically, the more they sought a more balanced partnership with the US. Access to the U.S. defence market for European companies was and still is notably restricted, often under the rationale that European military systems didn't match up to American counterparts. However, this situation was more deeply rooted in domestic political and economic motives, particularly through "buy America" policies aimed at retaining defence spending and employment domestically rather than extending them to Europe. In parallel, cooperating with the US was a work of self-depreciation, as European nations would always have the short stick of the defence program in terms of responsibilities and technology-sharing: one can give the case of te F-35 - One of the most remarkable aspects of the program's uneven production is the United States' decision not to distribute the critical software source codes to its allies, alongside the implementation of numerous anti-tampering mechanisms throughout the rest of the aircraft. Despite the longstanding and potentially formalised nature of U.S. limitations on technology sharing within the Joint Strike Fighter (JSF) program's foundational agreements, international allies have continually strived to secure

[102] Summary of the defence science board 1978 summer study on "achieving on improved NATO effectiveness through armaments collaboration", December 1978, p.36

a degree of technological autonomy but even then, It's important to highlight that only a few partners, namely Australia, the UK, and Turkey, have openly voiced their objections to the U.S. stance on source codes, a practice highlighted in many studies : "*Such practices of (not) speaking out can be said to both reflect and produce variable hierarchical authorities upon which the U.S. alliance system rests*"[103]. Meanwhile, other allies seem to have conceded early in the dispute or overlooked the matter entirely. This state of constant negotiation was even more hindered by "*a fundamental imbalance of power between the US and Europe":* [104]

1. The US as the biggest defence budget in the world. In 1950, the budget stood at $141.2 billion, influenced by post-WWII recovery and the onset of the Cold War. By 1970, amid the Vietnam War and escalating Cold War tensions, the budget expanded to $406.3 billion. U.S. defence spending surpasses that of each NATO member and the entirety of NATO not just in outright numbers but also when compared to measures of economic performance, government spending, or per capita. For instance, in 1978, the U.S. allocated 5.6 per cent of its Gross National Product (GNP) to military costs[105]. In contrast, NATO's European countries went already below the 3.5% after 1970. This illustrates the differing levels of defence investment between the United States and its European NATO allies.

2. Market differences in Europe's defence sector are significant due to its fragmented nature and varied procurement approaches. This leads to excessive costs from duplications and hinders the effective pooling of resources among European nations. Consequently, compared to the US, Europe achieves less return on its defence spending.

3. The United States possesses vast economic, military, and industrial strengths, rendering the need for arms collaboration or imports largely unnecessary. For the US, the primary advantage of engaging in transatlantic partnerships is primarily to bolster the unity within the Alliance.

4. In Europe, the dynamics are starkly different. Even the leading arms-producing nations cannot sustain a completely autonomous Defence Industrial Base (DIB). Apart from specific high-tech sectors, they depend on international partnerships to develop and manufacture advanced weaponry.

[103] S. Vucelic, "Before the cut : the global politics of the F-35 Jooint strike Fighter", Centre for International Peace and Security Studies, p.16
[104] G. Adams, B. Schmitt, K. Becher, "European and Transatlantic defence-industrial strategies", European Security Forum, January 2003, p.15
[105] U.S. Arms Control and Disarmament Agency, "World Military Expenditures and Arms Transfers 1968-1977", December 1978 p.4

5. The US implements a clear, unified strategy for its defence industries, focusing on achieving technological dominance across all vital areas. In contrast, European nations lack the resources to pursue such a strategy individually and have not reached a collective political agreement to establish one. This lack of consensus leads to challenges in forming united stances on defence matters with the US.

These factors pushed the European nations to confront and later divide themselves from the US military-industrial complex.

3.1.3. 1980-1990: the Levene reforms and the privatisation of European arsenals

As shown, European governments have been facing constraints in continuing to fund their national defence industries since the 80'. This time was particular as many strategic projects failed to be because of cost issues : the Nimrod aircraft for the UK, the Avion de Combat Future for France… The problem was that either the armies had doubts about the ability of the industrials to give cost-efficient products or that during the development of the program, cost increase would happen to such an extent that a reduction in performance or reduction in the scale of acquisition would happen. Under such constraints, they opted to introduce more competition into these sectors. The british Ministry of Defence, Lord Levene, led the way in 1983 with reforms aimed at achieving greater value for money.[106] The pre-Levene era of UK public procurement was characterised by a number of traditional practices and challenges in the procurement processes of the UK government, particularly in the Ministry of Defence: [107] 1) Lack of Competition with public procurement, especially in defence, often relied on a limited number of suppliers. Contracts were frequently awarded without competitive bidding, which led to inefficiencies and higher costs. 2) Cost Overruns and Delays: Procurement projects during this period were plagued by frequent cost overruns and delays. This was partly due to the lack of rigorous project management and oversight. 3) In-House Development: There was a strong emphasis on in-house development and production within government-owned entities or nationalised industries. This approach often resulted in less innovation and higher expenses than engaging with a broader range of private-sector suppliers. 4) Focus on Sovereignty: There was a strong focus on maintaining national sovereignty over defence production. This often meant prioritising domestic suppliers even when foreign suppliers could offer better value or quality.

The Post Levene decade was, as such, the decade of privatisation and shifting of research and development responsibilities from government agencies to industrials. in its 1987 Defence Estimates

[106] W. Walker, P. Gummett, "Britain and the European Armaments Market", International Affairs, July 1989, p.442
[107] S. Schofield, "The UK Defence Industrial Strategy and Alternative Approaches", March 2006, p.4

report, the British Ministry of Defence stated that it would no longer finance "gold-plated" technological solutions that necessitate funding new research and development programs[108]. It occurred in the UK first but also happened in continental Europe with the privatisation of state arsenals like the French GIAT or Alenia Aeronautica, which underwent restructuring and partial privatisation in the 1990s. Finmeccanica itself was partially privatised in 1992, reducing the Italian government's stake in the company. North of the Rhine, the West German government had encouraged Daimler-Benz to move into the military electronics and aerospace industries, with the goal of gradually replacing some state subsidies with private investment. The trend brought by the Levene reforms allowed for defence cooperation as it would allow for market rationalisation: Introducing free-market principles into defence procurement would bring competition, leading to increased efficiency and economies of scale, as per classical economic theory. Firms could merge freely, and European governments would seek bids from international firms, letting market forces decide firm survival. At the same time, in November 1988, the defence ministers from the 13 European NATO countries that are part of the IEPG unveiled an 'Action Plan' aimed at establishing a more open European market for armaments[109]. The plan proposes open bidding procedures, a standardised reporting system for cross-border contracts, and, most importantly, increased competition for contracts, ensuring that the benefits from all projects are balanced over an 'appropriate' period of time ('juste retour' or 'fair return'). Additionally, the plan advocates for more European co-development projects, particularly through 'competing consortia'—a compromise between free trade and collaboration.

This transformation was important also as it occurred within most states and, as such, was a path towards a more homogeneous European defence industrial base. The defence industry would be encouraged to find readily available technological solutions, either from the civilian market or, more likely, through collaborations with international companies to leverage technology created overseas and also to compensate national developments with more export-friendly products. Britz (2010) describes this shift as 'marketization'[110], highlighting the move towards market-oriented approaches in the defence sector. But this phase wasn’t synonymous with the state's crumbling over its defence industry, but merely the reorganisation of the entities it previously owned fully or partially towards privatisation. States were still very much active with national policies aimed at safeguarding its newly independent suppliers through different means: state ownership, through the shareholder structure, was a widespread method to ensure that the political power still had a grasp on its industrials;

[108] Commons Chamber Volume 124: debated on Tuesday 8 December 1987
[109] P. De Vestel, "Defence markets and industries in Europe: time for political decisions ?", Institut d'etudes de securité, November 1995, p.26
[110] M. Britz, "The Role of Marketization in the Europeanization of Defence Industry Policy", Bulletin of Science, Technology & Society, June 2010, p.177

legislative measures were introduced to temper the liberal initiative of international agents; finally, state procurement policies were still based on the “economic patriotism”[111] doctrine and as a such would apply insider-outsider logic to its programs, favouring national suppliers over foreign agents, or at the very least it would influence the program to ensure a “juste-retour” to its industrial tissue. This analysis exists through the concept of "producer state," "purchaser state," and "legislator state."[112][113] This leads to the corollary idea of a multi-level European governance of armament, which distinguishes decision-making spaces in a strictly impermeable manner: the national level of action is kept entirely separate from the European level.

Procurement reforms also implied administrative transformation, notably through the national armament agencies. The French defence procurement agency, DGA, underwent significant reforms in 1996 under President Jacques Chirac, driven by declining defence budgets, rising R&D costs due to more complex armament systems, and increased competition from American arms companies. The 1991 Gulf War's poor performance by the French Armed Forces underscored the need for these changes. The DGA was reorganised for better financial efficiency and procurement processes, with directorates assigned specific roles in armament project management, arms exports, international cooperation, industrial policy, and testing and evaluation activities. The DGA's role and autonomy were redefined, emphasising European cooperation in armaments projects. By 2002, European collaboration comprised 34% of French weapons programs, up from 15% a few years earlier. This shift from the Gaullist tradition of independence in arms production was driven by high R&D costs and economic pressures from EMU convergence criteria. For the Germans, after reunification in 1991, the Bundeswehr needed reforms due to the end of the Cold War and new missions, along with a declining defence budget. Reforms were influenced by strategic and political-military culture and the perceptions of defence ministers. The German government faced industrialists' reluctance to produce weapons, leading to the implementation of the Kircheim Resolutions[114]. These resolutions aimed to 1)align

[111] Set of policies that emphasize the internal control of the economy, labor, and capital formation on a geographical basis. For a better understanding of the concept in economics, B. Clift, C. Woll, "Economic patriotism: reinventing control over open markets", Journal of European Public Policy, April 2014, 307–323

[112] C. Hoeffler, «L’émergence d’une politique industrielle de défense libérale en Europe. Appréhender le changement de la politique d’armement par ses instruments », Gouvernement et action publique, April 2012, p.653

[113] The "producer" state is characterized by its political endorsement of private companies rather than maintaining a publicly-owned defence industry. In contrast, the "acquirer" or “purchaser” state signifies the adoption of a market-oriented perspective in arms procurement, prioritizing cost-effectiveness, value for money, economic rationality, and competitive practices among companies in an open market. Meanwhile, the "legislator" state develops the legal instruments necessary to safeguard its domestic market from international business actors, reflecting a policy of economic patriotism.

[114] S. Constantinos, "Armaments cooperation in Europe: an example of Europeanization ?", Research Institute for Europea and american studies, November 2008, p.26

armaments programs with German and Allied needs, 2) ensure high-quality outcomes, and 3) make the defence budget beneficial to the German economy, promoting scientific and technical capabilities. This policy overcame industry fears and created the necessary consensus for successful rearmament. This policy involves a careful balance: on one hand, German politicians conduct defence procurement with "a low-key, apologetic approach"[115], cooperating extensively with Western allies and adhering to strict arms export policies and a voluntary ban on ABC weapons production. On the other hand, Germany would seeks equality and success in technological and industrial contexts, leading to government subsidies for military and civilian technology R&D.

These efforts must be integrated as part of a greater transformation of the world economies; The neoliberal consensus, a set of economic and political beliefs advocating for free-market capitalism, minimal government intervention in the economy, deregulation, privatisation of state-owned enterprises, and reduced public spending, gained prominence globally from the late 20th century. This consensus supports the idea that open markets, free trade, and competition lead to economic growth, efficiency, and overall societal prosperity. Armament industries across Europe only took longer to adopt these new doctrines of management, which had already affected most ministries by the late 80'. Although the European defence industry foresaw budget cuts and strategic shifts beginning in the 1980s, significant changes in European defence markets and procurement did not occur until the 1990s. Yet, this phenomenon wasn't as obvious as it seems; For example, as Walker and Gurnmett write in a 1993 article, "*France and Britain provide the two poles, the one with its interweaving of industry and state, the other trying, if not always succeeding, to maintain a distance between them*."[116]

3.2."Marketisation" and its result in the industrial landscape

Economic pressures pushed states to introduce market logic into defence procurements. But this transition only established a new form of interaction. Now that free and fair competitions are introduced into the European defence market, states and firms still have to make a choice to cooperate with each other. These choices did not appear unilaterally but gradually, depending on the situation and the objectives pursued.

3.2.1. EADS, MBDA – aerospace and missile industries leading the way

[115] W. Walker, "Nationalism, Internationalism and the european Defence Market", European Union Institute for Security Studies, September 1993, p.17

[116] W. Walker, P. Gummett, "Nationalism, Internationalism and the European Defence Market", Western European Union Institute for Security Studies, p.16

Military aircraft production was at the forefront of changes in the European defence industry. The push actually came from over the Atlantic, with the 1997 merger between Boeing and McDonnell-Douglas. The new company would represent 70% of the world's civilian aircraft fleet[117], and be able to offer a complete line of military aircrafts from bombers to air-superiority aircraft, tankers or AWACS. By the end of the 1997, international pressure and the need to expand commercial possibilities outside of Europe pushed the governments of France, Germany, and the UK tasked Aérospatiale, DASA, and British Aerospace with devising plans to restructure the European aircraft sector. The late 1990s were marked by increasing discussions among politicians and industry leaders about the necessity of forming large Western European defence companies, with significant focus on the European Aerospace and Defence Company (EADC). This company was envisioned to build upon the existing civilian enterprise, Airbus, by incorporating a military division to establish a comprehensive European aerospace company. However, political hesitation regarding practical implementation allowed industry players to take the initiative. In January 1999, the UK saw its first major consolidation when GEC sold Marconi Electronic Systems to British Aerospace, leading to the creation of BAE Systems. Before this merger, British Aerospace was in talks with Germany's DASA to create a pan-European aerospace company. The UK's last-minute decision to merge internally, instead of forming a broader European partnership, caused frustration in Germany and France and postponed the creation of a unified European aerospace and defence company. Nonetheless, nine months later, the European Aeronautic Defence and Space Company (EADS) emerged from the merger of France's Aérospatiale-Matra, Germany's DASA, and Spain's CASA. [118]

EADS showed that when the stakes are high and there is strong political support, stakeholders can successfully navigate Europe's complex institutional framework to foster the creation of Europe-wide industry leaders. As a result of the described developments, BAE Systems and EADS have emerged as the dominant defence firms in Europe. Another prime example of this is MBDA in the missile systems sector, but has advanced the integration process through consolidation and specialization further than any other European defence company.

MBDA is distinguished among European defence firms due to its exceptional level of cross-border industrial integration. European nations have engaged in cooperative defence programs since the 1960s, particularly within the missile sector, exemplified by bilateral initiatives such as those between France and Germany (e.g., Roland, HOT, Milan) and the United Kingdom and France (e.g., Martel, Milan,

[117] In 1995, Boeing held 60% of the civilian market share, while McDonnels-Douglas accounted for 9.9%. if we include military aircrafts, this per cent increases significantly.
[118] D.W. Thornton, "the european aerospace defence and space Company (EADS): A new Dimension of European Cooperation ?", March 2003, p.4-7

FAM anti-air system) but none resulted in genuine integrated European companies for all the reasons described before, from industrial sovereignty, to «Juste retour». However, the 1996 Scalp EG/Storm Shadow programme of which MBDA comes from marked a departure from this trend as France and the United Kingdom embraced mutual dependency: "*This French-British programme was not a "one shot" cooperation but conceived so as to foster an integration of participating companies and create a unique and sustainable missile provider for both countries*"[119]. both states accepted to be 'mutually dependent on each other's industrial base for critical infrastructure' which resulted in the political approval for the merger between the French Matra and the British Bae Dynamics (different from BAE Systems). Then came the Meteor programme, which worked under the same logic: This missile project, involving France, the United Kingdom, Germany, Italy, Spain, and Sweden, significantly enhanced the consolidation of national entities within MBDA beyond the Franco-British framework notably by integrating Alenia Marconi Systems and Aerospatiale Matra Missiles into MBDA, culminating in the formal establishment of the company in 2001.

The consolidation strategies of these mergers reflect three distinct approaches. BAE Systems, referred to as a 'hypernational champion,' consolidated much of the UK's national defence infrastructure into a single company without significant cross-border partnerships. In contrast, EADS was created through a 'merger of mergers,' where national consolidations formed stronger entities capable of negotiating transnational ventures, a new milestone for Europe : "*With EADS, sectoral consolidation did not terminate at the national level*."[120] This strategy involved merging national champions within similar defence sectors, such as aerospace and missiles, across different countries to form EADS. Finally, MBDA showed a third option, the one of consolidation through cooperative programs which favoured industrial sharing of assets. MBDA case also showed the effect of political incentive notably with the French-British summit in December 1998 which was a "*political blessing on the cross-border consolidation of technological and industrial assets*".[121] To a lesser degree, Eurocopter did emerge in a similar fashion, with cooperative programs aimed at merging companies togethers.

