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Defence, Industry, and Deterrence

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Summary:

Current geopolitical instability makes it necessary to strengthen defence and increase the capacity of the military industry in European nations, an immediate consequence of Russia's invasion of Ukraine. After years of insufficient investment, industrial capabilities have been lost. In Spain, the national defence industry has limited capabilities, except in the naval sector. Therefore, increasing investments in defence must be done by balancing R&D developments with national acquisitions and the import of advanced technology, improving industrial sovereignty without compromising defence capabilities. However, increasing the budget is not enough: it is essential to have an industrial strategy aligned with national defence objectives.

Keywords:

Europe, defence, defence industry, military capabilities, technological sovereignty.

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Introduction

The growing complexity and volatility of the current geopolitical situation across the globe—from Europe, through the Mediterranean and the Middle East, to the far reaches of maritime Asia—requires strengthening national and allied military capabilities to ensure essential deterrence against latent and real risks and threats before they can materialize. Defence requires concrete and credible combat capabilities, which must be supported by a solid defence industry capable of providing and sustaining the needs of national defence over time. Current conflicts extend across an ever-wider geography, their boundaries are increasingly blurred, and some are prolonged indefinitely, making deterrence more necessary than ever, as its purpose is none other than to avoid open war. Furthermore, deterrence is not just a passive response; it is actively pursued through military presence wherever and whenever necessary to manage crises. Deterrence is effective when it causes a potential adversary to perceive a negative risk in undertaking military ventures; it is based on a credible and sufficient defence capability, sustained by a defence industry capable of producing and maintaining military armaments. The purpose of the defence industry is none other than the production and maintenance of the nation's military capabilities, so it is essential that it is aligned with national defence objectives.

The end of an illusion and the return of realism

The Russian aggression against Ukraine in February 2022 marked a turning point for Europe; Europeans were confronted with a reality they thought was overcome: a war within Europe's borders that profoundly altered the continent's political, strategic, and security balances. At a time when defence in Europe, which was rusty and degraded, became essential again. Russia's warnings had not been lacking, Georgia in 2008 and Ukraine itself in 2014 were clear signals that unfortunately went unheeded, at that time the commitments of the 2014 NATO Wales Summit to increase defence budgets to 2% of GDP for some nations became mere words too[1]. Moreover, there was an underlying

1.- See, Atlantic Council, "Who's at 2 percent? Look how NATO allies have increased their defence spending since Russia's invasion of Ukraine," 08/07/2024, available in https://www.atlanticcouncil.org/blogs/econographics/whos-at-2-percent-look-how-nato-allies-have-increased-their-defense-spending-since-russias-invasion-of-ukraine/ (access 25/11/2025)

problem: underfunding of defence at the continental level was the result of a widely accepted view that soft power was enough to guarantee continental security[2]. Over the years, this bet drained European nations of military capabilities, and as a consequence of decreased investments, the defence industry ended up partly dismantled and with inadequate production capacities.

Europe's defence industrial capabilities are at a minimum, also a result of the consequences of globalization. In Europe, as in the United States, less and less of everything is manufactured, from industrial equipment systems to cars and medicines, making it necessary to rely on external suppliers, to a large extent on China[3]. The case of shipbuilding is especially illustrative: if we look at the example of the United Kingdom, which until 1941 was the world's greatest naval power, today we see how its military shipbuilding capabilities have been drastically reduced; today, only three major military shipbuilding companies survive, grouping different shipyards: BAE Systems (majority American capital), Babcock, and Navantia UK (Spanish-owned). Today, the UK would barely be able to produce three frigate-type ships per year, and it is hard to imagine that, with its current level of investment, it could increase that production rate in the short or medium term[4].

The invasion of Ukraine in 2022 forced European nations to face a reality that had long been preferred to ignore: hard power is still valid and used insistently. Thus, while war crystallized in Eastern Europe, European nations continued to focus on peacekeeping operations and containing dangers associated with non-state actors, for which reduced armed forces sufficed. Now, it is not only the Russian threat in Eastern Europe; we are also witnessing a general rearmament process in countries in Asia, Africa, and the southern shore of the Mediterranean too[5]. This trend has led to a proliferation of modern and powerful military capabilities, of state-of-the-art weapons systems, through

