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# Transforming European Security: Industrial Resilience, Institutional Adaptation, and Strategic Autonomy for Sustainable Development

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**Abstract**

Security and stability constitute fundamental preconditions for long-term sustainable development. Russia's aggression against Ukraine and the return of high-intensity interstate warfare to Europe have profoundly transformed the European security environment and challenged long-standing assumptions underpinning European integration and economic development. This article analyses the ongoing transformation of European security with particular attention to industrial resilience, the evolution of the defence technological and industrial base, and the expanding institutional role of the European Union in strengthening strategic autonomy. Using a qualitative analytical approach based on the examination of strategic documents, policy initiatives, and academic literature, the study identifies structural weaknesses in Europe's defence-industrial system and evaluates recent institutional and financial responses aimed at enhancing resilience and sustainability. The findings demonstrate that security, industrial capacity, and institutional adaptation are increasingly interconnected, and that strengthening resilience and reducing strategic dependencies are essential conditions for Europe's long-term sustainable development in an unstable geopolitical environment.

**Keywords:** European security; defence industry; strategic autonomy; industrial resilience; European Union; sustainable development

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## 1. Introduction

Security and stability constitute fundamental prerequisites for the sustainable development of modern democratic societies. The capacity of states to ensure the defence and protection of their territory, population, critical infrastructure, and economic systems establishes a necessary framework for long-term economic growth, technological innovation, and social cohesion. In this sense, security should not be understood as an antithesis to sustainability, but rather as one of its essential preconditions. Consequently, contemporary geopolitical turbulence fundamentally reshapes not only defence policy but also the broader trajectories of sustainable development in Europe.

Russia's full-scale invasion of Ukraine in February 2022 represents a critical turning point in the European security environment and a profound challenge to the post-Cold War model of European integration based on stability, predictability, and economic interdependence [1,2]. The return of high-intensity interstate warfare to the European continent has

exposed the limitations of a security architecture that relied heavily on external guarantees and assumed the gradual convergence of major powers within a rules-based international order. As argued in recent analyses of European security transformation, this shift has forced the European Union (EU) and its member states to reassess long-standing assumptions about defence, industrial policy, and economic resilience [3–6].

In response to this evolving security environment, the relationship between security, industrial capacity, and institutional adaptation has become increasingly central to both policy and academic debates. The war in Ukraine has revealed significant structural weaknesses in Europe's defence-industrial system, including fragmentation of production, insufficient scalability, and dependencies on external supply chains [7,8]. At the same time, it has accelerated the development of new EU-level instruments aimed at strengthening defence capabilities, industrial resilience, and coordinated procurement. Strategic documents such as the EU Strategic Compass (2022) [9] and political initiatives such as the Versailles Declaration (2022) [10] illustrate a growing ambition to enhance Europe's capacity to act as a security provider and to reduce critical dependencies.

Within this context, the concept of strategic autonomy has gained renewed prominence as a guiding principle of European security and defence policy. Rather than implying isolation or autarky, strategic autonomy is increasingly understood as the capacity of the EU to act independently when necessary while managing complex interdependencies within the global system [11]. As Tocci (2021) [12] argues, strategic autonomy should be interpreted as the ability to shape and govern interdependence rather than to eliminate it. This conceptualisation highlights the close interconnection between defence capabilities, industrial resilience, and broader economic and technological sovereignty.

Despite a growing body of literature addressing European security, defence industrial policy, and strategic autonomy, existing research often treats these dimensions separately. Studies frequently focus either on military capabilities, institutional developments, or economic aspects, without sufficiently integrating them into a comprehensive analytical framework linking security transformation to long-term sustainable development [13,14]. This creates a gap in understanding how defence-industrial resilience, EU institutional adaptation, and strategic autonomy interact as mutually reinforcing components of Europe's broader development model [15–18].