[119] R. Bellais, "MBDA's Industrial Model and European Defence", Defence and Peace Economics, July 2021, p.14
[120] T. Guay, R. Callum, "The transformation and future prospects of Europe's defence industry", International review, 2002, p.760
[121] R. Bellais, "MBDA's Industrial Model and European Defence", Defence and Peace Economics, July 2021, p.17

3.2.2. Global trends : productivity and market access

Faced with challenges, defence industries are increasingly embracing free market principles, focusing on productivity and broader market access. Recent strategies have focused on concentration, portfolio restructuring, rationalisation, and internationalisation[122].

We saw that since the end of the 1980s, the defence industry in Europe first saw concentration, a process that happened at different speeds depending on the country and the sector. Portfolio restructuring includes exiting defence divisions or expanding presence through acquisitions. The adjustment of the boundary exemplifies the emerging partnership between customers and suppliers. Customers are privatising specific activities to leverage companies' expertise in commercial and industrial management, while suppliers receive partial compensation for the decrease in equipment orders. Rationalisation involves overhauling operating procedures and cost management. In response to declining markets, rationalisation has also led to a decrease in excess production capacity and streamlining of organisational structures, resulting in significant layoffs. This has primarily occurred when rationalisation has been implemented following market concentration. Internationalisation is progressing simultaneously across countries and sectors, with alliances gradually evolving into transnational joint ventures. Simultaneously, major corporations seek to access new overseas markets by investing in local companies.

Defence contractors are attempting to counteract the reduction in national demand in three ways: domestic actions like concentration and rationalisation increase the market share and competitivity of domestic agents in their national market. However, expanding outside into the international market is also a strategy engaged by many: portfolio restructuring increases overseas arms sales, which the industry now sees as a short-term, partial solution to the challenges of adjusting the defence sector. The other “foreign route”[123] is internationalisation, also called the “Globalization of the Arms Industry”. Of all these phenomena, concentration remains an unfinished business. States and industries already faced concentration trends during the Cold War, particularly in France and the United Kingdom, where central planning reorganised the industrial landscape; This meant that after the end of the Cold War and the liberal turning point of the economy, some nations already had their industrial “giants” which were able to share the national market while securing market access outside. For example, in Germany, concentration occurred with Henschel's defence technology division, which made armoured vehicles

[122] B. Schmitt, "From cooperation to integration : defence and aerospace industries in Europe", Institute for Security Studies, July 2000, p.11

[123] R.A. Bitzinger, "The Globalization of the Arms Industry: The Next Proliferation Challenge", International Security, Fall 1994, p.174

during the Cold War, bought by the Rheinmetall Group, which also acquired majority shares in MaK System Gesellschaft and Mauser-Werke Oberndorf Waffensysteme in the 1990'. Yet at the same time Krauss-Maffei, a German competitor, also engaged in mergers and aggressive tactics with the merger with Wegmann & Co creating KMW. At the end of 2006, KMW acquired the defence technology division of Blohm + Voss Industries (BVI), which subsequently operated under the name KMW Schweißtechnik. Recently, KMW merged with the French Nexter to create KNDS. German market now faces a duopoly between these two companies. In Italy, the same situation, although in a more organised manner: Iveco and its defence division operate in a consortium with Oto-melera, the first specialised in vehicles while the latter manufactures weapon systems. They've been cooperating by pooling their specialisation to create competitive vehicles with the hull from Iveco and the turret from Oto-melera, now part of Leonardo. At a national level, each industry has followed a different path.

3.2.3. The United States against euro-protectionism

The equity of the transatlantic arms trade has always been the centre of debate within Europe. American firms have always been able to enter the European market and win contracts against European competition, but the contrary wasn't as easily true, although the ratio of US to European involvement did change during the Cold War toward better terms for the Europeans. While certain European firms, such as Thales or BAE Systems, have succeeded in acquiring American contractors without losing access to classified U.S. technologies, the majority face considerable difficulties. The U.S. government remains particularly protective of its most advanced technologies, including 'stealth' anti-radar detection measures, and does not share these with NATO allies, even though exports. This situation prompts many Europeans to question why Europe should not similarly protect its own market if the U.S. does so. Many proposed the establishment of a European 'community-preference' zone as a potential countermeasure. A concrete suggestion to actualise this proposal was the European Commission's recommendation in September 1988 to impose a 10% tariff on arms imports into Europe[124]. However, an overarching strategy of Euro-protectionism in the defence sector is not viable. Primarily, such a strategy would likely be prohibitively expensive as it would cut a big portion of the competition with the effects that come with it: 1) the US is at the forefront of research and development and proves to be partially responsible for many European initiatives. Competition incentivises R&D because it drives companies to innovate to stay ahead of rivals, meet customer demands, and ensure long-term survival and growth. In a competitive market, firms must continuously improve their products and processes to maintain profitability and market share. The French-Italian Aster program is born from wanting to compete with the American family of SM Standard Missiles and

[124] A. Moravcsik, "The European armaments industry at the crossroads", p.78

ground-based defences. Another example is the concretisation of sixth-gen fighters in Europe: the F-35 swept most of the European air forces. Notably, thanks to the argument of being the sole fifth-generation fighter jet in service, European aerospace makers and politicians certainly do not want it to repeat for the next generation of aircraft. As of 2024 the efforts seem to be also made toward drone escorts for previous generation systems. Overall, the American-made aircraft's wins overseas have "*focused European minds on what they need to do next time around*"[125]. On the contrary, the Nimrod project serves as a notable example of the potential financial burden, where the UK government invested nearly two billion pounds in the development of an airborne command-and-control system, only to cancel the project later. They preferred their local aerospace and electronics manufacturers rather than propose international bidding with American competitors, which resulted in a lack of competition and a program simply not advancing.

Furthermore, many European nations' arms industries rely on transatlantic trade at the component level for operational independence. Many European nations notably transpose diplomatic relations with strategic needs, like how Germany uses US-made Patriot missiles for Ballistic Missile Defence (BMD). Another BMD program, MEADS, is designed to address the shortcomings of fielded systems like Patriots and to permit full interoperability between U.S. and allied forces. It is made by the US, Germany, and Italy and will still use the PAC-3 interceptor used on the Patriot system.

3.3. The Creation of an European Defence Equipment Market

The European Union's involvement at a firm level is important as it has the power to standardise legal procedures and implement incentive policies directly on the market. The EU's treaties prevent the use of its funds for military expenditures. Europe's defence industries, however, fall under the European Commission (EC) domain. The creation of a European defence equipment market must pass through the EC's involvement to consolidate this fragmented market.

3.3.1. Rationalisation of Research and Procurement Procedures

Creating a unified European defence industry market has faced two major challenges. First, Article 346 (ex-Article 296 TEC) of the Treaty on the European Union exempts defence equipment from the Common Market, creating a significant barrier. Second, the EU lacks comprehensive regulations for mergers and acquisitions in the defence sector and a unified corporate law. This regulatory gap has resulted in a fragmented approach to the defence industry, with most existing rules focusing on export

[125] V. Machi, "How the F-35 swept Europe, and the competition it could soon face", Defence News, September 2022

controls and technology transfers. Consequently, collaborations within the industry have depended on agreements between individual countries, requiring them to decide whether to apply Article 296. Nations that prefer greater competition have avoided using this article, while others have relied on it. In 1997, France, the UK, and Germany began working with the defence industry to explore restructuring the European aerospace sector. This initiative expanded into broader political cooperation on defence issues, leading to the signing of a LoI to facilitate the restructuring of the European defence industry and a subsequent Framework Agreement. These efforts occurred outside formal EU structures, reflecting dissatisfaction with the EU's slow progress on these issues. Despite these initiatives, the Framework Agreement did not deeply address the core issues. Article 33 mandated that national laws should ensure free competition in defence-related research and technology, thereby depending on existing EU regulations. Additionally, the section on "Harmonisation of military demands" suggested identifying potential cooperation projects, including procurement, without proposing significant changes to the regulatory framework.

The creation of the European Defence Agency (EDA) in 2003 officially brought defence industry policy under the EU's purview, formalising a process that had begun in the 1990s. In early 2005, the EDA was instructed to develop a Code of Conduct, and by the end of that year, EU governments agreed on a Voluntary Code for Cross-Border Competition in the Defence Equipment Market. An EDA press release stated, "Member States subscribing to the new voluntary, inter-governmental regime will commit to providing fair and equal opportunities for all suppliers from other subscribing Member States." This code is a politically, but not legally, binding commitment that allows for exemptions from civilian public procurement laws. The Intergovernmental Regime in Defence Procurement and the accompanying Code of Conduct by the EDA became effective on July 1, 2006, and apply to all defence contracts governed by Article 296 of the EC Treaty. The Code of Conduct outlines four fundamental principles to ensure suppliers' fair and equitable treatment[126]: (I) Selection Criteria: Suppliers will be evaluated using transparent and objective criteria, such as security clearances, requisite expertise, and prior experience. (2) Specifications and Requirements: Requirements will be expressed primarily in terms of function and performance. International standards will be used in technical specifications rather than national standards or company-specific requirements whenever possible. (3) Award Criteria: The criteria for awarding contracts will be clearly specified from the outset. The primary factor for selecting a contractor will be the most economically advantageous solution, which includes considerations of acquisition and life cycle costs, compliance, quality, security of supply, and offsets. (4) Debriefing: Upon request, all unsuccessful bidders will receive feedback after the contract has been awarded.

[126] The code of conduct on defence procurement of the EU member states participating in the European Defence agency, November 2005

This non-binding advancement, agreed by most European nations, characterized the need for rationalization in procurement procedures between state and ensure that all, through cross-country competition, with the objective to promotes fair and equal opportunities for all buyers and suppliers across the subscribing Member States.

It would be accompanied later by EDA's efforts towards a greater pool funding for equipment programs in two initiatives which still continue to be updated with relevant evolutions. The first one is the "European Defence Research & Technology" (EDRT) Strategy which exist mainly through the European R&T Joint Investment Programmes (JIP), a regular agreements between EU states and EDA to joint effort to develop R&T projects in specific fields of opportunities. The second one is the "European Defence Technological and Industrial Base" (EDTIB) Strategy, an initiative to identify and develop crucial industrial capabilities that need to be preserved and strengthened in Europe as such coordinates industrial policies. It is approved by the defence ministers of the EU through EDA's steering board and as such improves the political relevancy of the methods agreed upon.

3.3.2. The European Defence Fund : Promoting cooperation through financial incentives

Another strategy of the European Union is the creation of financial incentives, the main tool being the European Defence Fund (EDF): it is an initiative by the European Union aimed at supporting the development of defence capabilities and promoting cooperation among EU countries in the defence sector. Established to strengthen the EU's strategic autonomy and boost its defence industry, the EDF is particularly focused on facilitating collaborative defence research and development projects. On June 7, 2017, the European Commission issued a Communication initiating the EDF, which comprises two main components: one focused on defence research and the other on capability development.

To be eligible for funding from the EDF, projects generally need to meet certain criteria: There is the collaborative Nature of the project as it must involve collaboration between at least three entities from at least three different EU Member States or associated countries. The project must also focus on innovative and technologically advanced solutions that contribute to the EU's strategic autonomy in defence. Finally, projects must align with EU defence priorities, including compatibility with existing EU defence initiatives and policies mostly identified by EDA / PESCO initiatives. Two examples of programs that have received support from the European Defence Fund are:

- Ocean2020: This project focuses on enhancing maritime situational awareness by integrating drones and unmanned submarines with naval fleets' command and control systems.

- TWISTER (Timely Warning and Interception with Space-based TheatER surveillance): This program aims to develop a European capability for early warning and interception of ballistic missiles through the use of space-based surveillance systems. The HYDEF (HYpersonic DEFence) Interceptor Programme, which shall be part of the TWISTER program, is funded by the EDF and European countries: €100 million is co-funded by the European Defence Fund, and the other €10 million is funded by the five Participating States, which are Belgium, Germany, Norway, Poland, and Spain.

The EDF hasn't escaped criticism. The previous chapter has already overviewed industrial lobbying and the corporate capture of EU military initiatives like the EDF is only one step closer to a European Military Industrial Complex. Also, Only collaborative projects will be selected for the EDF aid, meaning that the states with the strongest industries, capable of handling many programs simultaneously, will receive most of the budget. This is even more true considering that development is only co-funded with member states, meaning that strong financial backing is needed, which is not always the case for smaller member states.

3.4.Cooperation against firm survival behaviours and national strategies

The landscape of European military cooperation presents a complex interplay between competition and cooperation. As European nations strive to enhance their defence capabilities, they face the cooperative dilemma—balancing geographic national interests with collective security goals.

3.4.1. The cooperative dilemma : competition and cooperation

It is evident that cooperation isn't a natural phenomenon but an exceptional occurrence. Under normal liberal prospects, economic agents engage with each other through competition first and foremost. Marketisation made a new problem: ensuring that the new private companies would survive in a global competitive market with capitalist dynamics of winner-loser. Indeed, one notable flaw is that efficiency in arms production is not primarily determined by inherent comparative advantages such as labor costs or organisational skills. Rather, it hinges on the duration of domestic production runs and government-subsidized R&D spending. The varying sizes of domestic markets and the different levels of government expenditure on military R&D and procurement create disparities between European companies; State involvement is still needed to invest heavily in R&D and procurement budgets so that its industry can flourish at the international scale. This goes against cooperative initiatives, which would benefit international entities; the foreign firm's relationship with the state is one of the suppliers, but with the local industrials, it is one of the rivals in an extremely competitive market. This dual identity means

that, through the lens of the insider-outsider paradigm, the outsider can temporarily become an insider for the time of cooperation and leave it at the end, with all the benefits that it stole from the other insiders which will have to face it later through bidding application in foreign procurement competitions. The term “coopetition” or “co-opertition”, from cooperation and competition, is a neologism that saw prevalence in the 1990’ and 2000’ to describe new business practices that involve competitors having to deal with cooperations of opportunity or of circumstances, creating the “coopetition paradox”[127] which is summed as “*involved in a relationship that on the one hand consists of hostility due to conflicting interests and on the other hand consists of friendliness due to common interests*”[128]. Through the lens of the arms industry, we see that this paradox appears in two forms: first, between companies as previously described, which cooperate when needed but also compete with each other. Second, between states and foreign firms with immediate common interests but also national hostility. While the first is called horizontal coopetition, the later situation is one of costumer-supplier called vertical coopetition.

In a normal economy, at a business level, two strategies exists: In a competitive paradigm, companies strive to gain an edge over others, often at their competitors' expense. This drives firms to engage in self-serving actions aimed at maximising profits and securing a dominant market position. As they live for limited market share, their interests diverge, leading them to prioritise individual goals. On the other hand, some researchers highlight a cooperative framework where competitive advantage is achieved through collaboration. In this scenario, the firm landscape is shaped by interconnected relationships based on mutual benefit rather than individual gain. Here, one company's success is closely tied to the success of others, fostering cooperative strategies due to shared objectives and increased interdependence.

Linking coopetition with economic patriotism reveals a nuanced landscape where national interests influence both competition and collaboration. In the arms industry, horizontal coopetition sees domestic companies collaborating to leverage each other's strengths while still vying for market dominance. By working together, these companies can achieve greater innovation and efficiency, which strengthens the domestic defence sector and aligns with the state's objective of maintaining a robust national industry. Vertical coopetition, involving states and foreign firms, showcases a dynamic where national interests and economic patriotism intersect[129]. While states collaborate with foreign firms to access advanced technologies and capabilities, they simultaneously strive to protect and promote their

[127] M. Bengtsson, S. Kockn, ""Coopetition” in Business Networks—to Cooperate and Compete Simultaneously", Industrial Marketing Management, September 2000, p.412
[128] ibidem
[129] Ibid, p.413

own defence industries. This dual approach allows states to benefit from international cooperation while ensuring that domestic industries remain competitive and influential. For instance, states may engage in joint development projects with foreign firms but impose restrictions on technology transfers and foreign sales to safeguard national interests. Thus, coopetition within the arms industry illustrates how collaborative and competitive strategies can shape and shape economic patriotism. By balancing cooperation with foreign entities and competition among domestic firms, states can advance their national interests, promote economic patriotism, and enhance their defence capabilities[130]. These economic theories can only apply in a situation of liberal markets, meaning that none of this would be possible if large privatisation movements had not happened before: For examples, GIAT industries which only recently evolved as a private entity, partnered with BAE Systems to develop a weapon capable of firing a new type of projectile, the telescoped ammunition. To achieve this, a joint venture called "Cased Telescoped Armament International" was established on October 18, 1994. It was the first time GIAT worked in collaboration with another enterprise. GIAT evolved as Nexter and now takes part in other multinational programs. The joint venture also happened because on the other side, Royal Ordnance was privatised and then acquired by BAE Systems.