2.- See, The Heritage Foundation, "NATO's Underspending Problem: America's Allies Must Embrace Fair Burden Sharing," 31/03/2025, available in https://www.heritage.org/defense/report/natos-underspending-problem-americas-allies-must-embrace-fair-burden-sharing (access 21/11/2025)
3.- See, Dossier Geopolítico, "Anatomía de la caída: El declive constante de la industria europea," 26/09/2024, available in https://dossiergeopolitico.com/2024/09/26/9636/ (access 24/11/2025)
4.- See, Navy Lookout, "Type 26 frigate construction and shipyard investment – progress update," 12/04/2024, available in https://www.navylookout.com/type-26-frigate-construction-and-shipyard-investment-progress-update/ (access 12/11/2025)
5.- SIPRI, "Global military spending surges amid war, rising tensions and insecurity", 22/04/2024, available in https://www.sipri.org/media/press-release/2024/global-military-spending-surges-amid-war-rising-tensions-and-insecurity (access 10/10/2025)

acquisitions abroad or the development of their own military industries in those countries. Consequently, the enormous difference in military capabilities with European nations is narrowing, which in turn fuels new ambitions and fosters renewed geopolitical competition on Europe's periphery.

The defence process in Spain: from needs to military capabilities

The process of obtaining military capabilities in Spain is complex and conditioned by strategic, industrial, and regulatory factors[6]. It all begins with the identification of operational needs by the Armed Forces, the Chief of Defence Staff (CHOD), who analyses present and emerging risks and threats to define the capabilities necessary for national defence and for fulfilling international commitments. This examination also compares the current availability of existing and future capacities and translates into a target capability to be achieved. An analysis is also carried out within the Ministry of Defence regarding the necessary resources, both personnel and financial, to achieve the objectives proposed by the CHOD within the defence programming cycle. However, when the resources the Government can provide to the Armed Forces do not meet the needs established by the CHOD, it is necessary to define and assume risks that must be clearly defined, in addition to limiting the scope of commitments to be assumed with our allies.

Deficiencies in the Armed Forces' capabilities must be covered by launching the necessary procurement programs, for which it is necessary to carry out a planning and validation process, established by O.M. 37/2005, which is long and fragmented due to the involvement of multiple bodies. The acquisition of military capabilities involves the development of operational requirements, technical specifications, the search for funding, and the selection of manufacturers, prioritizing, when possible, the national industry to strengthen strategic autonomy and the domestic industrial fabric. However, the lack of continuity in procurement programs, the shortage of human resources among the many stakeholders, and the established procedures slow down the whole process, resulting in capabilities sometimes arriving late or not adapting to present-day threats. Moreover, the

6.- The MoD Order (OM) 37/2005 regulates the four-year planning, with biennial execution and two years of review, which must be aligned with the National Defence Directive (DDN), establishing the structured process of planning military capabilities, coordinating within the scope of the Ministry of Defence.

Spanish defence industry mainly depends on national demand, which has been contracted for years, affecting the knowledge and experience of the limited human resources available to the industry[7].

Now, as Trump having abruptly awakened Europe, making it clear that the American commitment, which has underpinned the defence capacity of European nations for decades, could now fade. The general European reaction has been to rapidly increase defence spending; it is no longer the case that 2% is enough—some nations reach 5%, like Poland. While NATO nations committed at the 2025 Hague Summit to achieve 5% of GDP, albeit in 10 years. However, that spending as a percentage of GDP, if not applied to obtaining the combat capabilities specifically needed for national defence, will be ineffective, whether it is 2%, 5%, or any other percentage[8]. The capabilities are defined by the CHOD, but they must stem from the National Defence Directive and the Defence Policy Directive, both dated 2020, notably two years before the Russian aggression against Ukraine. The next step is how, when, and where those capabilities are obtained, and this is where the defence industry, national or foreign, comes in.

Industry: Timelines and capabilities

An outstanding example of the situation in Europe in defence production is the construction of combat ships in Spain: between the launch of the first “Álvaro de Bazán” class frigate (five units) and the first of the “Bonifaz” class (another five), twenty-five years passed—the “Álvaro de Bazán” was launched in 2000 and the “Bonifaz” in 2025. This means a production rate of barely 0.24 frigates/year during the first quarter of the current century. An inconsistent naval demand causes cycles of expansion and contraction in the industry, with long intervals between construction programs that inevitably result in a significant loss of knowledge and experience in a very specific and technically advanced