In conceptual terms, the article proceeds from the assumption that security transformation, industrial resilience, and strategic autonomy are not separate phenomena but interdependent dimensions of a broader European adaptation process. The deterioration of the security environment generates new material demands on defence production, these demands expose structural weaknesses in the European Defence Technological and Industrial Base, and these weaknesses in turn stimulate the development of new EU-level institutional and financial instruments. Sustainable development enters this framework not as a competing concept, but as a broader condition of long-term societal resilience, within which security, industrial capacity, and political coordination become mutually reinforcing elements.

The aim of this article is to analyse the transformation of the European security environment, the structural evolution of the European defence industry, and the expanding institutional role of the European Union in strengthening strategic autonomy and long-term societal resilience. More specifically, the article seeks to answer the following research questions: (1) What are the key structural weaknesses of the European defence-industrial system in the context of the current security environment? (2) How has the European Union adapted its institutional and financial instruments in response to these challenges? (3) To what extent do these developments contribute to strengthening Europe's strategic autonomy and its capacity for sustainable development?

To address these questions, the article adopts an analytical framework that links three core dimensions: (i) changes in the European security environment, (ii) the structure and performance of the defence-industrial base, and (iii) the role of EU-level institutional and financial instruments. These dimensions are evaluated in terms of their contribution to industrial resilience, reduction in strategic dependencies, and the EU's capacity to act as a coherent security actor. This approach allows for a more systematic assessment of the relationship between security policy, industrial development, and long-term sustainability.

Methodologically, the study is based on a qualitative analysis of strategic documents, policy initiatives, and academic literature. The analytical–synthetic approach enables the integration of security, industrial, and developmental perspectives, while a comparative and institutional lens facilitates the examination of interactions between national and supranational levels of governance. Although the dynamic nature of the current geopolitical environment represents a limitation, it simultaneously underscores the importance and timeliness of the research.

## 2. Materials and Methods

This study employs a qualitative research design aimed at analysing the transformation of the European security environment, the evolution of the European defence industry, and the expanding institutional role of the European Union (EU) in defence-industrial coordination and financing. Given the complexity of the research problem and the interdependence between security, economic, and governance dimensions, a qualitative analytical approach is considered the most appropriate for capturing structural trends and institutional dynamics.

### *2.1. Data Sources*

The analysis is based on a systematic review of both primary and secondary sources. Primary sources include official EU strategic and policy documents, legislative acts, institutional communications, and defence-related initiatives adopted particularly after 2022. These include, among others, key strategic frameworks such as the Strategic Compass (2022) [9], political declarations such as the Versailles Declaration (2022) [10], and regulatory instruments such as the Critical Raw Materials Act (2024) [19], which collectively shape the EU's approach to security, industrial resilience, and strategic autonomy.

Secondary sources consist of peer-reviewed academic literature, policy reports, and expert analyses addressing European security, defence economics, industrial policy, and strategic autonomy. This combination of sources allows for the triangulation of perspectives, ensuring both empirical grounding and theoretical contextualisation of the findings.

### *2.2. Analytical Approach*

The study applies several complementary qualitative analytical methods.

First, document analysis is used to examine the objectives, instruments, and implementation logic of key EU initiatives in the field of defence and defence industry. This method enables the identification of major policy trends, including the shift from research-oriented support toward production and procurement, the increasing role of EU-level financial instruments, and the growing emphasis on supply chain security and industrial resilience.

Second, an analytical–synthetic approach is employed to integrate findings from different domains—security policy, defence industry, and sustainable development—into a coherent interpretative framework. This allows for the identification of structural relationships between changes in the security environment and the evolution of industrial and institutional responses.

Third, a comparative perspective is used to assess differences between national and supranational levels of governance and to identify key sources of fragmentation, coordination challenges, and divergent strategic priorities among EU member states. Although the analysis does not focus on detailed country case studies, it highlights general patterns of divergence and convergence within the European defence-industrial landscape.

### 2.3. Analytical Framework and Evaluation Criteria

To enhance analytical clarity, the study applies a structured framework linking three core dimensions: (i) the transformation of the European security environment, (ii) the structural characteristics of the European defence-industrial base, and (iii) the evolution of EU institutional and financial instruments.