While the marketisation phase during the Cold War largely inspired companies to hold a competitive stance, we today see a European defence market largely influenced by competition. One more concept we can squeeze from economic-firms theories is the Resource-Based View (RBV) Perspective : Firms engaged in coopetition can pool their resources and capabilities, which allows them to develop and leverage these resources more effectively than they could alone. This is the fundamental principle that allows European companies to work together. Taking the Italian Dardo Infantry Fighting Vehicle as an example : The development of the Dardo involves leveraging the distinct capabilities and resources of two companies, Iveco and Oto Melara. Iveco's expertise lies in hull and propulsion systems, while Oto Melara specializes in weapons and fire control systems. By pooling these specific resources and capabilities, the two companies can create a superior product than they could individually.

Following the three paradigms of competition, cooperation and coopetition, we can identify three ways a firm can evolve: first, firms can stay fully competitive. This is the case of Dassault, for example, which also pressured the French government to control cooperation programs better. Its CEO is vocal against the SCAF program and even called for a possible second path if the government opts out of a national approach. Secondly, firms may cooperate constantly to the point of a fusion between the two. This finality is the one witnessed with EADS, MBDA. Finally, the three options that seem to be the most popular path are the one of coopetition through consortia and joint-venture. The polling and sharing

[130] R. Dupuy, "Fondements economiques et industriels de la Defence", Innovations, March 2013, p.98

of resources through these entities allow for more efficient offers, yet at the same time, also permit them to engage in individual market-grabbing practices when offered the opportunity. For example, Naval group and Fincantieri have the Navaris joint venture that allows them to offer common propositions, notably to their respective navies. Yet, at the same time, they compete with each other in the maritime market with, for example, the recent acquisition of French frigates by the Hellenic navy, where both the Naval Group and Fincantieri had their own offers.

3.4.2. National sovereignty through Offsets and "juste-retour"

In foreign policy and security, member states have been cautious, prioritising national sovereignty and showing reluctance to transfer power. Unlike other policy areas that have seen significant European integration over the past fifty years, states recognise that foreign policy and armaments directly relate to the essence of statehood and sovereignty. According to contract theory developed by Hobbes, Locke and Rousseau, the state's primary purpose is to protect the lives and property of its citizens, and external interference in these domains threatens the fundamental concept and existence of the state. The defence industries had, in short, become an extension of national sovereignty. Within the protective shroud of national security, the defence business evolved more often than not insulated from commercial pressures and commercial disciplines: "*Large and complex procurement establishments, defined needs and requirements, negotiated contracts with suppliers, oversaw development and imposed unique accounting and security restrictions on private enterprise*."[131]

As such, it is no surprise that even if European governments do have a long history of engaging in co-development projects, those are always governed by the principle of "juste retour," which ensures that each participating nation's share of work and financial contributions is proportional to its share of production. Initially, the IEPG prescribed, "*Because of very important national interests, IEPG countries will only be prepared to admit border crossing competition if they are sure to get an equitable and fair return in a suitable time corresponding to their vital interests and possibilities. Therefore some kind of Juste Retour has to be arranged*"[132]. Once this principle is agreed upon, the specific tasks for each country are negotiated to ensure an equitable distribution of technologically demanding work. This approach has been a cornerstone of nearly all European collaborative projects.

Economically, "juste retour" operates like a cartel, with participants dividing market shares. It is often criticized for stifling competition and limiting efficient subcontracting. Disputes between firms are

[131] K. Hayward, "Defence Industrial Globalisation - the 'Hidden hand of Government'", Paper given at "NATO: the First Fifty Years", International Academic Congress, Brussels/Bonn, May 1999, p.14
[132] E.C Willie. "Reshaping the Demand side of the European Armaments Market", journal of the Defence System Management College, December 1990, p.6

settled by politicians rather than corporate leaders, leading to perceptions that government intervention introduces inefficiencies. These inefficiencies include extended diplomatic negotiations, duplicate production lines, higher administrative costs, and delays caused by the absence of a single main contractor responsible for the project. Yet it represents the necessity of fairness in cooperative programs: A country that has invested heavily in defence programs, due to its defence industry's reliance on national public contracts, will naturally be reluctant to let a foreign competitor win contracts. With liberalism, the country will still aim to secure industrial work equal to the investment made.

"Juste retour" can also be seen as a principle that helps states better control expensive programs which require large investment: With only a few corporations capable of producing specific products, states face arms producers that hold monopolistic or oligopolistic positions. This leads to information asymmetries, making it challenging for states to determine the actual weapons costs or monitor corporate profits. Adding to the complexity, weapons projects necessitate substantial research and development investments, making it nearly impossible to secure the necessary funding from banks or capital markets. As a result, states must provide upfront payments to develop the products they will eventually buy. While we usually define this notion as integral to negotiations within a program, it can also take different forms with offsets or countertrades, especially for smaller states that don't have the weight in programs to defend their interests. [133] A good example of countertrade is the CaMo (Capacité Motorisée) partnership between France and Belgium, involving selling 492 armored vehicles, from personal transports to wheeled artillery systems. That being said, the industrial aspect of the CaMo program is just as significant. In April 2022, KNDS France selected the MOL group to assemble the Griffon vehicles (armoured transport) ordered by Brussels. CMI Defence Group from Seraing will handle the final assembly of the 40mm turret for the Jaguar (combat vehicle) and maintenance and training. FN Herstal will produce the remotely operated turrets, while Mecar (a Belgian subsidiary of the Nexter group) will develop and supply some ammunition.[134] While Belgium had no say in the final products as it was not part of any developments, it could negotiate its own "juste-retour" through industrial involvement. Belgian researcher De Vestel argues, "*Whatever the sometimes negative views expressed by large companies or countries, this principle will not be abandoned, even if consensus emerges on the necessity to limit its disadvantages*".[135]

[133] J. Mawdsley, "European Union Armaments Policy: Options for Small States?", September 2008, p.374

[134] N. Gain, "CAMO commence aujourd'hui", Force Operation Blog, October 2018

[135] P. De Vestel Defence markets and industries in Europe: time for political decisions? Institute for Security Studies of WEU, November 1995, p.45

It must be said that Offsets, and countertrades are forms of “Juste retour” that were meant to disappear with the IEPG introduction of the latter. Offsets and countertrades were prominent in foreign military sales where a country would want an industrial return, as shown in the recent Belgian example[136]. With “«Juste retour»”, the idea is that this logic should be applied on longer terms, not on a program-to-program basis. It is nowadays difficult to define concretely the difference between both principles as they seem not to have been applied in a way that would differentiate them.

A commonly used description of offset in trading has been the U.S. Department of Commerce Bureau of Industry and Security documentation, defining it as “*Offsets in defence trade encompass a range of industrial and commercial benefits provided to foreign governments as an inducement or condition to purchase military goods or services, including benefits such as co-production, licensed production, subcontracting, technology transfer, purchasing, and credit assistance*”.[137] Historically, as foreign armament cooperation was made in majority with the United States, Offsets were a characteristic of transatlantic defence trades. While the US had a strict no-offset policy outside of national security concerns, European states used them to ensure proper economic return. [138] A 1985 hearing of the US General Accounting Office before the Committee on Energy and Commerce on foreign military sales and offsets defined two forms: direct ones, which are like coproduction and license production, and indirect ones, like technology transfer and subcontracting.[139] We can assume that the nuance of “Juste retour” is that it appears as a work-sharing in the co-development of a program, while trade offsets appear when programs don’t involve co-development. “Downstream” with little armament know-how and industrial capacities, like Belgium used as an example, but also most European countries during the Cold War, were incapable of arguing for co-development and had engaged in trading with offsets.

As a result of offsets and «Juste retour», these programs become more costly than others because each state, acting out of self-interest, wants to secure its return on investment at least. But it might also seek to acquire not the technology it already masters but the one it lacks and wants to obtain. This approach negates the potential economies of scale and the theory of "comparative advantage" (where each participant contributes their best capabilities), which are meant to justify cooperative programs. The case of Intellectual property rights (IPR) often poses challenges for cooperation, as it is not always clear who owns the IPR for defence technology. Defence companies and governments frequently have

[136] Also showing how Offsets did not disappear.
[137] U.S. Department of Commerce Bureau of Industry and Security, "Offsets in Defence Trade Twentieth Study", march 2016, p.1
[138] J.H Eisenhour, “Offsets in Military Exports: U.S. Government Policy”: Extract of Remarks Presented to the Defence Industry Offset Association. DISAM Journal, p.27-33.
[139] F.C Conahan, "Statement of US general accounting office before the committee on energy and commerce, subcommittee on oversight and investigations, House of Representatives, on foreign military sales and offsets", October 1985, p.3

conflicting interests concerning IPR, and there are also distinctions between countries with significant defence industries and those without. The second aspect of «Juste retour» is industrial output: Jobs and capital are at the cornerstone of every industrial policy, and the principle of Juste-retour tries to respect those needs. Juste-retour is a credible solution to the issues of the 60s' and 70s' where military programs failed to secure members' participation throughout the programs. The NBMR-1 was a NATO requirement from the 1950s aimed at developing a light tactical strike aircraft for all NATO members. The competition was won by the Fiat G.91, an Italian design. However, despite winning the competition, several NATO countries chose to pursue their own projects: France decided to focus on developing its own aircraft, such as the Dassault Étendard IV, rather than adopting the Fiat G.91, while the British decided to continue the Hawker Hunter program. The USA, a promoter of the project, bought and tested the aircraft on its own site but preferred still to take in service their own aircraft, the F-5A Freedom Fighter, which would also attract Greece, Turkey and Norway, all NATO members. As such, the infamous NATO strike aircraft would only see service in two NATO countries, Italy and West Germany. These elements were symptomatic of the failure of NATO to standardise procurement procedures; the alliance has been largely successful at establishing strategic missions, but the choice of means to execute these missions remains the responsibility of national governments, particularly regarding equipment, training, and organisational structure. Tactical doctrines, which determine military needs (such as specific equipment characteristics), are a clear national responsibility. On the contrary, a phenomenon of implosion happened in the 60' and 70', when standardisation policy, facilitated by adopting American-delivered items, failed to adapt to the aging of WWII items from Lend lease and the multiplication of European native programs to replace them.

Dealing with Juste-retour is also essential when accounting for the rationalisation of firms: While perfect competition would result in a large number of highly specialised producers, liberalising the oligopolistic European defence market—due to relatively few but very large contracts—would lead to the emergence of a small number of national champions. Consequently, the group of competitive "upstream states" (to use Biermann's notion), both selective and innovative, strongly favour abolishing the «Juste retour» principle. However, the "downstream states" oppose this: Given the relative uncompetitiveness of the latter's defence firms, abandoning «Juste retour» in the armaments sector and permitting competitive tendering would disadvantage them in defence consolidation and competitively organised armaments procurement and production.[140]

[140] J. Mawdsley, "European Union Armaments Policy: Options for Small States?", September 2008, p.371

3.4.3. Finding the balance between liberalism and national policies

Throughout this chapter, we already overlook different forms of cooperation to find the right balance between liberalism, cooperation initiatives, and national policies.

The principles of «Juste retour» and free trade are fundamentally at odds. This inherent conflict is exemplified in the IEPG Report, which advocates for a 'single European arms market' characterised by competitive bidding while simultaneously recommending support for 'less developed' defence industries and ensuring each participant receives a proportionate return over an 'acceptable' timeframe. The IEPG tactfully refrains from addressing this contradiction. Neither principle, in isolation, provides a wholly satisfactory framework for organising European arms production. One potential approach to harmonise competition and collaboration involves categorising products according to the most efficient organisational strategy. The benefits and limitations of various forms of international cooperation can be delineated by conceptualising the European arms procurement system as comprising three tiers: 1. Collaborative co-development on «Juste retour» terms for the most expensive products. 2. Competing consortia for intermediate products or those with substantial product differentiation. 3. Managed free trade for lower-cost products.

The collaborative co-development model is appropriate for sectors such as large weapons platforms, where high fixed costs and natural monopolies render competition prohibitively expensive. Typically, there is a single 'national champion' per country, and economies of scale are suboptimal. In these contexts, «Juste retour» is politically indispensable since these projects constitute core programs for national champions and cannot be discontinued. There are numerous opportunities for efficient European co-development, including producing main battle tanks, ships, helicopters, and large missiles. The competing consortia model is suitable for areas such as small missiles, radars, and major subsystems, where European governments are willing to finance multiple firms or design teams, and there are numerous specialised markets to serve. The managed free trade model is effective for niches within the armaments market that comprise many small or highly specialised producers supplying components for various weapons systems. No single country has a decisive strategic interest in maintaining technological competence in these areas. Here, fixed costs are low, production runs are long, and competition can be particularly beneficial. Component manufacturers often hold monopolistic or oligopolistic positions in their domestic markets, yet their small size makes them challenging to regulate.

This complexity did not ease the Europeanization of procurement policies as political will, through the principle of «Juste retour» and state sovereignty, did not allow a full transformation of the sector at a

global. Consequently, it was still primarily domestically focused, with few transnational projects appearing outside of the aerospace industry: market-oriented procurement did not mean the demise of national industrial strategies, but a loose tie between producer and customer. Europeanization and Marketization. The transformation initiated by the Levene reforms ended in a mitigated landscape: During this period, European consolidation mainly involved large national defence companies acquiring smaller domestic firms or targeting acquisitions within EU countries with less prominent defence industries like Giat of France, which purchased Fabrique Nationale of Belgium in 1991. “European consolidation at this time took the form of large national defence champions acquiring small domestic forms (a strategy pursued by Germany's Daimler-Benz) or big companies acquiring targets in EU countries with minor defence industries)”.[141] Transnational collaborations that did exist were typically joint ventures for specific products, such as missiles, or multinational consortia like the Eurofighter project, allowing firms to maintain their national independence. Efforts for cross-border mergers were significantly hampered by strong resistance, often manifesting as outright refusal to permit domestic companies to be acquired by foreign entities. This resistance stemmed from political concerns regarding sovereignty, the potential unavailability of armaments, and the political consequences of job losses from restructuring. Executives were also resistant to industry-wide rationalisation due to fears about their roles within new entities and potential disruptions to established relationships with national defence ministries. Consequently, “*european defence industriy entered the 1990' as a collection of national fiefdoms*”: the existing monopsonist and monopolist structures within each country were maintained, with the status quo being deemed the safest option for both government and industrials.[142] Ownership structures began to become internationalised but did not grant more room for rationalisation of produced equipment, also caused by how liberalism hit European states at different times and in different ways, which also complicated any industrial alliances. British aerospace industry began privatising in 1980, while its French counterpart saw the end of its state ownership in 1999…

A 2007 report by a consortium of Institutes ordered by the EDA highlighted the industry differences based on the country they were in. It showed that national defence industrial policies differ significantly, making it challenging to develop common procurement approaches. A government's attitude toward a program is often linked to its "special relationship" with its national industry. The depth of

[141] T. Guay, "The european defence industry : prospects for Consolidation", UNISCI discussion papers, October 2005, p.23

[142] T. guay, R. Callum, “The transformation and future prospects of Europe's defence industry”, International affairs, 2002, p.1

connection between the military and industrial players varies significantly between countries and sectors. Across Europe, there are four principal attitudes towards government-industry relationships[143]:

1. In countries that maintain a special relationship with national champions, the influence of these entities on the defence industry is significant. This influence often includes ownership, as seen in Italy and France.

2. Countries like the UK and Germany, which have a robust national defence industry presence, are transitioning towards the approach favoured by Italy and France. This shift, which sees the government open to competition and not a shareholder but aims to preserve employment and retain ownership of technology rather than industry, underscores the dynamic nature of government-industry relationships.

3. Countries with niche capabilities that protect those capabilities. Although they must cooperate with other governments, they strive to maintain their niche capabilities (e.g., Spain, Czech Republic).

4. Countries with minimal or no defence industrial capabilities, focusing on off-the-shelf purchases. They sometimes have dual-use capabilities that can be integrated into cooperative programs (e.g., Estonia).