7.- See, Europa Press, “Expertos avisan de la "limitada capacidad" de la industria de la defensa para absorber el incremento de la inversión”, 10/07/2025, available in https://www.europapress.es/seguridad-y-defensa/noticia-expertos-avisan-limitada-capacidad-industria-defensa-absorber-incremento-inversion-20250710110000.html (access 21/09/2025)

8.- Eaglen, Mackenzie & Spiller, Cole, “Behind NATO’s 2 Percent: Measuring the True Scope of Alliance Defense Investments and the NATO Defense Deficit”, AEI Foreign & Defense Policy Working Paper 2025-06, 03/2025, p. 15, available in https://aei.org/wp-content/uploads/2025/03/Eaglen-Spiller-NATO-Working-Paper-Final.pdf?x85095 (access 12/11/2025)

field such as warships production[9]. Thus, when national programs do not appear, the industry tries to turn to export programs. However, it is in national construction programs where technological progress is made, developing new systems and capabilities that are later offered for export.

In the naval field, weak demand for new naval programs also has other important consequences, not only in the shipyards but also in the navies and defence ministries, which see their capacities to drive the acquisition of new naval platforms diminished. When the main activity—new ship procurement programs—stops or slows down (in Spain, the second decade of the 21st century was almost sterile for this activity), efforts shift to minor projects, deadlines are extended, and bureaucracy grows[10]. In short, inefficiency multiplies as scarce work and multiple responsibilities are spread among different institutions, a situation further complicated since the transfer of program offices to the MoD Directorate General of Armaments and Materiel (DGAM) in 2014[11], when acquisition programs were at its lowest. As a result, procurement processes drag on in discussions about operational requirements, technical solutions, and costs, causing program delays and potentially resulting in platforms and capabilities entering service when the needs for which they were conceived have changed. Who, 10 or 15 years ago, when the frigates that will enter service in the next decade were conceived, could have foreseen the massive present threat of drones and missiles?

Thus, cycles of contraction in the naval industry, from the end of the Cold War until recently, have resulted in the closure of numerous shipyards and the loss of experienced human capital[12]. The case of American naval shipyards is paradigmatic, as a chain of closures occurred—Philadelphia in 1991 and Charleston in 1993, followed by Long Island and others, which are now being revived with the support of foreign industry[13]. Meanwhile,

9.- See, Global Defence Corp, “Navy officials and shipbuilders have attributed the US shipbuilding issues to long-term and short-term problems”, 22/02/2025, available in https://www.globaldefensecorp.com/2025/02/22/navy-officials-and-shipbuilders-have-attributed-the-us-shipbuilding-issues-to-long-term-and-short-term-problems/ (access 08/11/2025)
10.- Ibid. 9.
11.- MoD Resolution 320/03967/2014 centralized the management and contracting of weapons and equipment programs in the Ministry of Defence Directorate General of Armament and Materiel (DGAM), resulting in the loss of ownership of the capability acquisition process by the end user and the redistribution of the scarce human resources dedicated to the programs between the DGAM and the Armed Forces.
12.- Ibid. 9.
13.- See, Kim, Heejin, “South Korea's HD Hyundai Heavy in talks to buy US shipyard”, Reuters, 18/09/2025, disponible en https://www.reuters.com/world/asia-pacific/south-koreas-hd-hyundai-heavy-talks-buy-us-shipyard-2025-09-18/ (access 23/10/2025)

in Europe, the situation was not much better, with closures and capacity losses in the UK, Germany, and others, leading to the dispersion of workers, showing that it is easier to rebuild facilities than to recover a qualified workforce[14]—a problem now afflicting the whole Western naval industry[15]. This situation is reflected in the launch of construction programs with undefined and incomplete designs; the failed American "Constellation" or the Australian "Hunter" class frigate programs are clear examples of current problems in U.S. and Western naval industry: building a ship with insufficiently defined requirements by adapting an existing design and trying to do so with a lack of properly qualified workers in the shipyard[16].