These dimensions are evaluated using three main analytical criteria:

- Industrial resilience, understood as the capacity of the defence industry to scale production, ensure continuity of supply, and respond to high-intensity demand;
- Reduction in strategic dependencies, particularly in relation to critical raw materials, technologies, and external suppliers;
- Institutional effectiveness, referring to the ability of EU instruments to improve coordination, reduce fragmentation, and support joint procurement and investment.

This framework enables a shift from purely descriptive analysis toward a more systematic evaluation of how current policy responses address identified structural weaknesses.

More specifically, the evaluation of EU-level responses is guided by three analytical questions: first, whether a given instrument increases the capacity of the European defence industry to expand output under crisis conditions; second, whether it reduces fragmentation by promoting coordination, standardisation, or joint procurement; and third, whether it contributes to lowering critical strategic dependencies on external suppliers, technologies, or raw materials. This evaluative structure makes it possible to move beyond simple policy description and to assess the substantive contribution and limitations of individual instruments.

### 2.4. Scope and Limitations

The study focuses primarily on institutional, structural, and policy dimensions rather than on quantitative modelling or firm-level performance analysis. While this approach allows for a comprehensive understanding of systemic transformations, it does not provide detailed statistical measurement of defence production or expenditure.

Nevertheless, selected quantitative indicators and illustrative data are used where appropriate to support key arguments and enhance empirical grounding. The rapidly evolving geopolitical context represents an inherent limitation, as ongoing developments may influence both policy frameworks and industrial capacities. At the same time, this dynamism underscores the relevance of the research and the need for continuous scholarly assessment.

## 3. Results

### 3.1. Transformation of Europe's Security Environment

The post-war European security order, which evolved after 1945 and was further consolidated following the end of the Cold War, was based on several fundamental assumptions. These included the military predominance of the United States within the transatlantic alliance, the gradual integration of the Russian Federation into international political and economic structures, and the expectation that economic interdependence would act as a stabilising factor preventing large-scale interstate conflict [2,20,21]. Within this framework, European states were able to prioritise economic integration, reduce de-

fence expenditures, and optimise military structures for low-intensity operations rather than high-intensity warfare [22–24].

However, the analysis of recent developments indicates that this security model has undergone a gradual but profound erosion. Events such as the Russian intervention in Georgia in 2008 [25] and the annexation of Crimea in 2014 [26] signalled a shift toward a more confrontational security environment. Despite these warning signs, the response of many European states remained limited, reflecting a persistent gap between strategic assessments and practical preparedness.

The full-scale invasion of Ukraine in February 2022 represents a decisive rupture in the European security environment [2,27]. Based on the conducted document and policy analysis, three key structural trends can be identified. These trends should be understood as analytical findings derived from the examined strategic documents, policy initiatives, and expert assessments rather than as a mere chronological description of recent events. Taken together, they indicate a shift from a security model centred on efficiency and external guarantees toward one based on resilience, stockpiling, industrial preparedness, and sustained capacity for long-term competition.

First, there has been a shift from a stability-based security model to a conflict-oriented environment characterised by the return of high-intensity interstate warfare. The war in Ukraine demonstrates that large-scale conventional conflict, including artillery warfare, missile strikes, and the systematic targeting of infrastructure, has re-emerged as a central feature of European security. This fundamentally challenges prior assumptions that such scenarios were unlikely in the European context.

Second, the analysis reveals a growing gap between strategic ambition and material capabilities. For decades, European defence planning was shaped by assumptions of limited conflict and external security guarantees, leading to reduced stockpiles, limited production capacities, and insufficient preparedness for sustained military operations. The war has exposed these limitations, particularly in terms of ammunition shortages, logistical constraints, and the inability to rapidly scale production [28,29].