This variability explains why governments have different attitudes and sometimes adopt more or less nationalistic stances when deciding on cooperative programs. Generally, the less interconnected the military and industry are, the more competitive the defence market is. This balancing between liberal norms and open competitions is a differential that affects the country's position toward cooperation. The scope of security and defence policies is heavily reliant on defence industrial capabilities, and political decisions significantly shape the operations of defence companies. In some countries, this relationship is intentionally emphasized in political strategies, strategically managed or barely recognized. Therefore, national policies on the defence industry vary accordingly. According to the 2022 Coordinated Annual Review on Defence (CARD) report, a mere 18% of investment in defence programs is conducted collaboratively[144]. Similarly, collaborative defence procurement accounts for only 18% of total defence procurement. It states that the European defence industry is hindered by both fragmented demand and supply, that 'cooperation remains the exception rather than the norm', as it is used when it coincides with national plans, would benefit national defence industries, or consolidates a strategic partnership.

[143] J.P. Darnis, G. Gasparini, C. Grams, D. Keohane, F. Liberti, J.P. Maulny, M.B. Stumbaum, "Lessons learned from european defence equipment programmes", occasional paper n°69, October 2007, p.24
[144] EDA, 2022 Coordinated Annual Review on Defence Report, November 2022, p.6

Chapter IV : Detailed study – maritime industry and Franco-Italian-European cooperation

In 2020, the European Union Institute for Security Studies (EUISS) published a report named "'CSDP in 2020' : The EU's legacy and ambition in security and defence". The comprehensive review sets out by contextualising the challenging security environment Europe has faced since the early 2000s, driven by pivotal events such as the 2008 financial crisis, Russia's annexation of Crimea, and significant geopolitical shifts, including Brexit and the unpredictable nature of transatlantic relations, under U.S. President Donald Trump[145]. The text also delves into the implications of these security policies on Europe's defence industry. It points out that despite efforts to consolidate and enhance the EU's defence technological and industrial base, significant hurdles remain in achieving a fully integrated European defence market. The narrative suggests that internal divisions and varying national interests have often hindered the EU's ability to present a unified front in global affairs, affecting the efficacy and perception of the CSDP on the international stage. Regarding European naval cooperation, the EUISS observed that from 1999 to 2018, EU navies experienced a decline of over 30% in their frigates and destroyers and more than 20% in their submarines[146]. Notably, this substantial decrease occurred during a period when naval forces were frequently mobilized. The rising tensions in the Mediterranean, Black, and Baltic Seas, further intensified by the conflict in Ukraine and the sharp geopolitical rivalry in the Indo-Pacific region and around vital maritime chokepoints, pose significant threats to EU security. The same year, retired Admiral Gary Roughead, former Chief of Naval Operations, expressed his concerns before the Seapower and Projection Forces Subcommittee of the House Armed Services Committee, stating, "There's also the need to understand just how small our allied navies have become, and in the past we have always relied on our allies to support us, but those navies are extraordinarily small now"[147]. This situation calls for more investment in the naval industry, but how ?

An overlook at the industry can give us the help to learn the dynamics behind european shipbuilding better. The shipbuilding industry is primarily controlled by a few major shipyards. The OECD points out that asian shipyards, mainly China, Japan and Asia, hold for no less than 95% of the total number gross

[145] D. Fiott, "The CSDP in 2020: The EU's legacy and ambition in security and defence", European Union Institute for Security Studies, 2020, p.10
[146] Ibid, p.43
[147] D.B. Larter, "With challenges aplenty, Europe's navies are coming to grips with high-end warfare", DefenceNews, June 2020

tonnage produced in 2022. However, Europe has a stronger position in terms of value, particularly when including naval activities. Despite the overall dominance of Asia, European companies maintain a strong presence in several specialized market segments. For example, another study of the OECD state that between 2012 and 2022, Europe accounted for 91% of the cruise ships produced in the world. Italy alone is responsible for 36% of the world production of cruise ships during that period[148]. Yet, while Europe resonate within the aeronautic sector through the existance of the Airbus, it is not the case within shipbuilding for two reasons : the first one is structural as shipbuilding is the product of shipyards, which are where the ships are manufactured, and shipbuilding companies who design the ships. While a company like Airbus owns most of its factories in Toulouse or Seville, this is not the case for many shipbuilding companies. Companies like Naval group, Blohm & Voss, Kiel GmbH who only control small infrastructure or their own shipyard. In parallel, companies like Navantia in Spain and Fincantieri in Italy have a monopole in their country and own most if not all of the production chain for their ships. Yet, The naval shipbuilding sector, that is shipbuilding of military vessels, stands out in its distinctiveness, primarily because it does not fully adhere to the usual rules of economic markets. This sector is heavily influenced by "soft" political and strategic factors, very much like the more commercially-driven regular shipbuilding industry.[149]

4.1.European shipbuilding cooperation

One of the most notable examples of a European success story is Airbus. Airbus was established through a series of strategic decisions aimed at consolidating Europe's aerospace industry to effectively compete with Boeing. European nations realized that their fragmented aerospace sectors were at a disadvantage compared to the dominant U.S. manufacturers. In 1967, France, Germany, and the UK initiated discussions that led to the formal creation of Airbus, with the official agreement signed in 1969. Initially, Airbus was a consortium of aerospace manufacturers, which later transitioned into a single integrated company, Airbus S.A.S., in 2000 under the ownership of EADS (European Aeronautic Defence and Space Company). This reorganization aimed to streamline operations and enhance competitiveness. The heavy industries sector, characterized by the manufacture of large-scale products with high capital investment, offers numerous examples of successful collaborations. Besides Airbus in aerospace, there are other notable instances such as Stellantis in the automotive industry, and Arianespace, which involves various industrial partners like Safran, MTU, and Avio. However, despite the prevalence of large multinational companies in many sectors, such entities are extremely rare in

[148] OCDE, "Peer review of the italian shipbuilding industry", 2024
[149] Vincent Vuillard, « Une industrie Navale en pleine mutation », Ministère des armées

the shipbuilding industry. The naval sector appears resistant to this trend, as we will explore. We will examine how this fragmentation exists and the reasons behind it.

4.1.1. A fragmented sector

On the subject of naval industry, Alain Bovis, ex-engineer at the DGA and DCNS-now Naval group, argued that for a long time, military shipbuilding - the arsenals - were integral parts of military navies, but they are now private legal entities, like Naval Group in France or Fincantieri in Italy. The lengthy transition from public administration to private enterprise has not eliminated the industry's strong dependence on the state, which is critical for national sovereignty: “The construction of large ships, due to their size, complexity, and the specific techniques employed, has long been considered a demonstration of a country's industrial capacity” [150]. In fact out of all the industries in a country, shipbuilding might be the closest to state interests and interventions. Firstly, most of the large companies in that sector have a significant participation of the state : Naval group is owned at 62% by the French state, Fincantieri is owned by the Italian state through the Cassa Depositi e Prestiti, controlled by the Ministry of Economy and Finance, at 71%, while the Spanish company Navantia is 100% owned by the Sociedad Estatal de Participaciones Industriales (SEPI) is a Spanish state holding company[151]. In comparison, in the aeronautic sector, Airbus is owned only by 25% by the French, german and Spanish states collectively similarly, the French state doesn’t have any participation in the holding of the major French aeronautic company Dassault Aviation. Why so ? The CEO of naval group, Patrick Boissier responded to this interrogation in a senate hearing in 2013[152]. His opinion is that companies merge and consolidate in all sectors due to factors such as economies of scale, the need to amortise development costs, the ambition to enter new markets, and the desire to acquire well-known brands. However, these drivers do not apply to the naval industry, which lacks major international conglomerates. Additionally, each nation is keen on maintaining the independence of an industry that produces tools critical for national sovereignty. Indeed, another way to see the fragmentation of the european naval industry is through procurement policies : if we compare the acquired equipment since 2000, we see that european air forces align 5 newly acquired different fighter jets (F-16, F-35, Eurofighter, Rafale, JAS 39 Gripen), while european navies, through the same logic, have acquired 16 classes of surface combatant vessels. Most of them were developed and designed in Europe which is not the case for the F-16 and F-35 which are linked to the American industry in development or production. Another difference to highlight is that while Europeans cooperated within the F-35

[150] A. Bovis, "L'industrie navale française et les perspectives européennes", Groupe K2, May 2024
[151] State participation as shareholder can be found in the Financial report of each companies.
[152] Commission de la défense nationale et des forces armées, Compte rendu n° 96, September 2013, p.11

program under the authority of the American company Lockheed, and were the main responsible for the Eurofighters, most of the ships counted were unique : since the 2000, only the Italian-french Horizon class frigate can represent a case of cooperation in armament development in that sector while the rest saw cooperation only in subsystem procurement at best, and only for very few of them.

4.1.2. A variable lack of industrial motivation

One way to explain the issue originates from a lack of industrial will, notably because of the extremely competitive nature of the naval market. It is important to highlight that some trans frontier organisations do exist in Europe, notably through SEA Europe : SEA Europe (Shipyards' & Maritime Equipment Association of Europe) is a lobbying group That represents the interests of European shipyards and maritime equipment manufacturers. It is worth mentioning as it acts as a transnational agent as its members aren't companies but national lobbying groups who themselves participate in the activities of Sea Europe. Yet, factually the group doesn't have any strategic activities. While it co-manages some research projects, it is not an element of consolidation but rather representation between European ship design bureaux and shipyards at the European level. In reality, European leaders of the naval industry have never stopped asking for more cooperation. This is why they made Euronaval. Euronaval is an exhibition dedicated to the naval defence industry, it is the largest exhibition in the world in this sector, focused but not limited to the European market, founded in 1968 and held in France every two years at Le Bourget. Jacques Grossi, The then CEO of the French company DCN made at the Euronaval 1994, which officialised the CNGF program, an optimistic comment about naval consolidation by explaining how he viewed it as a necessary development. His affirmation was based on the three following arguments[153] :

- The necessity to build a "common Defence" centered around the most developed military naval powers in Europe, centered around France and the United Kingdom. He would call this initiative "Europe on the sea".
- The need to lower program costs by sharing their fixed costs (development of ships, program management organizations, testing...) which would requires that the cooperating states to agree and share on identical needs rather than multiply competencies.
- Finally, a focus on the concerned industrialists to rationalize the European defence industry. "This requires agreement on ship procurement strategies and equipment, and on the best use of each country's competencies. "[154] This particular argument can be expanded. The 1990' and

[153] Cols bleus, marine et arsenaux, hebdomadaire de la marine francaise, October 15th 1994, p.11
[154]Ibidem

2000' were a troubled period with many naval military projects failing to come to existence, or with severe reduction. "The generalized reduction of military budgets immediately impacts the workload of industrialists whose activity inevitably decreases. The time has come for savings. One possible solution, (…), is to seek productivity gains, which can be achieved through close cooperation, particularly among major European groups" would claim Jean Loup Picard, president of the French maritime lobbying group SECAN, not in 2024, but 1994[155]. He did see well in the future, notably with the FREMM program that shall be looked over later, which went from 27 ships order to 18.

As such, explaining why no advancements in that direction exist is a difficult task as it is not only battle of industrials, but also politicians from all the countries that try to defend or critic european consolidation. In a 2022 report, the italian Istituto Affari internazionali tries to give explanations for this situation :

1- Europe features a robust array of advanced industries with significant capabilities in naval defence. France, Spain, Italy, Germany, the Netherland, the United Kingdom, Danemark and also Norway are capable to making of designing, constructing, and outfitting military naval vessels with various levels of autonomy and "Therefore, when they are not cooperating, the main actors in european's naval defence market are first and foremost competitors."[156] Traditionally, the naval shipbuilding sector has been largely protectionist because it primarily serves a limited number of buyers—national governments—motivated by concerns over sovereignty, defence strategies, and economic factors. In the past, domestic shipbuilders mainly supplied their own national navies, with exports playing a minor role. However, with European defence budgets shrinking, exports now make up 42% of the value of Europe's naval orderbook. This has become crucial for European firms, especially as they look to countries in the Middle East, Africa, Asia, and Latin America, which are increasing their defence spending and lack their own naval manufacturing capabilities. Military vessel acquisition programs are rare as the ships are increasingly multirole, reducing the number of required specialized classes, and also are long term investments, which ships being decommissioned only after three to four decades of active service. Additionally, as stated, many navies have the opportunity to make their own vessels, making export opportunities within Europe, which are opportunities for joint programs, even lower. This behaviour, going against the union fundamental principles of competitivity, is actually allowed as article 346(1)(a) of the Treaty on the Functioning of the European Union allows Member States of the European Union to go outside of Treaty rules by setting forth that no Member State is obliged to supply

[155] Ibid p.15
[156] E. Calcagno, A.E. Juncos and S. Vanhoonacker, "Naval Defence Cooperation in the EU: Potential and Hurdles", Istitutio Affari Internazionali, December 2022, p.5

information that is contrary to the essential interests of its security. One of very rare case of one of the capable listed nation giving a contract to a foreign European company was the german 2015 tender Multi-Purpose Combat Ship 180 (Mehrzweckkampfschiff 180). In 2020 a Dutch-led consortium (Damen) with significant participation from the german Lürssen Group was awarded the contract to build the four German MKS 180 combat ships for a 5.3 billion euro contract[157]. When a competition occasion arise, “European manufacturers very often find themselves opposed into fratricidal competitions, destroying value on European and export markets and making the competitive pressure even more aggressive”.[158] This leads to a tendering process in which it is no longer a question of complying with technical requirements, but of using all possible means to influence the political decision-making process : for example, promising a share of work for some shipyard in desperate need of contract, or proposing to take ships from the national navy, already in service, to accelerate the delivery of vessels like the French did with the Greek contract for their new frigates, the so cold "soft" political factors.

2- Additionally, unlike other defence sectors such as the missile industry, which saw consolidation through the formation of MBDA (Matra BAE Dynamics Alenia), the naval defence industry has not undergone similar intra-European mergers. Recently, the company Fincantieri’s bid to take over French shipyard Chantiers de l’Atlantique was cancelled by the European Union’s anti-trust[159][160]. While the commission justified its position as “the transaction may therefore significantly reduce competition in the market for cruise shipbuilding, which could lead to higher prices, less choice and reduced incentives to innovate”[161], it was badly seen by european defence companies who face extreme competition in that sector : the CEO of Leonardo would comment that “The concept has a sense in many sectors but we need to identify sectors like security and energy where the competition is global”[162]. Another prohiminent actor, CEO of Naval group, would point out that “the naval shipbuilding industry, with more than a dozen shipyards, is still one of the few defence sectors in Europe that has not undergone any major consolidation in the recent decades.”… “If we do not react quickly, there is, unfortunately, a good chance that the fate of the military shipbuilding companies in Europe will resemble the railway sector’s one…”.[163] As said, even at the national level, national mergers aren’t absolute: The United

[157] P. Hanuschke, Lürssen shipyard and German Naval Yards join forces, Wesert Kurier, May 2020
[158] interview with Hervé Guillou, CEO of Naval Group, "Military naval industry: the urgent need for European consolidation", Fondation Robert Schuman, March 2022, p.1
[159] "EU: Antitrust Review for Fincantieri-Chantiers de l'Atlantique Deal", The Maritime Executive, October 2019
[160] G. Leali, "History of Franco-Italian rivalry lurks behind troubled mergers", Politico, January 2021
[161] k. Prasowy, "Mergers: Commission opens in-depth investigation into proposed acquisition of Chantiers de l'Atlantique by Fincantieri", European Commission, October 2019
[162] T. Kington, "EU regulators must let defence firms merge freely, Leonardo boss urges", DefenceNews, February 2024
[163] interview with Hervé Guillou, CEO of Naval Group, "Military naval industry: the urgent need for European consolidation", Fondation Robert Schuman, March 2022, p.1

Kingdom is still in a mosaic of large naval defence companies like BAE, Babcock, BVT and Thales UK. Germany underwent a national consolidation in 2004, leading to Thyssen Krupp Marine System (TKMS) becoming the predominant force in Germany's naval military construction market. However, TKMS does not monopolize the construction of small and medium-sized ships, as it still faces competition from four private shipyards: Lürsen, Abeking & Rasmussen, Peene Werft, and Flensburger Schiffbau. A similar situation exist in France, with its leader Naval Group which has the surface combatant vessels like frigates and corvettes but doesn't compete in the smaller vessels market where Piriou, Socarenam and OCEA share most of the French navy patrol vessels orders and exportations. Also, as the Chantier de l'Atlantique is the only shipyard capable of producing strategic vessels like aircraft carriers of amphibious assault ships in France, and is still under public control, naval group regularly has to cooperate with it for these special orders. As such, only Italy, Spain and the Netherland are the only nations with national champions.