Industrial capabilities and defence needs

The rush to recover defence capabilities by European nations and the doubling, or even more, of defence budgets compared to what they were not long ago has sparked a race to obtain a new "manna"—public money. Thus, while interest in green energies wanes, the eagerness to capture defence funds soars. There is talk of creating "national champions" that bring together different industrial capabilities and, in the future, can increase industrial autonomy in defence[17]; investment funds are even created to seize the opportunity to make money. All this is fine and perfectly legitimate, but it needs to be supported by an essential national strategic vision, which must be sustained over time, based on national defence objectives, and to achieve them, the defence industry

14.- See, Pitrof, Tyler, "The Shipyard Shortage Is a People Problem", Proceedings Vol. 150/9/1,459, 09/2024, disponible en https://www.usni.org/magazines/proceedings/2024/september/shipyard-shortage-people-problem (access 10/09/2025)
15.- See, Velázquez, Alberto, "La modernización del sector de la construcción naval encalla en la falta de talento", ABC, 14/01/2024, disponible en https://www.abc.es/economia/modernizacion-sector-construccion-naval-encalla-sequia-talento-20240115144622-nt.html?ref=https%3A%2F%2Fwww.abc.es%2Feconomia%2Fmodernizacion-sector-construccion-naval-encalla-sequia-talento-20240115144622-nt.html (access 12/09/2025)
16.- See, Lagrone, Sam, "Navy Cancels Constellation-class Frigate Program, Considering New Small Surface Combatants", USNI News, 25/11/2025, available in https://news.usni.org/2025/11/25/navy-cancels-constellation-class-frigate-program-considering-new-small-surface-combatants (access 25/11/2025) and PBS, "How workforce issues in Marinette reflect the US Navy's struggles to build warships", 12/08/2024, available in https://pbswisconsin.org/news-item/how-workforce-issues-in-marinette-reflect-the-us-navys-struggles-to-build-warships/ (access 01/11/2025)
17.- See, Martín, Nacho, "El Gobierno quiere hacer de Indra un 'campeón nacional' de la defensa", El Independiente, 24/02/2025, available in https://www.elindependiente.com/economia/2025/02/24/gobierno-indra-campeon-nacional-defensa/#google_vignette (access 01/12/2025)

contributes by providing the Armed Forces with the military capabilities they need—that is, the materials to build Colin S. Gray's "strategic bridge."[18]

The defence industry must focus on supplying weapons and systems that meet the needs defined in strategic defence planning, avoiding imposing its specific industrial development goals or prioritizing products that, although commercially interesting, are not necessary or a priority for the Armed Forces. The responsibility for directing the defence industrial strategy lies with the Government, which must ensure that it is aligned with and supports the national defence strategy. To this end, it is essential that the Government guide and, when necessary, correct the particular strategies of companies and industrial groups, especially those it controls through shareholding, whose vision is conditioned by commercial interests and, therefore, may be limited and partial. This approach should also apply to innovation, the development of new industrial capabilities, and the formation of conglomerates in the defence sector, which should always be adjusted to a long-term national defence industrial policy.

In Spain the defence industry is relatively small, preventing the production of all the systems and armaments needed by the Armed Forces. Among the main systems not manufactured locally are missiles and artillery; light weapons have also not been produced for years—everything is imported. The naval sector is currently the core of Spanish national military industry; Navantia[19] is one of the largest shipyards in Europe and not only builds ships but also develops and integrates combat systems—one of only three shipyards in Europe capable of this, along with BAE and Naval Group. Meanwhile, INDRA has focused its main defence activity on radars, electronic warfare systems, and simulators; SENER participates in missile manufacturing programs and produces aeronautical systems. AIRBUS, although a European giant in defence, has a small Spanish share—barely 4%[20]—which keeps it from being considered a national company, despite its industrial capabilities located in Spain. The same applies to ammunition

18.- Gray Colin S., "The Strategy Bridge, Theory for Practice" Oxford, 2010, p. 244.
19.- Navantia is the largest defence sector company in Spain and the only Spanish company among the world's 100 largest defence companies, SIPRI, "The SIPRI Top 100 arms-producing and military services companies in the world, 2024", available in https://www.sipri.org/visualizations/2025/sipri-top-100-arms-producing-and-military-services-companies-world-2024 (access 03/12/2025)
20.- See, "Major shareholders: Airbus SE", Market Screener, available in https://www.marketscreener.com/quote/stock/AIRBUS-SE-4637/company-shareholders/ (access 01/12/2025)

factories in Spain, all of which are now foreign owned[21]. These large companies are complemented by a multitude of small and medium-sized enterprises, many of them recently created thanks to new funds, which provide innovative products and help energize the sector.

Defence and Spain's industrial strength

In the current situation and with the available national capabilities, national defence could not be sustained exclusively by systems produced in Spain, as we do not have the necessary "technological sovereignty" in many weapons systems. On the other hand, launching R&D initiatives for the development of defence capabilities is very positive but requires a long term. The industry receives public funds for the development of new systems, which drives the essential technological advance, but it is not without risks and does not meet the short- and medium-term defence needs, which are now necessary throughout Europe. Thus, military planning cannot be based exclusively on R&D programs, in Spain or any other nation, especially in these times when everyone wants to increase their defence capacity before 2030, since between the initial investment in R&D and the deployment of effective military capability, up to 25 years may pass[22].