Third, there is a re-emergence of industrial capacity as a core determinant of security. The character of the conflict in Ukraine as a war of attrition places unprecedented demands on production systems, supply chains, and the long-term sustainability of military support. This has highlighted the strategic importance of defence-industrial resilience, including the availability of critical inputs, the scalability of production, and the robustness of supply networks [30,31].

These trends collectively indicate a transition from a security model based on efficiency, predictability, and external guarantees toward one that prioritises resilience, redundancy, and sustained capacity. In this context, security can no longer be understood solely in military terms but must be analysed in close connection with industrial capabilities and economic structures.

From an analytical perspective, these developments have direct implications for the European Union's policy response. The increasing importance of industrial capacity and supply chain security creates pressure for stronger coordination at the EU level, while the identified gap between strategic ambition and material capabilities underscores the need for institutional innovation and financial instruments capable of supporting defence-industrial expansion.

Overall, the transformation of the European security environment constitutes the primary driving force behind the subsequent evolution of the European defence industry and the growing role of the European Union in this domain. It is within this context that the structural weaknesses of the European defence-industrial system, analysed in the following section, acquire their full strategic significance.

### 3.2. European Defence Industry: Structural Weaknesses

The European defence industry represents a critical component of Europe's security architecture, yet its current structure reflects long-term systemic constraints that limit its effectiveness in the context of high-intensity conflict. Based on the conducted analysis, four key structural weaknesses can be identified, each with direct implications for industrial resilience, strategic dependencies, and the EU's capacity to respond to contemporary security challenges.

First, the European defence-industrial landscape is characterised by a high degree of market fragmentation. Historically, defence production has developed along national lines, closely linked to sovereignty and political control over military capabilities. As a result, the European market consists of multiple parallel systems with limited standardisation and interoperability [32]. This fragmentation leads to duplication of programmes, reduced economies of scale, and increased costs across the entire lifecycle of defence systems [33]. In analytical terms, fragmentation represents a structural constraint that weakens both industrial efficiency and collective operational capability [34,35]. Beyond its economic costs, fragmentation also has strategic consequences. It limits interoperability, slows coordinated procurement, and reduces the ability of member states to generate common responses under crisis conditions. The problem is therefore not only that Europe produces in parallel national segments, but that these segmented structures inhibit the emergence of a defence-industrial base capable of supporting collective strategic action at scale.

Second, the analysis highlights limited production scalability and insufficient industrial capacity as a major constraint. The European Defence Technological and Industrial Base (EDTIB), while technologically advanced, has been optimised for low-volume production and long development cycles rather than for sustained high-output manufacturing [36]. The war in Ukraine has exposed the consequences of this model, particularly in the area of ammunition production and the replenishment of depleted stockpiles [30,31]. The inability to rapidly scale production reflects not only capacity limitations but also structural factors such as uncertain demand, fragmented procurement, and long-term underinvestment. From the perspective of industrial resilience, this represents a critical vulnerability. Even if the present study is not based on full-scale quantitative modelling, available policy and expert evidence consistently indicates that post-2022 demand for ammunition, replacement stocks, and production inputs has exceeded the pre-war output logic of much of the European defence industry. This supports the conclusion that the central problem is not merely insufficient investment, but the structural mismatch between peacetime industrial organisation and wartime requirements.

Third, the European defence industry is affected by significant supply chain dependencies and vulnerabilities, particularly in relation to critical raw materials, components, and advanced technologies. Modern defence production relies on complex, globally integrated supply chains, making it sensitive to geopolitical disruptions and resource competition. In this context, the EU's dependence on external suppliers for key inputs—such as rare earth elements and specialised components—emerges as a strategic risk. Policy responses such as the Critical Raw Materials Act (2024) [19] reflect an increasing recognition of this challenge and the need to secure more reliable and diversified supply chains. Reducing such dependencies is essential for ensuring continuity of production under crisis conditions.