3 - Thirdly, the naval defence industry has certain characteristics that make collaboration between EU states challenging. One significant issue is workshare, which not only determines the employment impact of a project on a specific shipyard and its region but also influences the technical and technological demands placed on the companies involved. The level of technological sophistication required for tasks within a larger project plays a crucial role in how much a company. Higher-tech tasks lead to greater gains in skills, knowledge, and intellectual property rights from innovation-driven work. For example, a company developing an advanced radar system for a ship will gain more in technological terms than a company assigned to manufacture simpler components for the same vessel. This is particularly difficult for large vessels : the cost of the combat systems, including the sensors and weapon systems are higher with larger vessels than smaller ones. For example, in 2002, the French navy calculated that the cost for the manufacturing of the two Horizon frigates without PAAMS would be 1.1 billion euros. The PAAMS program, the combat system itself, including the manufacturing of two PAAMS systems, two long-range radars, and a hundred anti-air missiles would be at a total cost of 650.3 million euros so more than half the cost of the production of the ships. In fact companies like Fincantieri and Naval group are shipbuilding companies but also system architect-integrators, selling weapons and sensors and combat hardware to equip "naked" vessels. As a 2016 report puts it: "Considering the complexity and sophistication of the products designed and built by these companies, they should nowadays be regarded as "system integrators", dismissing once forever the old image of shipbuilders as mere assemblers of steel blocks"[164]. As such, shipbuilding represent not only the competition to get the contract for the construction of the vessel but also equipping it, with contracts not always going to

[164] Sea Europe, "Study on Industrial and Technological Competences in the Naval Sector", 2016, p.9, can be found in the EDA magazine European Defence Matters, issue 11

the first bid winner and sometime totalling billions of euros. System contracts are as such also under stressful competition and push companies to more research and development funding. The Study on Competitiveness of the European Shipbuilding Industry says 1 : that outside of common systems, demand within the high-tech niche of shipbuilding is typically defined by a small quantity of ships, each produced through a tailor-made process. This necessitates that innovation, along with the corresponding research and development (R&D), becomes a fundamental feature of each specific end product. 2 Sales in the high-tech shipbuilding niche are typically driven by the concept design rather than detailed specifications of the end product. This approach means that much of the innovation occurs during the production process, after the sales contract has been signed, and is an integral part of the final product. 3 compared to more mass-oriented production, high-tech shipbuilding usually involves a complex network of highly specialized subcontractors. This structure leads to significant research and development (R&D) and innovation expenses throughout the value chain. It also necessitates a dense network of knowledge between shipyards and their subcontractors. The Study on Industrial and Technological Competences in the Naval Sector highlight that over the past decade, navies, which were traditionally the primary sponsors of technological advancements, have significantly reduced their funding for research, development, and innovation (RDI) due to budget constraints. This situation poses a dual threat: on one side, there's a risk that the navies' intrinsic knowledge in specialized areas like survivability, shock, blast, noise, and armament could deteriorate. On the other side, the industry is now burdened with covering a substantial portion of the necessary investments in RDI.

4.1.3. Shipbuilding – an existential tool of state sovereignty

While the three arguments presented by the Istituto Affari Internazionali provide relevant insights into the question, they primarily comment on and justify the pre-existing situation without emphasizing why naval shipbuilding, out of all sectors, is the most fragmented. The answer lies not only in the industrial logic but also in the inherent nature of the industry itself: any respectable navy must have its own infrastructure to operate effectively. French researcher R. Bellais refers to shipyards as a "core sovereign capacity." Given that ships have decades-long operational lives, "Accepting cross-country consolidation would mean the loss of industrial resources to support, retrofit, and modify its platforms.[165]" Bellais illustrates this point by examining the nuclear deterrence strategies of France and the UK, which rely heavily on submarine-launched ballistic missiles. All French ballistic missile submarines (sous-marins nucléaires lanceurs d'engins) are homeported in Cherbourg, Brittany, while

[165] R. Bellais, "The european Naval Industry", The Economics of Peace and Security Journal, 2017, p. 8

British submarines are based at His Majesty's Naval Base Clyde (HMNB Clyde). As both nations prioritize their own survival through nuclear deterrence, "accepting cross-country consolidation would mean the loss of industrial resources to support, retrofit, and modify its platforms,"[166] thus compromising the readiness of their submarine forces. This principle extends to other strategic assets; for instance, France would not delegate the maintenance of its sole aircraft carrier, Charles de Gaulle, to Germany. Bellais argues that in-service support (ISS) plays a crucial role in the survival of a nation's naval industry. This necessity partially explains why European shipyards, despite having a small percentage of the world demand, continue to exist. In summary, the fragmentation of the naval shipbuilding sector is deeply rooted in the strategic importance of maintaining national sovereignty over military infrastructure. The long operational life of naval vessels necessitates a robust, nationally controlled support system to ensure readiness and effectiveness. This strategic imperative, exemplified by the nuclear deterrence policies of France and the UK, underscores why cross-country consolidation in this industry is not feasible.

But what is sovereignity ? "*The sovereignty of a nation is the ability to implement its strategic choices independently*."[167] Would answer the French businessman Philippe Louis-Dreyfus in 2023, at the head of one of the biggest ship-owning companies, Louis Dreyfus Armateurs. He argues that it is essential for a nation like France which claim to be a sovereign country, to control the naval space around it which can take many forms like Cable layers or Bulk carrier. His argument extend the question of naval shipyards as military to also civilian strategic assets that should be maintained and defended under the nation's flag. The case of France is particular the government made the first decree in Europe to define a "strategic fleet" in the 2016. The loi sur l'economie bleu of 2016 defined the strategic fleet as consisting of ships flying the French flag "c*apable of ensuring, in times of crisis, the security of supplies of all kinds, means of communication, essential maritime services and works, and of augmenting the resources of the armed forces."*[168] The concept of a strategic fleet encompasses not only the ability to mobilize existing civilian ships under the French flag for logistical flow and personnel transport missions (thus primarily a concern for shipowners), but also pertains to wartime economy. What is important is that this concept includes the ability to build ships (primarily for energy supply and personnel transport, and possibly for coastal shipping) to maintain Sea Power. This is different from the standard concept of "auxialiary" fleet which is in all medium to large navies, reffering most of the time to civilian assets being used for military needs with the possibility to extend the fleet with requisition in time of war. The

[166] Ibidem

[167] A. Descamps, "Philippe Louis-Dreyfus : « les annonces sur la flotte stratégique vont dans le bon sens »", TEMA Transport & Logistique, October 2023

[168] « … permettant d'assurer en temps de crise la sécurité des approvisionnements de toute nature, des moyens de communications, des services et des travaux maritimes indispensables ainsi que de compléter les moyens des forces armées », Article L1335-4, Loi du 20 juin 2016 pour l'économie bleue

French concept of “flotte strategique” implies not only the control of the active assets, but also the control of the tools to produce them. Consequently, despite limited global demand, European shipyards persist due to their vital role in national security and industrial sovereignty.

In conclusion, consolidation is widely called by everyone but seems to only be possible at a domestic level. We saw that naval shipbuilding is fragmented compared to other sectors, a phenomenon that can be explained by either a lag in cooperation that the industry took and fed itself through a predatory logic that the industrials can only grasp if it means they’re the one “eating the other” through mergers, or a client-driven necessity as the navies, must maintain some degree of autonomy. After all, one could argue that the situation isn’t pressing for consolidation: in 2016, the European Defence Agency argued that the European naval shipbuilding had a “healthy successful industrial base”[169], which can question the necessity for more consolidation. Looking at the creation of Airbus in the 1960s, European aerospace industries faced intense competition from American giants such as Boeing and McDonnell Douglas. This effectively put several European companies under financial pressure and pushed them towards a multiplication of mergers to finally create the European Aeronautic Defence and Space Company (EADS), the regrouping of French, German and Spanish aerospatial companies, and then Airbus. When Fincantieri or Naval group experiences steady growth in sales, one can wonder why any of these two companies would decide to merge. In Germany, the possible secession of TKMS, which produces warships and frigates from its parent company Thyssenkrupp also highlight the dual langage that takes place, as it seems that, after its eventual independence from the leader in steel production, the favoured solutions for TKMS would be either the fusion with a domestic shipyard to create a national champion or the entrance of a capital fund in the company; no possibilities for foreign companies even if the propositions are here. The same happened for the Chantier de l’Atlantique ; it was mentioned that the opposition of the European Union commission ended the project of the merger, but underlying it was a strong opposition of a significant part of the political elite, calling it a “strategic error”[170] to give the infrastructure to Fincantieri, known to acquire rival shipyards only to see them close years later as a way to delete competition. The question was asked as there was doubt that in case of an acquisition of the chantiers de Saint-Nazaire (Chantier de l’Atlantique), would Fincantieri be tempted to reduce the activities on the French shipyards to realise economies of scale or transfer

[169] EDA, "EU naval industry in good shape but more R&T investment needed, study says", European Defence Matters, issue 11, 2016, p.21

[170] S. Primas, "Le projet de cession des Chantiers de l'Atlantique : éviter l'erreur stratégique, construire l'avenir", Commission des affaires économiques, Rapport d'information n°84,

orders. At the same time, the government was facing a political hurdle as the nationalisation of the shipyard was meant to be temporary.

4.2.Focus on the cooperation dynamic within and between projects

4.2.1. the Common Next Generation Frigate

The common Next Generation Frigate is a failed program from the 1990', including France, Italy and the United Kingdom for the development of a new air-defence frigate. The program lasted for nearly a decade before being cancelled by the end of participation of the United Kingdom, leaving France and Italy to engage in bilateral cooperation for the Horizon frigate.

Genesis of the program

The study of the project dates back to the early 1990s and initially involved two countries, France and the United Kingdom, with Italy joining later. At that time, the program was already named Horizon/Orizzonte, but it was also known as the Common New Generation Frigate (CNGF) in the UK. The obsolescence of the platforms, which need to be decommissioned (replacing Suffren and Duquesne for the French Navy, Ordito and Audace for the Italian Navy, and the Type 42 Sheffield class for the Royal Navy), originated from the decision of the American manufacturer of the surface-to-air system for these classes of vessels not to offer a modernisation option. Equipping the ships with the new air defence system called PAAMS (Principal Anti-Air Missile System), which requires the installation of a vertical launcher, was not feasible, mainly due to a lack of space[171]. The CNGF comprises as such two distinct collaborative programs: the PAAMS anti-air missile system and the ship with its other systems, called Horizon, derived from the unified tripartite personnel requirement for the CNGF.

Franco-British cooperation was already underway in October 1990 when the two nations discussed potential collaboration on replacing the Type 42 program. The CNGF program began when Admiral Coatanéa of the French Navy and his counterpart Sir Julian Oswald of the Royal Navy, both aware that no frigate projects post-NFR-90 could be undertaken solo due to budget constraints, signed the first documentation on March 1, 1991, concerning a Joint Statement of Need for the Anglo-French Future

[171] Projet de loi de finances pour 2004 : Défense – Marine, « C'est la décision de l'industriel américain, fabricant du système surface-air de cette classe de frégates, de ne pas proposer de modernisation qui est à l'origine de l'obsolescence des plates-formes qui devront être désarmées. L'équipement des bâtiments avec le système PAAMS (Principal Anti-Air Missile System), qui suppose l'installation d'un lanceur vertical, n'est pas envisageable, notamment faute d'espace. »

Frigate (AFFF), a 5500-6000 tonne ship with 200 crew members intended to replace a significant portion of the operational frigates, with a service entry date set for 2002[172]. From September to October 1991, the defence ministers of the time exchanged letters regarding broader military cooperation, including the new anti-air frigate, culminating in a joint signature on December 2, 1991, approving this cooperation and noting the possible participation of other nations involved in the FAMS program. Several meetings followed, where Italy, a member of the FAMS-Family of Air Missiles program (future FASF), was invited as an observer. The Italian staff closely monitored the program and conducted parallel research and studies. Finally, on December 18, 1992, a Tripartite Staff Requirement (TSR) was signed by the chiefs of staff from the three countries: Admiral Coatanéa of the French Navy, Sir Julian Oswald of the Royal Navy, and Guido Venturoni for the Italian Navy, officially including Italy in the Horizon program, though the term CNGF for Common New Generation Frigate is more frequently used in British literature (also known in France as FCNG for Frégate Commune de Nouvelle Génération). Along with the TSR, a document outlining the operational needs of the future frigate, the Trinational Statement of National Needs, was signed.[173] This was followed by a common acquisition policy signed by the three armament directors on January 29, 1993, certifying the initial harmonisation of military and industrial actors. Finally, a Memorandum of Understanding (MOU) and its supplements were signed in July 1994 and March 1996, respectively, for the Horizon frigate and its PAAMS anti-air warfare system. Through these memoranda, the navies also specified the expected number of hulls: 12 for the Royal Navy, four for the French Navy, and six for the Italian Navy. The July 11, 1994 agreement established the main principles governing the program: the organisation of program management, cost and work-sharing rules, equipment selection, etc. This signature marked the transition from nationally conducted studies to the beginning of fully integrated tri-national program management[174].

Simultaneously, the entire industrial structure of the program began to take shape in 1993. In total, four teams were established. Separate tri-national government project teams managed the two programs—the Joint Project Office (JPO) for Horizon in London, established on July 13, 1993, and the PAAMS program office in Paris—both of which reported to tri-national steering committees. As of April 1, 1993, the Horizon Joint Project Office, including its tri-national satellite offices in Rome and Toulon, had a total of 86 employees, comprising 37 British, 26 French, and 23 Italian staff members. The PAAMS project office had 21 employees, including eight British, four Italian, and nine French members. It is noteworthy that the JPO does not duplicate positions to represent all three nationalities: for each

[172] Cols bleu : hebdomadaire de la marine française, March 9th 1991, p.16
[173] Cols bleu : hebdomadaire de la marine française, December 26th 1993, p.21
[174] Cols bleu : hebdomadaire de la marine française, October 15th 1994, p.21

domain, a single representative is chosen, regardless of nationality, to avoid blockage processes caused by duplicated positions. This JPO, the sole representative of the industrial actors, is entrusted with the responsibility of program management and reports only to the steering committee, which oversees and supervises the entire program. It represents all national naval armament directorates, namely the Procurement Executive for the United Kingdom, DCN for France, and Naval Costarm for Italy, through a senior representative from each armament directorate. In parallel, a tri-national operational team was established to address operational issues and define the needs of the navies, known as the Operational Requirement Staff Team (ORST). This team is composed of officers from all three navies. The ORST reports to a naval committee, which includes a senior officer from the three respective naval staffs: the French Navy Staff, the Italian Navy Staff, and the Joint Chiefs of Staff for the Royal Navy.[175]

Development of the program

As previously mentioned, the industrial organization is based on the need to entrust a single contractor with the project's management, making them solely responsible to the JPO for delivering armed vessels that meet specifications, within the agreed timeframe and budget. This provision includes the following elements:

- Definition and detailed study of the vessel,

- Construction of the powered hull,

- Integration of the combat system,

- Delivery of combat ships meeting the required performance.

Discussions among the nations led to the collaboration of the DCN Industrial Service (through DCN International) for France, Orizzonte Sistemi Navali (Orizzonte SpA) (a 50/50 joint venture between Fincantieri and Finmeccanica) for Italy, and GEC Naval Systems (leading a team comprising Yarrow Shipbuilders Ltd and British Aerospace Defence with the support of Yard and Vosper Thornycroft) for the United Kingdom. This resulted in the creation of an international consortium (IJVC for "International Joint-Venture Company") to become the project's industrial contractor. In the equipment domain, three main categories are distinguished: government-supplied equipment, very few in number, the most important being PAAMS; and systems to be developed, such as the combat management system (CMS), the integrated communication system (FICS), and the electronic warfare system (EWS), whose definition phase will be conducted through competitive bidding directly by the

[175]Ibid, p.17-26

JPO. The development and procurement will then be managed by the winning consortium under the authority of the IJVC. Additionally, a list of 14 pieces of equipment (initially 19 in 1995, but the program's development led the JPO to leave some equipment, like the decoy launching system, to become purely national acquisitions) requiring no development funded by the program, called NDIs (Non-Developmental Items), are procured through competitive bidding[176]. This industrial organization is the solution found to 1. Avoid complications among contractors and facilitate negotiations in task sharing, and 2. Achieve economies of scale by sharing development costs proportionately among three nations (even though the navies will not receive the same number of ships) but mainly to avoid duplication of development and investment in equipment[177]. As explained above, the concrete development of the CNGF frigate within the tripartite program begins with the MOU of July 1994; this general agreement is supplemented by additions covering each main phase of the program. Supplement No. 1, whose content was approved and set by the ministers with the MOU, covers the definition phase. It was to be formally signed by June 1995 at the latest, but its ratification was delayed twelve months due to British opposition to the signing of the PAAMS program MOU, freezing the entire CNGF development. Consequently, Supplement 1 was not formally signed until March 22, 1996, thus releasing the entire funding for the corresponding phase, alongside the signing of the MOU for the PAAMS program and its Supplement 1. Its content precisely defines the nature of the work to be done, the acquisition strategy to be employed, as well as the cost and time frame to be respected. This supplement also addresses the frigate itself: the agreement covers the design of the main lines of the ship and its combat system, the selection of equipment and sub-systems of the combat system, and the subcontractors in naval engineering. The next two supplements were: 1. The first dedicated to the detailed study of the frigate and the delivery of the first three series ships, 2. The second represented the production and delivery of the series ships. Evidently, the CNGF program was stalled throughout its existence at the first definition phase, unable to agree with all three participants simultaneously. A second contract, still under the first supplement, was signed in late October 1998 to restart the program, leading to the signing of the second supplement six to nine months later to launch the second phase of the program[178]. Thus, the Horizon program was launched in July 1994, but the development phase itself did not begin until 1996.