The fact is that in Spain and Europe, perhaps with the exception of France, it is still essential to resort to external sources for weapons systems, mainly the U.S. Thus, between 2020 and 2024, European NATO member nations doubled their arms imports, 64% of which came from the U.S., whose availability of weapons systems and industrial base is far superior to that of European nations[23]. Today, it is neither viable nor reasonable to eliminate the acquisition of systems and weapons from the American ally; the power and capability of the systems it produces, in many cases, are notably superior to equivalent European systems. On the other hand, the European defence industry still

21.- EXPAL was acquired by the German Rheinmetall in 2022, becoming Rheinmetall Expal Munitions; Granada Munitions Factory (FMG) is owned by the Slovak group MSM, which in turn is owned by the Czech CSG; and Nammo-Palencia belongs to the Norwegian Nammo.
22.- See, Bowns Steven & Gebicke Scott, "From R&D investment to fighting power, 25 years later", McKinsey, 2010, available in https://www.mckinsey.com/~/media/mckinsey/dotcom/client_service/public%20sector/pdfs/mck%20on%20govt/defense/mogdefenserd.ashx (access 20/11/2025)
23.- See, SIPRI, "Are the European NATO states moving towards self-reliance in arms procurement? A Q&A with Katarina Djokic", 19/03/2025, available in https://www.sipri.org/commentary/topical-backgrounder/2025/are-european-nato-states-moving-towards-self-reliance-arms-procurement-qa-katarina-djokic (access 08/11/2025)

has important national bases, reflected in intra-European competition for defence programs, in Europe or for export. The European industry competes among itself, often with the support of respective governments, each defending its national interests, so it is not always easy or possible to establish cooperation programs.

The best option is a balance between R&D developments, which are essential to achieve sovereignty in defence systems, the acquisition of national systems and weapons, and imported systems, mainly American[24]. On the other hand, the much-touted pursuit of strategic autonomy cannot be done from scratch and should not be the argument for industries lacking the necessary knowledge and experience to become the main suppliers of military equipment[25]. Either they will have to develop long and risky R&D programs, or proceed as intermediaries in supplying weapons and systems they do not actually manufacture and must contract abroad, even if they later put their own logo on them. Such a procurement system would provide no added value and would result in increased costs for defence ministries.

Conclusions

The need to recover military capabilities in the current geopolitical context has led nations to significantly increase their defence budgets; however, the industry has capacity problems to respond to the current demand for armaments in Europe. The arrival of a surprising wave of defence funds carries significant risks, mainly due to the urgency to spend them, as there is a risk that they will not be used optimally, especially if not applied to obtaining systems that support the achievement of defence objectives. This requires a strategic policy for the defence industry; merely increasing the defence budget will not ensure an improvement in combat capabilities. In a different vein, Spain has limited defence industrial capabilities, except for military shipbuilding, where it is at the world's top level, so it needs a defence procurement policy that balances the development of

24.- See, Jaime González, Javier, "National Strategic Autonomy within the European Context: The Case of French Weapons Programs", Bachelor's Thesis, Universidad Pontificia de Comillas, Madrid, 05/2025, p. 43, available in https://repositorio.comillas.edu/xmlui/bitstream/handle/11531/89246/TFG%20RRII%20-%20JAIME%20GONZALEZ%2C%20Gabriel.pdf?sequence=1&isAllowed=y (access 16/11/2025)
25.- See, Schmidt, John & Patrice Patrice, "Defense disrupted: New players, new pressures, new possibilities", Accenture, 06/2025, available in https://www.accenture.com/content/dam/accenture/final/industry/aerospace-and-defense/document/Accenture-Defense-Insight-Report-June-2025.pdf (access 19/11/2025)

R&D systems with the acquisition of national and international systems. Finally, it should be noted that in the defence industry, not everything is about acquiring new systems and armaments; it is essential to maintain those already available to the Armed Forces, in which the national industry participates at all levels, and for what the Armed Forces must be provided with the necessary funding. Acquiring systems that become inoperative and therefore useless due to lack of necessary maintenance is not precisely an effective or efficient way of operation.

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