Fourth, the analysis identifies a persistent tension between national sovereignty and European-level coordination as a key institutional constraint. Member states continue to prioritise national industrial interests, support domestic defence companies, and maintain control over procurement decisions. While this approach reflects legitimate security considerations, it also limits the effectiveness of collective initiatives and slows the development of integrated European capabilities [37,38]. Divergent strategic cultures, budgetary priorities,

and industrial interests further complicate coordination efforts, resulting in suboptimal outcomes from the perspective of collective efficiency and long-term resilience.

These four structural weaknesses—fragmentation, limited scalability, supply chain vulnerability, and political-institutional divergence—are mutually reinforcing. Together, they create a defence-industrial system that struggles to combine technological sophistication with the capacity for sustained large-scale production. This mismatch becomes particularly evident in the context of a war of attrition, where the ability to maintain long-term output is as important as technological superiority [39].

From an analytical perspective, these findings highlight that the challenges facing the European defence industry cannot be addressed through isolated policy measures. Instead, they require a systemic approach that combines industrial policy, coordinated procurement, and institutional adaptation at the European level [40]. The increasing involvement of the European Union in defence-industrial coordination and financing can thus be interpreted as a direct response to these structural limitations.

The following section examines how the European Union has sought to address these challenges through the development of new institutional and financial instruments, and to what extent these measures contribute to strengthening industrial resilience and strategic autonomy.

### *3.3. EU Institutional and Financial Responses*

The increasing involvement of the European Union in the field of defence and the defence industry represents a significant institutional shift, particularly in the context of the post-2022 security environment. While defence policy remains formally under the authority of member states, the EU has progressively expanded its role through financial instruments, regulatory initiatives, and coordination mechanisms. This development can be interpreted as a direct response to the structural weaknesses identified in the previous section [41].

Based on the conducted analysis, EU-level responses can be understood as an attempt to address three key challenges: (i) insufficient industrial capacity, (ii) market fragmentation, and (iii) strategic dependencies. However, the effectiveness of these instruments varies significantly depending on their design, scope, and level of member state participation [42]. From an evaluative perspective, the analysed instruments reveal a clear internal tension within the EU response. On the one hand, they demonstrate an unprecedented willingness to intervene in an area historically dominated by national sovereignty. On the other hand, many of them remain limited either by temporary design, insufficient scale, or the voluntary nature of member-state participation. As a result, the current policy mix represents an important institutional breakthrough, but not yet a fully coherent defence-industrial strategy capable of overcoming the structural weaknesses identified in the previous section.

A central element of this transformation is the gradual shift from research-oriented support toward instruments targeting production and procurement. The European Defence Fund (EDF) represents a foundational step in this process, focusing primarily on research and development and aiming to reduce fragmentation in defence innovation. While the EDF contributes to technological advancement and cross-border cooperation, its impact on immediate production capacity remains limited, highlighting a gap between long-term innovation and short-term operational needs.

In response to the urgent demand for increased production, the Act in Support of Ammunition Production (ASAP) introduces a more direct intervention aimed at scaling industrial output. From the perspective of industrial resilience, ASAP represents a significant step forward, as it addresses immediate bottlenecks in ammunition production and

supports infrastructure expansion. However, its temporary nature and limited financial scope raise questions about its long-term sustainability.

Similarly, the European Defence Industry Reinforcement through Common Procurement Act (EDIRPA) seeks to reduce fragmentation by incentivising joint procurement among member states. In analytical terms, this instrument addresses one of the core structural weaknesses of the European defence market—its fragmentation. Nevertheless, its effectiveness is constrained by the voluntary nature of participation and the persistence of national procurement preferences.

A comparison of these instruments also reveals an important policy asymmetry. Whereas the EDF is oriented primarily toward long-term innovation and cross-border research cooperation, ASAP and EDIRPA respond more directly to immediate shortages in production and procurement. EDIP aspires to bridge these levels, yet its strategic significance will depend on whether member states accept a deeper degree of common prioritisation. This suggests that the main challenge is not the absence of instruments as such, but the absence of a sufficiently integrated framework connecting innovation, industrial scaling, procurement coordination, and long-term political commitment.