The negotiations between the participants

[176] Parliament of the United Kingdom, House of common eighth report, defence Committee, Session 1998-99, CNGF

[177] Cols bleus : hebdomadaire de la Marine française, July 15th 1995, p.8

[178] G.P. Horvath, "Horizon delay may mean costly refits", The engineer, 22 September 1998, p. 14

Since the beginning of the negotiation, several essential problems have never been resolved [179] [180]:

- For the PAAMS weapon system, there were differences from the beginning of the collaboration between the UK and other partner countries regarding the extent to which different systems would meet the missions outlined in the common capability requirement. For the Royal Navy, PAAMS was intended to provide local area defence against modern anti-ship missiles, protecting lightly armed and unarmed ships operating alongside it—such as amphibious assault ships and Roll-on-Roll-off ships—as well as aircraft carriers. For the French, the initial focus was on protecting key naval assets like aircraft carriers, rather than the entire naval task force. The performance required by the UK, in terms of factors such as the number of incoming missiles to be defeated and their stealth, was stricter than the others. Although the tri-national personnel requirement was meant to counter the threats envisaged for 2010-2015, due to underestimated difficulties in adapting a primarily land-based missile system for maritime use, the sought capacity was later relaxed to counter only the threat levels expected at the system's entry into service. This was the main cost/capacity compromise of the PAAMS program. Nonetheless, the PAAMS development contract included provisions allowing each country to commission study work for later upgrades, and such an upgrade could be ordered by the UK for 2010.
- The integration of DCN into an international private framework always encountered British reluctance, not only because of DCN's status but also because France had not conducted a competition to select its national candidate (whereas the UK had chosen Marconi after a consultation). The choice of the combat management system (CMS) focused these reservations. The UK refused DCN's involvement, despite its experience with Senit (Senit 8 equips the Charles de Gaulle), in leading the CMS concept. The only contractor with success and few failures was thus eliminated. Many examples show that GEC-Marconi struggled with its system integration contracts (F23 frigates for the Royal Navy, frigates for Malaysia, which experienced a three-year delay). Consequently, the British state had to take over the responsibility for integrating systems on the F23 frigates, highlighting that system integration is central to military shipbuilding and that industrial problems are specific due to technical (system complexity) and historical (long tradition of arsenals) reasons. CMS was one of the three subsystems under development for the warship, each with two consortia awarded contracts to develop competing proposals. The two consortia for the CMS subcontract—

[179] Parliament of the United Kingdom, House of common eighth report, defence Committee, Session 1998-99, CNGF

[180] Avis presenté au nom de la commission de la defence nationale et des forces armées, sur le projet de loi de finances pour 2000, Assemblée Nationale, N° 1864

"HEPICS" and "EuroCombat"—each included British, French, and Italian companies. The difficulty stemmed from DCN's close participation in one consortium—HEPICS—since DCN was also part of Horizon IJVC. This significantly blurred contractual boundaries, putting DCN in the delicate position of being part of a bidding team while also involved in awarding the CMS contract. The CDP tried to give a charitable interpretation, stating that DCN behaved "impeccably". The pressures on DCN to favor HEPICS must have been considerable, as its SENIT combat management system family (on which HEPICS was based) already equipped other French Navy ships, including the aircraft carrier Charles de Gaulle, which the French Horizon frigates were meant to protect. When the Horizon program ended, the CMS competition had not been decided. In May 1999, the French Ministry of Defence announced a late restructuring of the public shipyard DCN, placing it in a more commercial framework with a contractual relationship with the French government. This necessary first step, however, came too late to address the UK's concerns about the competition procedures for Horizon. the original plan was for the Combat Management System (CMS) software integration to be carried out in Italy and for Combat System Integration to be carried out in France. "The UK, under such a scenario would have been unable to maintain a facility for integration of the UK national variant of the combat system and would therefore have been dependent in the future upon French industry to provide the means of evaluating systems upgrades and changes in configuration throughout the life of the ships."[181]

- The acquisition strategy was based on the desire to commit long-term and facilitate the restructuring of the industrial sector. An integrated management team, JPO (Joint Project Office), was established and had real delegated authority. The industrial prime contractor of the program, IJVC (International Joint Venture Company), included DCN-International for France, Orizzonte Spa for Italy, and GEC-Marconi for the UK. It selected two consortia for each major subsystem (SENIT, SIC, and electronic warfare). However, these consortia were disrupted by industrial restructurings at the European level. GEC-Marconi, which had delayed the project by wanting to impose another type of radar, withdrew from the competition. The assessment of bids exceeding the fixed cost led to new negotiations; the industrial sharing among the three countries was conditioned by the effects of announcements on national orders. Faced with an initial need for four units, military programming funding included two "French" frigates for the 1997-2002 period, with the first delivery in 2005. The British always announced an order for 12 ships but it is certain that

[181] Memorandum submitted by British Aerospace Defence Systems on the Common New Generation Frigate (7 July 1999)

they would not acquire that many, as they only planned to order four frigates by 2007. Italy, after mentioning the prospect of six units, financially programmed only one for 2005.

- The defence procurement methodologies of the French and Italian governments were closer to the pre-Levene era of UK public procurement than to current British practices. Consequently, the attempt to organize a competition on the basis of fair rules was probably unrealistic. The French and Italian industrial organizations involved in Horizon had different approaches to competition and were not faced with an "all-winner" situation but an environment where a national work-sharing agreement was inevitable. Applying a British-style best value for money equipment selection decision was always going to be difficult in such a situation. In the Horizon market, DCN's position—part of the French Ministry of Defence—meant it was the client (associated with the DGA), a shareholder of the prime contractor organization (the IJVC), and a subcontractor bidding its HEPICS combat management system. This, combined with the French government's support for its national champion, significantly impacted the prospects for fair competition.
- The structure of the Horizon IJVC was not optimal. The IJVC shareholders, assuming shared responsibility for a high-risk program, inevitably demanded the protection of a unanimous agreement. This led to a lack of clear leadership, and the shareholders tended to be more concerned with protecting their domestic interest, particularly in terms of work sharing, than managing the project objectively. Furthermore, there was a lack of agreement until very late in the program on the extent to which responsibility should be delegated to the IJVC general manager, resulting in too many decisions being referred back to the shareholders. This led to the IJVC being micro-managed by the client. Industrial initiatives were thwarted by the Joint Project Office, which was concerned with preserving technical performance instead of balancing risks and value for money. The introduction of Smart Procurement in the UK emphasized the different procurement approaches. The UK placed more emphasis on cost and performance objectives rather than specifications and timelines. Although the French and Italian defence ministries were moving towards similar disciplines, they still placed more importance on political and industrial considerations and work sharing.

The withdraw of the British investment from the project

Strong political support had facilitated the continuation of the negotiations: the signing of the first MOU (Memorandum of Understanding) on July 11, 1994, by the Defence Ministers of the three

interested countries anticipated that development would begin eighteen months later, and the MOU supplement, signed on March 21, 1996, allowed the definition phase to be launched. However, this political support vanished with the arrival of the new British government in 1997, which showed little favor towards the project.

Defence Minister Mr. Robertson indicated as early as the summer of 1998 that he did not trust the industrial organization and preferred the establishment of a single prime contractor instead of the tri-national IJVC. He thus wanted the industrial organization to be reformed in a way more in line with British armament acquisition policy. A form of blackmail was thus established, with the state agreement on the PAAMS missile program being conditional on an agreement on Horizon. To save the program, the other two Defence Ministers then asked the industries to propose a new industrial solution. But faced with the significant decline in political will, British industries increased their demands excessively: the merger project between BAE and GEC-Marconi granted the new group capabilities equivalent to those of DCN and prompted it to question the entire Horizon project. A new organizational project, presented by DCN on March 10, assigning DCN and Orizzonte a role as second-tier contractors (sub prime contractors), was not even considered, and the solution proposed by GEC-Marconi on April 1st did not take any French proposals into account. It was unacceptable to the French and Italians because:

- It entrusted all prime contractor responsibilities to GEC-Marconi, who would choose all suppliers and equipment and consider the other participants as subcontractors;
- It shifted the responsibility for construction, final integration, and performance onto DCN and Orizzonte;
- It required delaying the program by 18 months to 2 years, as the British needs were less immediate, whereas any delay in the schedule was incompatible with the condition of the French anti-missile frigates, which could not be maintained beyond 2005;
- It offered no guarantees in terms of costs, despite being one of the British requirements.

French and Italian industries rejected this offer, which was also contrary to the Memorandum of Understanding. The Horizon program steering committee noted the disagreement on April 14 and asked the Defence Ministers to accept the British withdrawal. The national armament directors, meeting on April 22, endorsed this request. On April 25, 1999, this failure was formalized. This summarizes the tripartite cooperation between France, Italy, and the United Kingdom, which began in 1992 and ended in 1999 due to divergent definitions (there was only 40% commonality between

the British and French frigates) and differing industrial objectives, in addition to complex cooperation among the industrial actors involved[182].

4.2.2. The Horizon/Orizzonte program

Now that the United Kingdom had left the CNGF program, the French and Italian navies were left with the unfinished development of their future frigates. Decisions had to be made rapidly, as costs would rise with every new pause in the program.

Continuation of previous development

On April 25, 1999, the three Defence Ministers (France, Great Britain, Italy) officially acknowledged the failure of the trilateral cooperation after three years of negotiations. The UK had already announced its withdrawal from the program in March 1999. This decision resulted from the difficulties encountered by the Industrial Joint-Venture Company, the industrial prime contractor, which included GEC-Marconi, DCN/International, and Orizzonte, in defining the industrial and operational aspects of the frigate, compounded by the challenge of establishing common specifications. However, France and Italy chose to continue the program in September 1999, five months after the end of the tripartite cooperation, due to their converging needs in terms of timeline and the number of frigates (two each before 2010) and their strong collaboration on other programs like the MU90 torpedo and the anti-torpedo system (Slat). The French and Italian frigates would be identical except for a variant (the anti-ship missiles) and two additional options for Italy (a surface surveillance radar and a third 76 mm turret) [183]. The mission of these anti-aircraft frigates is essentially protecting a naval or naval aviation force at medium to long range. They provide the "third circle" of missile defence, the first two being the short-range self-defence system (SAAM: surface-to-air anti-missile), which protects the aircraft carrier Charles de Gaulle, and the missile defence provided by escort ships. They can also be used independently to control the air-maritime environment in a crisis zone or for the air defence of national maritime approaches.

The continuation of cooperation with Italy was decided in early September 1999 after an agreement on the definition of a common anti-aircraft frigate based on the results of the tripartite program definition studies and national projects. On September 7, 1999, the Franco-Italian Heads of Agreement

[182] Projet de loi de finances pour 2001 : Marine, Avis n° 95 (2000-2001)
[183] ibidem

(HoA) were signed, launching the complementary definition phase to redefine the Horizon program following the UK's withdrawal. [184]

On September 16, 2000, Horizon SAS (Thalès, DCN, Fincantieri, Finmeccanica) was created as the prime contractor and the main actor for the program's development. On October 27, 2000, the contract for the construction of four frigates (two French and two Italian) was signed. Following the agreement reached in September between the national armament directors, France and Italy decided to continue the anti-aircraft frigate program together, limiting the number of units to two per country and adhering to the initial cost frameworks. The program office (Ufficio di Programma Orizzonte) is headed by Italian Admiral Dino Vene. The offices are located in the Paris region, in Issy-les-Moulineaux, with extensions in Toulon and Rome. This structure, originally comprising around 25 people, is reinforced by several specialists: a representative from each staff (CC Socce for Italy, CF Ferragu for France), teams from the French General Delegation for Armament and its Italian equivalent, Navarm, as well as teams from the test centers of both countries. The Franco-Italian cooperation-led program is managed by a Franco-Italian consortium, Horizon SAS, created for the occasion. This joint venture includes the Italian group ORIZZONTE (Finmeccanica and Fincantieri) and the French ARMARIS (Thales and Naval Group (DCN)). The four Franco-Italian Horizon frigates are 95% identical[185]; the program is genuinely cooperative, with common ships and shared tasks among the industries[186]:

- The platform development is carried out by FINCANTIERI in Genoa. A subcontracting agreement has been made with DCN.
- The combat system development is managed by EUROSYSNAV (Armaris + Finmeccanica) in Toulon.
- Production and testing are conducted by DCN in Lorient for the French side and by FINCANTIERI in Genoa for the Italian side.

Simultaneously, there is the PAAMS program, consisting of radars and fire control systems. This program is separate from the main Horizon program due to its tripartite nature, involving Italy, France, and the United Kingdom.

The Horizon-class frigates for the French and Italian navies were constructed and commissioned over several years. For the French Navy, the frigate Forbin (D620) construction began on April 4, 2002. It was

[184] Projet de loi de finances pour 2000 : Marine
[185] Rapport d'information déposé par la commission des finances, de l'économie générale et du controle budgétaire, en conclusion des travaux de la Mission d'évaluation et de contrôle sur la conduite des programmes d'armement en coopération, Assemblée Nationale, N° 1234
[186] archived website of the ministere dees armées, marine nationale, Frégates antiaériennes type Horizon

launched on March 10, 2005, and finally commissioned in December 2008. The second French frigate, Chevalier Paul (D621), started its construction on October 23, 2003, followed by its launch on July 12, 2006, and commissioning in June 2009. The Italian Navy's Andrea Doria (D553) commenced construction on July 19, 2002, was launched on October 15, 2005, and was commissioned on December 22, 2007. The construction of Caio Duilio (D554) started on September 19, 2003, launched on October 23, 2007, and it was commissioned on April 3, 2009.

On June 20, 2023, during the Paris Air Show, France and Italy signed a memorandum of understanding (MoU) for the mid-life upgrade (MLU) of horizontal line destroyers, facilitated by NAVIRIS and the European Air Defence Missile Company (EUROSAM, a collaboration between MBDA and Thales Group). Following this, on July 18, OCCAR signed a contract to upgrade horizontal line destroyers with France, NAVIRIS, and EUROSAM, on behalf of Italy and France, valued at 1.5 billion EUR.[187] According to the plan, the Italian Navy's two horizontal line destroyers will be the first to undergo the MLU upgrade, with the first ship expected to be re-launched in mid-2026, and both ships scheduled for delivery by the end of 2027. his step follows a feasibility study awarded in July 2020 to Naviris as prime contractor and by OCCAR (Organization for Joint Armaments Cooperation). The study represented the project's first phase and focused mainly on the ships' anti-aircraft defence system. It aimed to identify and analyze modifications to be implemented on Italian and French Horizon-class frigates to increase their capabilities until the end of their life cycle.[188]

4.2.3. The FREMM Program

The FREMM (Frégate Européenne Multi-Mission in French and Fregata Europea Multi-Missione in Italian), meaning "European multi-purpose frigate," is a series of versatile frigates developed jointly by the French Naval Group and the Italian Fincantieri for the french and Italian navies.

A new opportunity for cooperation

It is a major program that was initiated from the need to replace many classes of old vessels with one single class. For the French, three classes were targeted for replacement: the F 67 Tourville anti-submarine frigates, the F 70 Dupleix, and the A 69 d'Estienne d'Orves class avisos, also known as "second-tier frigates." The aim was to standardize these into a single series of vessels, which would lead to significant savings in both construction and maintenance. This new type of frigate was designed

[187] T. Ozberk, "OCCAR, NAVIRIS And EUROSAM Sign MLU Contract For French & Italian Horizon-Class AAW Frigates", NavalNews, August 2023
[188] K. Tringham, "Franco-Italian Horizon-class MLU moves forward", Janes, June 2023

to meet the operational needs of the Navy in maritime and land-targeted actions, based on a common platform known as the "frigate component," which would serve as the backbone of escort and combat ships. Ultimately, these new frigates would undertake a wide range of missions typically assigned to high-sea vessels. The French had at the time launched a purely national project named FMM for Frégate Multi-mission. At the same time, the Italian navy had a similar need with similar evolution. It needed to replace the Lupo and Maestrale class frigates. It also wanted a single hull to unify both missions with one class of ships like the French at the time. It also had its own national project called the Rinascimente (renaissance) class. [189] [190] [191]

The first announcement of a cooperative program between the two countries was during the Euronaval Salon of 20-23 October 2002. The statement, jointly made by both defence ministers, was announced by madame Michèle Alliot-Marie, the Minister of Defence, who unveiled plans to enhance collaboration on a common frigate project alongside her Italian counterpart, Mr. Antonio Martino, as part of a cooperative initiative. This announcement would be followed the 7th of November 2002 by a common agreement signed by Mr. Jacques Chirac, the President of the French Republic, and Mr. Silvio Berlusconi, the President of the Italian Council of Ministers, during a binational summit at Rome. [192]The 26th of December 2002 is officially launched the definition phase of the program in each country. It is on these bases that the French Minister of Defence Michèle Alliot-Marie and her Italian counterpart Antonio Martino signed a memorandum of understanding defining the technical characteristics of the buildings at the Euronaval show on October 25, 2004. Italy articulated its requirement for 10 frigates, mirroring the specifications of anti-submarine and ground support specialised sub-classes, outlined by France initially, which itself asked for 17 ships. Eventually, because of extreme budget cuts throughout the 2000', by 2008, the plan was revised down to just 11 FREMM, and finally, it would again be reduced to 8 ships with the Loi de programmation militaire de 2013. In comparison, the Italian order would stay at 10 only to be increased to 12 with an additional two ships with increased operational capabilities. [193]

[189] "L'aquitaine à flot", Breves Marine, Centre d'enseignement supérieur de la Marine, N°108, May 2010,
[190] Website of the Marina Militare, FREMM
[191] Avis présenté Au nom de la commission des Affaires étrangères, de la défense et des forces armées sur le projet de loi de finances pour 2005, Sénat, N° 77
[192] "Conférence de presse commune de MM. Jacques Chirac, Président de la République, et Silvio Berlusconi, Président du Conseil des ministres de l'Italie, sur les relations et la coopération franco-italienne, l'état des négociations sur le retour des inspecteurs de l'ONU en Irak et les modalités de l'usage éventuelle de la force et sur le respect du Pacte de stabilité, Rome le 7 novembre 2002.", Communication from the Elysee, November 7th 2002 : « *We have reached an agreement, signed by both Ministers of Defence, on the next-generation frigates. We are delighted about this. We already had exemplary cooperation in the previous program, and I have no doubt that it will be the same for the next-generation frigates*. »
[193] "FREMM : Chronique d'un incroyable gâchis", Mer et Marine, October 2013

The ships, although coming from a cooperative program, are two distinct classes : The French variant, known as the Aquitaine class, and the Italian variant, designated as the Bergamini class, showcase technologies and capabilities tailored to meet the evolving challenges of modern maritime warfare. [194]

Without going into to much technical details, the Aquitaine class and Bergamini class frigates are distinct in many ways. They have different offensive configurations, and some of the weapon systems are unique. For example, the Italian group support subclass has a 127mm artillery gun while the French boast a 76mm gun with a specific vertical launcher system made to fire the MdCN (Missile de Croisière Naval) naval cruise missile, a capacity non-existent in the Italian variant. The anti-submarine variants of the two ships are similar in capacities but differ in weapon configuration, with some French vessels equipped with longer-range air defence missiles. Most of the sensor suite is different from one class to another : The Aquitaine class is equipped with a Herakles radar system, the Artemis Infrared search and track system and the Najir system or the STIR EO MK 2 system as fire control system for the 76 mm gun (depending on the ship subclass), while the Bergamini class has the MFRA radar system, the SASS Infrared search and track system and the NA-25 DARDO-F fire control system for the 76mm or 127mm gun, while also having additional sensors capacity non-existent on the French class like the SPS-732 Low Probability of Intercept radar or the RAN-30X-I surface radar for Over-The-Horizon detection and guidance. Even the combat systems, which control all the weapons and sensors and fuse them, acting as the “brain” of the ship, are different: the Italian ships have the Athena combat system, while the French have the SETIS combat system. This comparison shows how listing the equipment in common rather than different would be easier, highlighting how both classes are far from similar. In reality, six main family of equipments are shared[195] [196] [197]:

- The sonar sensor suite are mostly the same for both Aquitaine and Bergamini classes.

- While the French and Italian ships differ in weapon configuration, they share the main Sylver modular Vertical launching system as the main missile-firing system. As such the Italian and French ships fire the same family of anti-air missiles as the Horizon class, which are the Aster 15 and Aster 30.

[194] L. Peruzzi, "The Balance of Power in the Persian Gulf" MARITIME Security & Defence : From the Sea and Beyond, February 2021, p.32-42

[195] Rapport d'information déposé par la commission des finances, de l'économie générale et du controle budgétaire, en conclusion des travaux de la Mission d’évaluation et de contrôle sur la conduite des programmes d’armement en coopération, Assemblée Nationale, N° 1234

[196] D. Mitch, "Aquitaine class (FREMM) frigates of the French Navy, Royal Moroccan Navy and Egyptian Navy", Naval Analysis, July 2014

[197] D. Mitch, “Bergamini class (FREMM) frigates of the Italian Navy”, Naval Analysis, August 2014

- Propulsion configuration is different but use the LM2500 gas turbine as the main propulsion for both classes.

The complex stabilisation system that improves the hull's seaworthiness is shared between the Bergamini and Aquitaine classes.

The Electronic warfare suite, represented by ESM (electronic support measures) and ECM (electronic Countermeasures), is also shared. One of the main systems is the Nettuno 4100 jammer.

- Finally, torpedo countermeasures and anti-submarine weapons, which were some of the first elements on which the French and Italian cooperated, pre-dating even the Horizon program, are also shared: firstly the SLAT (Systeme de Lutte Anti-Torpille) for anti-torpedo counter-measures, and then two double WASS launchers for France while Italian ship have two triple WASS launchers, both variants firing the Italian-french MU 90 torpedoes.

The Industrial workshare

The case of the FREMM program is vastly different from the Horizon program. While the latter was the work of one consortium, it was not the case for the FREMM which were essentially, as the difference in equipment shows, two national projects with some common specificities. as a the prime contractor by Italy is Orizzonte Sistemi Navali (51% Fincantieri, 49% Leonardo) and by France of Armaris (Naval Group and Thales)[198]. As said previously, France and Italy had their own national programs which as such resulted in two different designs. It was only during the second phase of the program that OCCAR was included in the industrial share. The contract was signed on November 16, 2005 with Occar as the second phase of the program, also called the realisation phase.[199] In particular, it planned to entrust the construction of the frigates to the two prime contractors of the program, Armaris and Orizzonte SpA. Just like Horizon, involvement doesn't stop there. From initial In-Service Support to Through Life Sustainment Management Contracts, OCCAR is still involved in the FREMM program with the responsibility of maintenance, spare parts and eventual modifications of the Italian ships. The initial 2005 contract included life service support for a defined period of time, and in 2019, the Italian Navy decided to reconduct the contract with OCCAR through new amendments. In comparison, the French decided to conduct maintenance themselves with a contract awarded directly by the SSN to Naval Group. OCCAR was also again involved with the Marina Militare in the evolution of the latest two FREMM frigates. As their deliveries were delayed because of commercial opportunities with Egypt, the last two ships were subject of technical changes asked by the Italians to OCCAR, which defined a critical

[198] Fincantieri press releases, "the tenth multipurpose frigate "Emilio Bianchi" launched", January 2020
[199] OCCAR website - FREMM factsheet

design Review to ensure the technical relevancy of the two IT FREMM to the latest threats. Following OCCAR's Through-Life Management (TLM) approach[200], the FREMM programme includes an Integrated Logistic Support phase and an initial In-Service Support (ISS) phase (starting with Frigates delivery) for both French and Italian ship. This includes engineering support, configuration and obsolescence management, technical service, training, supply chain support management, electronic systems maintenance and documentation. A further five-year ISS contract was signed in June 2019 to ensure maintenance and supplies for Italian frigates. On 4 May 2017, an agreement between the Italian and the French Naval Armament Directions and Navies Logistic Support Directions was signed with the purpose of creating a Common ISS structure for FREMM and Horizon frigates, and further developments are being planned thanks to two dedicated Working Groups. [201] [202]

4.2.4. the European Patrol Corvette

The European Patrol Corvette (EPC) is a collaborative naval defence project initiated under the PESCO framework of the European Union. The EPC aims to develop a new modular, multirole corvette designed to address various maritime security challenges and missions, including surveillance, interdiction, and protection of maritime interest. Italy coordinates the project with the participation of France, Spain, Greece, Denmark and Norway. The program aims to develop a second-tier surface combatant, of approximately 110 meters in length and with a displacement of around 3,000 tonnes. This vessel is intended to replace a variety of existing ship classes, ranging from patrol vessels to light frigates. Its modular design allows it to meet the diverse operational needs and missions specified by different navies. The EPC will feature a versatile area that can be reconfigured for different missions by swapping out certain equipment or onboard systems between assignments.[203]

The EPC is fundamentally a European program : it was born from the need of the French and Italian navies to replace a panoply of small vessels that made most of the patrolling missions. Its genesis come from an alliance of the Naval Group and Fincantieri through the Poseidon project, which would lead in October 2019 to Navaris, a company owned 50/50 by the two industries, to propose a common solutions to naval problems. The two companies initially proposed in 2018 a new joint program for 4,000/4,500-ton frigates aimed at the export market, named ELF (European Light Frigate). This program was intended to partially replace France's intermediate-sized frigate (FTI) program and Italy's

[200] D. Fiegas, "Through Life Management in OCCAR", OCCAR presentation
[201] OCCAR communication, "IT FREMM Through Life Sustainment Management (TLSM) Contract Amendment 1 Signature", June 2021
[202] Naval group communication, "Naval Group et le Service de soutien de la Flotte signent un contrat pour le maintien en condition opérationnelle des frégates multi-missions (FREMM)", March 2023
[203] OCCAR website, programs, Multi Modular Patrol Corvette, General information

multipurpose offshore patrol vessel (PPA) program. The French Navy largely refused this project as it already had difficulties funding its FREMM and FTI programs while the Italians had the PP(X) program which would lead to PPA program. To gain the support of both navies, Naval Group and Fincantieri shifted their strategy. They proposed collaborating on a lighter 3,000-ton frigate instead of the initially proposed 4,000/4,500-ton version. At the same time, in October 2018 was formalized the pathway for the creation of Navaris (made one year later). The Marine Nationale eventually accepted the project which led to an agreement being signed by the two navies the 3rd of June 2019 to officialise their common requierement for a new class of vessels. The 14th of June 2019, the pathway for the creation of Navaris was officialised onboard an Italian frigate with Italian and French officials. [204]

The Involvement of the European union

Rome then bidded the project to the PESCO framework which saw approval within the 3rd wave of PeSCo projects came in November 2019. On October 24, 2023, during a ceremony at OCCAR's premises in Rome, the Organisation for Joint Armament Cooperation (OCCAR) signed all the Modular and Multirole Patrol Corvette (MMPC) contractual documents for the first phase of the EPC project with a Consortium coordinated by Naviris and including other beneficiaries from the participating nations. The total value of this first phase is €87 million and is strongly supported by the European Commission (EC) through the European Defence Fund (EDF). Of the total amount, €60 million will be provided by the EC as grants, while the remaining €27 million will be funded by the member states. Nations collaborating to create a flagship European corvette with EU funding are anticipating a €200 million investment from European defence funds in the near future to construct the first corvette prototype. in December 2021, the EC and OCCAR signed a "Contribution Agreement." This agreement entrusted OCCAR with the preparation phase, the signing, and the management of the Grant Agreement (contract between OCCAR and an industrial European consortium coordinated by Naviris)[205]. After signing the Programme Management Authorization (PMA) in October 2022, OCCAR began the MMPC Programme integration process to manage the full scope of the project, acting as the Granting Authority on behalf of the EC and the Contracting Authority on behalf of the five nations. In 2023, the European Commission initiated the second phase of the project, MMPC CALL 2, to continue the work from CALL 1. This phase aims to complete the Critical Design Review (CDR) and start the development

[204] L. Peruzzi, "The PeSCo's European Patrol Corvette (EPC) programme gains momentum", European Defence Review On-line, October 2020

[205] "Contribution agreements signature between the Commission and OCCAR", European Commission, November 2020

phase, producing platforms of several variants as prototypes, with at least one prototype for each version (Full Combat Multipurpose and Long Range Multipurpose)[206] [207].

The European Patrol Corvette (EPC) is one of the most ambitious PESCO endeavours that EDA will soon take under its management wing. The Agency's new project will support the implementation of the EPC PESCO project by developing and adopting the Common Staff Target (CST), Common Staff Requirements (CSR), and a Business Case (BC). These documents are essential for the next phase of the EPC PESCO project, as they will shape the common core components and define specifications and requirements compatible with the modularity concept of the military ship. The Agency will also assist the governance body of the EPC project. With its expertise in project management and the harmonization of capability requirements, the European Defence Agency (EDA) will provide valuable support in these areas. Although the industry is not directly involved in this EDA project, it may be consulted if the contributing Member States consider it necessary.[208] [209]

4.3. Observation of the successes, failures and results of these programs

The programs CNGF, Horizon, FREMM, and EPC help us better understand how the cooperative dynamic within each program evolved throughout the years. In the following lines, we will compare and comment on how cooperation succeeded or failed and how changes in the European defence landscape helped improve this matter.

4.3.1. The French-Italian alliance, a “structuring cooperation”

The creation of Navaris in 2019 resulted from decades of cooperation between branches of the industries, leading to the Joint Venture. The IJVC established a template for further cooperation even if the product it was meant to deliver, the CNGF, failed to happen. The heritage of the CNGF/Horizon programs influenced the evolutions of the companies in particular for Italy; Orizzonte Sistemi Navali, made of fincantieri and Leonardo, was made for the Horizon program but also took responsibility for the Italian FREMM program. It then worked on the new Italian aircraft carrier and recently acquired the contracts for developing and constructing a new class of small offshore patrol vessels. The same can be said for Armaris, the joint venture between Thales and the Naval Group, which also worked on

[206] OCCAR website, programs, Multi Modular Patrol Corvette, General information
[207] L. Peruzzi, "The PeSCo’s European Patrol Corvette (EPC) programme gains momentum", European Defence Review On-line, October 2020
[208] EDA communication, "EDA to support ‘European Patrol Corvette’ PESCO project", January 2021
[209] EDA, "Helping hands", European Defence Matters, 2020, issue 20

the FREMM program. The creation of Navaris is seen by both sides as a solution for the difficulties of naval markets; in most of the recent naval biddings in Europe, Naval group and Fincantieri faced each other as competitors. Even worse was that they mostly bedded their own FREMM variants: Two different bids with the same name and different-looking ships, but fundamentally the same in their performances. In fact, as both navies cooperate more, the catalogues of the two companies become more and more similar.[210] Rather than always having one loser and one winner, or in the worst case, two losers, Navaris happened as a way to maximise efficiency by pooling, sourcing, and sharing the optimal practices in engineering and production to achieve significant cost synergies and generate significant additional revenue. The European patrol corvette is the prime example of this synergy: in 2017-2018, both companies were in need of a new product that was more "export" friendly: the FREMM were too complex for export which prompted the French navy to launch the FTI class with naval group, a class of frigate simpler yet modern, meant for export. Evidently, the FTI aren't as good at export as expected as the naval group pushed with Fincantieri for a new, even more, export-friendly class of vessel, which would evolve as the EPC, again under the principle of collaboration. The EPC is a small project that happened at the right time when most navies needed to change their second-line vessels. It is a chance for Navaris and, as such, the two parent companies to use their " synergy" under the paradigm of European defence consolidation to win a contract of more than 20 hulls. This logic also follows the direction of naval procurement, which will stay with a few highly modern ships.

Referring to previous economic theories explained in the previous chapter, it can be assumed that Navaris offers an option for states to establish a coopetition relationship between the Italian and French firms. This relationship already existed but was solely limited to the French-italian alliance. This first stage refers to "induced coopetition", where policymakers and regulators are willing to rationalise the defence industry. This "induced coopetition" works through "*incremental adoption of organizational solutions and stratagems [...] enabling the creation of actual interfaces among competing organizations' value chains*".[211] In this case, the interfaces are the forms of alliances taken through the different programs, leading to inter-firm connections that outlived programs. It is also called "structuring cooperation" (De vestel)[212] which is described "*as the launching of joint armaments programmes that are sufficiently ambitious and long-term. Such projects can lead to the creation of*

[210] The Egyptian Navy first acquired a French FREMM, specifically the Normandie. Initially intended for the French Navy, it was officially transferred to Egypt in 2015. In 2020, Egypt bought two more FREMM frigates from Fincantieri, of Italian design.