A more ambitious framework is represented by the emerging European Defence Industry Programme (EDIP), which aims to provide a more comprehensive and long-term approach to defence-industrial policy. EDIP has the potential to integrate research, production, and procurement into a coherent strategy, thereby strengthening both industrial resilience and institutional coordination. However, its ultimate impact will depend on political agreement among member states and the availability of sufficient financial resources [43].

In parallel, the European Peace Facility (EPF) has introduced a novel mechanism for financing military assistance to partner countries, including Ukraine. While not directly aimed at industrial development, the EPF plays a crucial role in shaping demand and supporting the operational dimension of European security policy.

From an analytical perspective, these instruments collectively reflect a shift toward a more active EU role in defence-industrial coordination. However, their overall effectiveness remains uneven. While some instruments address specific bottlenecks (e.g., ASAP), others focus on long-term structural issues (e.g., EDF, EDIP), and their interaction is not yet fully integrated into a coherent system.

As Table 1 indicates, the analysed instruments differ not only in policy focus but also in their temporal logic and institutional ambition. Some address immediate bottlenecks, while others seek to reshape the long-term structure of European defence-industrial cooperation. This differentiation is analytically important because it shows that the EU response is evolving in layers rather than through a single integrated reform, which helps explain both the dynamism of current developments and the persistence of systemic incoherence.

**Table 1.** Overview of Key EU Defence-Industrial Instruments.

| Instrument | Primary Objective | Policy Focus | Contribution | Key Limitation |
|---|---|---|---|---|
| EDF | Research & development | Innovation | Supports technological cooperation | Limited impact on production |
| ASAP | Increase ammunition production | Industrial capacity | Addresses short-term supply bottlenecks | Temporary instrument |
| EDIRPA | Joint procurement | Market integration | Reduces fragmentation | Voluntary participation |

**Table 1.** *Cont.*

| Instrument | Primary Objective | Policy Focus | Contribution | Key Limitation |
|---|---|---|---|---|
| EDIP | Long-term industrial strategy | System integration | Potentially comprehensive framework | Politically dependent |
| EPF | Military assistance | Operational support | Strengthens demand and external engagement | Indirect industrial impact |

Source: Authors' own elaboration based on European Commission documents (EDF, ASAP, EDIRPA, EDIP) [44–46], the Strategic Compass (2022) [9], the Versailles Declaration (2022) [10], and relevant academic and policy literature.

These findings suggest that while the EU has significantly expanded its role in defence-industrial policy, its current approach remains fragmented and partially reactive. The coexistence of multiple instruments with different objectives, time horizons, and governance structures limits the overall coherence of the system [47].

At the same time, recent strategic and policy developments, including the Strategic Compass (2022) [9] and the Versailles Declaration (2022) [10], indicate a growing political commitment to strengthening European defence capabilities and reducing strategic dependencies. These initiatives reflect an emerging consensus that security, industrial policy, and economic resilience must be addressed in an integrated manner.

Overall, the EU's institutional and financial responses represent an important but still incomplete step toward strengthening industrial resilience and strategic autonomy, as their long-term effect remains constrained by fragmentation, uneven implementation, and unresolved political tensions among member states. However, their long-term effectiveness will depend on the ability to ensure coordination between instruments, secure stable funding, and align national and European priorities. These challenges are closely linked to the broader debate on strategic autonomy, which is examined in the following section.

## 4. Discussion

The analysis presented in this study highlights a fundamental transformation of the European security environment and its implications for the defence industry and EU-level institutional development [48–50]. The findings indicate that the current shift is not merely a reaction to a single geopolitical crisis but reflects a broader structural transition toward a more conflict-prone and uncertain international system.