[211] M. Mariani, "The role of policy makers and regulators in coopetition", The Routledge companion to coopetition strategy, University of Reading, October 2018, p.6

[212] P. De Vestel, "Defence markets and industries in Europe : Time for political decisions ?", Institu d'étude de securité, November 1995, p.53

joint ventures or, even better, European consortiums."[213] Yet, the competitive element should not be put aside: the nature of this cooperation is only vertical as being between complementary products, ie ships meant for state-driven programs, and not horizontal, as they still propose substitutive products in the global market.[214] For example, both Fincantieri and Naval Group have their own offers for the malaysian Littoral Mission Ship batch II.[215]

Finally, cooperation is also a non-intentional by-product of geographic proximity. Strategic level competition turns out to be cooperation at the operational level because of state involvement and the transformation of a European market. Firms are forced to cooperate under the framework of Europeanization, with the European Patrol Corvette being a prime example. Navaris, the prime contractor, will have to work with other secondary industries from all the countries involved. This non-intentionality explains how competition and cooperation happen at the same time.

4.3.2. Different forms of programs for different products

There is a clear distinction between the Horizon air defence frigates, the FREMM and the future EPC. The former consists of four nearly identical ships, while the FREMM and EPC have or will have varying degrees of adaptability between each subclass depending on the naval force's requirements. The latter is also interesting as it involves modularity to adapt to each nation's requirements.

The case of the FREMM shows that the diversity of the final products is most likely the result of failures of negotiations between navies or industrials. From the beginning, the collaboration was meant to be outside the realm of primary development but more limited to shared procurements in equipment and sub-systems: as said previously, the number of differences vastly outweigh the commonalities between the French and Italian FREMM. What probably doomed the CNGF program but helped the Horizon frigate was the NDIs Non-Developmental Items list that identified common equipment to be procured based on pure competition between the buyers: as such French vessels have Italian-made equipment like the decoy launchers, the artillery guns, navigation radars and others, while the Italian vessels have French made equipment like the bow Sonar, Deck pointing device, infrared search and track systems and others. While it could be argued that in the end, this solution favoured Italian industrials like Selex and WASS, who won most of the NDI offers, it was still a peaceful way to settle national preferences. Interestingly, for the FREMM, the main aspect of the cooperation was this very subject of equipment

[213] Ibidem
[214] Y. Luo, "A Coopetition Perspective of Global Competition", Journal of World Business, p.129-144. His work focuses on how cooperation and competition occur at the same time through different forms and at different levels. It can take place between multinational companies in the global and local markets.
[215] Naval group proposes its Gowind frigate while Fincantieri offers FCX-15 design.

co-procurement, it failed to entail most of the ship's suites. One hypothesis is that Thales, now a major defence system manufacturer, was part of the French industrial team through Armaris which was not the case during the CNGF program. Although Thales was part of Horizon SAS, which was made in September 2000, the contract for the production of the new Horizon frigate was made a month later in October 2000, meaning that the industrials most likely had to use the available research done during the CNGF program to finalise the development and quickly jump to the production phase. Less than two years later, Horizon SAS made the first steel cuts for the French warships.[216]

For the European Patrol Corvette, the path is toward modularity[217]. Designing for modularity means intentionally dividing the ship into distinct, well-defined parts and components that can be reassembled later according to established specifications and procedures. One common hull can be made and modified easily to suit operational requirements better. Modularity on the EPC isn't a first in ship design. The studies have been numerous with the multiplication of navies using modularity for mission flexibility[218]: It involves a choice between increased modularity at the cost of increased complexity, meaning that the more missions a ship design has to achieve, the higher the Upfront costs will be because the modules must be developed, and the hull will require special attachments to adopt those modules. At the same time, modularity has its limit: large modules will require larger, more expensive hulls, meaning that navies that do not need large modules will "pay extra" for the added size because of foreign navies requirements. As such, the potential of modularity is better used when operational requirements don't necessarily involve large equipment.[219] Modularity must involve compromises in this aspect, meaning that it is not the perfect solution for strategic naval assets tailored to specific situations. Historically, modular ships have been limited to auxiliary missions like anti-piracy and patrolling and sometimes to act as secondary assets for larger ships. [220]

Ship design reflects operational requirements and negotiations between navies to solve cooperation issues that may arise when the needs don't align. When they do, programs like Horizon appear; when they don't, the result is more akin to the FREMM program. For smaller ships, where modularity is an

[216] It is only a hypothesis based on how management structures changed between each program.
[217] The EPC is called the "MMPC" for Multi Modular Patrol Corvette. Two versions are defined, the full Combat Multipurpose and the Long Range Multipurpose variant, but it is expected that national variations, even within each main variant, will appear as there will be a need to standardise sub-systems with previous platforms for each navy.
[218] Royal navy, "Maritime modularity concept", Minister of Defence, 2022
[219] J.F Schank, S. Savitz, K. Munson, B. Perkinson, J. McGee, J.M Sollinger, "Designing Adaptable Ships Modularity and Flexibility in Future Ship Designs", RAND, March 2016, p.11-19
[220] For example, the US Littoral Combat Ship has little firepower, and the US Navy has used its modularity to handle anti-submarine drones to assist larger destroyers.

option but also a necessity considering all possible variants, programs like the EPC are tailored, but it is too soon to say if cooperative development will succeed.

4.3.3. Intra-project cooperation and OCCAR

What can the failure of the CNGF program give us as hindsight to the difficulties of intra-project cooperation? Although the project failed, there is much to learn about its temporary successes. First, the work to regroup the operational requirements of three navies each put a lot of importance in this project due to fleet defence missions (air defence being perhaps the most important mission a ship can undertake) was at first glance not an easy task but succeeded with the triparty document of December 1992 signed by all three admirals, the work of 18 months of negotiations. The next milestone to reach was the need to harmonise the operational requirements with technological solutions. We saw that, overall, choices were debated and solutions found, which led to the signature of the March 1996 MOU. In fact, out of all the disputes enumerated in the presentation of the program, only one was about equipment, specifically the offensive performances, mostly pushed back by the British. It could be argued that this obstacle wasn't of particular importance as. Eventually, the British would still participate in the PAAMS program (which includes the main missile system) for their following replacement program after withdrawing from the CNGF program – the Type 45 Daring class. What failed the CNGF was the industrial collaboration and perhaps also the loss of political will from the British to support the program. In a 1999 report, the UK National audit Office stated that the main causes of the end of the program were 1. "Collaborative process" and 2. "contract negotiations"[221]. The first part is well documented, notably with a 1999 memorandum of UKIPNIC stating, *"It is believed by many that the cultural and procurement practices of the United States are closer to those of Britain and this direction should be promoted more than possibilities with European partners. In particular, many feel that collaborative procurement with France should not be attempted while its Industry remains so closely tied to Government*"[222]. This was again highlighted in the comments of the British Aerospace Defence system company as a clear lesson from Horizon is "*that for collaborative programmes to succeed, there is need not only for harmonisation of requirements, programmes and budgets, but for the reconciliation of national procurement policies, industrial organisations and cultural issues*".[223]

[221] Report by the Comptroller and Auditor General, "Major Projects Report 1999", Ministry of Defence, July 2000, p.117

[222] "Memorandum submitted by UKIPNIC on the Common New Generation Frigate", Committee on Defence, written evidence, July 1999

[223] "Memorandum submitted by British Aerospace Defence Systems on the Common New Generation Frigate", Committee on Defence, written evidence, July 1999

Harmonising operational requirements isn't an issue, notably because it involves navy staff who are influenced by political incentives to adopt common needs. Staffs also work together more frequently thanks to more cooperation, international bureaux being established, sharing navies culture, policies, and also align strategic and operational requirements. It is when solutions are proposed, involving industrials, that problems arise.

Finally, we can note the increasing involvement of OCCAR in those projects. The Horizon program predates OCCAR, but the entity would eventually be involved in a decisive part of the program, which is the MLU for Midlife upgrade. Then OCCAR would be added as the representative of the two states during the second phase of the FREMM development program. Finally, OCCAR was involved on the get-go in the European Patrol Corvette. This trend also encourages OCCAR to keep its administrative division for one French-Italian project to another, as seen first with the FREMM program: the Program division of OCCAR on the FREMM program is actually called HORIZON (HRZ) Programme Division (PD). It is responsible for "*the development, production and initial in-service support of the HORIZON ships Class Mid-Life Upgrade*" and the "*management of development, production and In-Service Support of the European Multi-Mission Frigate*"[224]. As Italian Adm. Bisceglia said "*If Nations would decide it, we could be ready to "transform" the FREMM PD into a "Naval PD" that could manage many cooperative naval programmes (Horizon, FREMM, LSS, and so on)".*[225] The importance of OCCAR is essential for properly developing a cooperative environment between the two entities and, overall, in the sector.

[224] OCCAR website, HORIZON MLU/FREMM factsheet
[225] L. Peruzzi, "OCCAR and the Naval world", European Defence Review On-Line, June 2020

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Chapter V : Summary and conclusion

The thesis provides a comprehensive examination of European defence cooperation, specifically focusing on the institutional and economic drivers. It delves into collaborative efforts between France, Italy, and the European Union in the maritime sector, analysing programs such as the Common New Generation Frigate, Horizon Frigate, FREMM, and European Patrol Corvette to offer valuable insights into the evolution, successes, and challenges of defence cooperation within the European context. The research emphasises the critical importance of industrial and political alignment for the success of cooperative defence programs. It also underscores the pivotal role of international organisations in facilitating these programs to mitigate the complexities of multinational collaboration and enhance European security and defence capabilities.

The following question drove the thesis; Why and How is armament cooperation undertaken in Europe? To answer this problem, two following questions were defined: What factors have contributed to the emergence and dissolution of multinational agencies, all of which aimed to coordinate efforts, ultimately leading to the formation of today's European Union with its frameworks and agencies? The second question is, what prevents states and firms from collaborating independently of the European Union? Both inquiries require an examination of the obstacles and motivations related to this common objective. We hypothesised that many factors have influenced cooperation and that each of them is different. Historical pressure, economic incentives, and institutional negotiations must have varied throughout the years to result in the current situation. Our hypothesis is correct based on the findings established in chapters II, III and IV.

Chapter II on Institutionalism and Europeanization examined the theoretical framework of institutionalism and Europeanization, focusing on developing European defence institutions from the Western European Union to the European Defence Agency. It discusses how negative differentiation among EU member states due to varied security needs, capabilities, and political priorities has historically hindered integration. The chapter also covers the evolution of defence cooperation during the Cold War, the establishment of NATO, and the eventual creation of the European Defence Agency. This chapter's main finding is that the phenomenon of Europeanization is real but takes more than one form. Europeanization as military cooperation was first linked to NATO, notably during the first decades of the Cold War. It then evolved as a responsibility of the Western European Union and would eventually take a more fragmented yet also complete form with the European Union: European armament cooperation is a cluster of initiatives which all revolve around either state initiatives like OCCAR or European institutions like the Permanent Structured Cooperation or the European Defence

Agency. The analysis highlights the persistent challenges and the gradual progress towards a more integrated European defence policy. Persistent challenges because cooperation is still clustered and not uniform like it was envisaged with the creation of the European Union. These challenges take the form of a lack of adequation of the institutions with the state's imperatives, but also the international landscape that evolved with the beginning and end of the Cold War. Gradual progress is done through incremental changes with, first new institutions that absorb or render useless the previous agencies. Secondly, and in particular with establishing the European Union, through new tools to incentivise cooperation like funding and binding agreements.

In Chapter III, the focus was on the bottom-up approach, delving into a comprehensive historical study of state-to-firm relationships to gain a deeper understanding of the evolution of this sector and its relevance to the contemporary landscape. The exploration encompassed the establishment of national armament agencies during the Cold War, subsequent reforms in procurement policies, and the profound impact of market-oriented reforms on defence cooperation. This intricate analysis illuminated the complex balance between liberalism, cooperation initiatives, and national policies, thereby illustrating the multifaceted challenges of aligning economic efficiency with national sovereignty and collective security. Throughout history, states have endeavoured to consolidate their national markets, navigating through various phases of nationalism and liberalisation in anticipation of future budgetary imperatives within the defence industry. Notably, both firms and states have upheld the logic driven by nationalism in their respective supply and procurement policies, underscoring the enduring influence of national interests on strategic decision-making processes. Consequently, the European Market is characterised by coopetition, a delicate interplay between cooperation and competition, reflecting the intricate dynamics at play within the defence industry. Furthermore, the nuanced interplay between state intervention and market forces has engendered a delicate equilibrium wherein states are compelled to regulate and safeguard their national sovereignty while simultaneously incentivising their "national champions" to assert dominance and compete within the global marketplace. This intricate interweaving of national interests, economic imperatives, and global competitiveness underscores the complexities inherent in the defence industry's landscape and underscores the necessity for a nuanced and adaptive approach to policy formulation and implementation.

Chapter IV worked toward implementing these findings into a specific sector of the armament industry that still has not seen much cooperation. The shipbuilding industry has been studied and shown that its defiance towards cooperation is due to three factors: Unlike other sectors, the shipbuilding industry remains highly fragmented. Historically, military shipbuilding was integral to national navies but has transitioned into private entities such as France's Naval Group and Italy's Fincantieri. Despite

privatization, the industry remains heavily dependent on state involvement due to its strategic importance. Also, the naval industry's competitive nature and the lack of industrial motivation hinder consolidation. While SEA Europe represents the sector at a European level, it focuses on representation rather than strategic consolidation. National interests and strategic imperatives also prevent consolidation. It was established that shipyards are core sovereign capacities, naval shipbuilding is deeply tied to state sovereignty. For example, the maintenance and support of strategic assets like submarines and aircraft carriers are critical for national defence, making cross-country consolidation unfeasible. The naval shipbuilding sector's fragmentation is driven by industrial logic and the strategic necessity of maintaining national control over critical defence infrastructure. While calls for consolidation are widespread, real progress is hampered by the need for national sovereignty, competitive market dynamics, and political considerations. Compared to the success of Airbus in the aerospace sector, the naval industry faces unique challenges that make consolidation difficult.

To better understand the cooperation in this field of defence, an overview of the French-Italian cooperation in armament procurements was deemed necessary. This alliance is characterised by the most innovative and ambitious ship programs made in the last decades, giving it a prominent place in the development of the thesis. Four programs were studied: the British-French-italian Common Next Generation Frigate, the French-Italian Horizon Frigate, the French-Italian FREMM, and the multi-national European Patrol Corvette. The industrial interaction within and between each program was also analysed, focusing on the discussions between the Italian Fincantieri and the French Naval Group. Through new cooperative initiatives, coopetition can appear between firms like it did with Fincantieri and Naval group. As the French and Italian navies formulate the same needs and require the same solutions the two companies pool and share their resources to optimise the offers they can make to both navies simultaneously. This “structuring cooperation” finally takes the form of Navaris, meant to supply European-tailored solutions that would have been overwise the landscape of harsh competition between the two industries.

During a speech in Prague on August 30 2022, German Chancellor Olaf Scholz advocated for making the Organisation for Joint Armament Cooperation the central pillar of a unified European defence and armaments system. However, General Eberhard Zorn, the Chief of Staff of the Bundeswehr (German Federal Armed Forces), expressed a starkly different view in front of the German Council on Foreign Relations on September 12 of the same year. General Zorn emphasised his preference for readily available operational equipment: "*I want materials that fly, that move, and are available on the market. Not the development of European solutions that ultimately don't work. I won't name examples here; it would border on disparaging the companies involved*." This comment highlights the tensions within European soil. States are nowadays more than willing to cooperate. Many examples have been named

throughout this thesis. However, negative past experiences have been more marked than successful since the beginning of the Cold War. Even if institutions evolve and propose better frameworks for cooperation, it is only up to states to engage within or outside. Within, they must accept the result of cooperation even if it implies being at the losing end of the stick. Outside, they control the program from beginning to end but at the risk of failed negotiations and unexpectedly high costs because of changes and false promises. This affirmation is true for all states, industrialised or not. This is also why the few successful consolidating initiatives have been driven by firms: first, between them with the example of EADS and MBDA, and between companies and the European Union, establishing a structure of multi-governance in a sector traditionally monopolised by state authority. Yet, we can't allow firms to be the sole initiator of productive engagements. States must also be involved, as market transformation is only possible if the right circumstances exist. This interplay between institutions, states, and defence industries is the driver and obstacle to European armament cooperation.