Three key conclusions emerge from the analysis. First, the European security environment has moved from a stability-oriented model toward one characterised by high-intensity conflict and long-term strategic competition. Second, the European defence industry exhibits structural weaknesses—particularly fragmentation, limited production scalability, and supply chain dependencies—that constrain its ability to respond effectively to these new demands. Third, the European Union has significantly expanded its role through financial and institutional instruments; however, these responses remain only partially effective due to coordination challenges and the persistence of national priorities [51].

From a theoretical perspective, these findings contribute to the ongoing debate on strategic autonomy. In this context, the concept of security itself requires a broader interpretation, as it encompasses not only military dimensions but also institutional, legal, and socio-economic aspects that shape the overall resilience of modern societies [52]. This broader understanding of security provides an important conceptual foundation for interpreting strategic autonomy. In line with Tocci (2021) [12], strategic autonomy should not be understood as a form of isolation, but rather as the capacity to manage interdependence

in a complex global environment, a perspective also reflected in recent analyses linking security, power, and European strategic autonomy in a transforming global order [53]. The results of this study suggest that such capacity is contingent not only on political will but also on the existence of a resilient industrial base and effective institutional mechanisms. Without sufficient production capabilities and secure supply chains, strategic autonomy remains largely declaratory [40,54].

At the same time, the relationship between the European Union and the transatlantic alliance requires careful consideration. As Biscop (2022) [4] argues, the strengthening of the European pillar within NATO should be understood as a complement to, rather than a substitute for, transatlantic cooperation. The findings of this study support this interpretation, indicating that increased European defence capacity can enhance the overall resilience of the alliance. However, this complementarity depends on coordination, transparency, and the avoidance of unnecessary duplication [49].

At the same time, this complementarity should not obscure the structural tension between the aspiration for greater European strategic autonomy and the continued reality of transatlantic dependence. The war in Ukraine has highlighted both the necessity of stronger European capabilities and the continuing importance of US enablers in intelligence, logistics, air defence, and long-range strike capacity. In this sense, the pursuit of strategic autonomy is best understood not as disengagement from NATO, but as an attempt to reduce the imbalance within the alliance by strengthening the European capacity to act under conditions of uncertainty [55,56].

The analysis also reveals several important trade-offs that complicate the pursuit of strategic autonomy. Increased defence spending may come into tension with other policy priorities, including social welfare and the green transition. Similarly, efforts to reduce external dependencies may conflict with the economic benefits of globalised supply chains. These trade-offs highlight that the strengthening of European security and industrial resilience is not a purely technical process but a fundamentally political one, requiring difficult strategic choices [13,57].

This point is particularly important in relation to sustainable development. If sustainable development is understood in a broad sense as the long-term capacity of societies to preserve security, economic stability, institutional effectiveness, and social cohesion, then defence preparedness can be regarded as one of its enabling conditions. At the same time, however, increased defence spending may compete with fiscal resources allocated to climate policy, social investment, or technological transition. The relationship between security and sustainability is therefore not automatically harmonious; it is shaped by political prioritisation, budgetary constraints, and the extent to which defence-industrial policy can generate dual-use innovation and broader economic spillovers.

Furthermore, the current EU approach to defence-industrial policy remains characterised by a degree of fragmentation. While individual instruments address specific challenges—such as production capacity or joint procurement—the absence of a fully integrated framework limits their overall effectiveness. This raises questions about the long-term sustainability of the current model and the extent to which temporary crisis-driven measures can be transformed into stable institutional arrangements [58,59].

From an academic perspective, this study contributes to the literature by integrating three dimensions that are often analysed separately: security transformation, defence-industrial development, and EU institutional adaptation. By linking these elements within a single analytical framework, the article provides a more comprehensive understanding of how strategic autonomy is shaped in practice. It also highlights the importance of industrial capacity as a central, yet often underestimated, component of security and sustainable development.

The study also contributes to the literature in two specific ways. First, it treats industrial capacity not as a secondary technical variable but as a constitutive dimension of contemporary security policy. Second, it connects the analysis of defence-industrial change with the debate on strategic autonomy and long-term resilience, thereby offering a more integrated framework for interpreting current European developments. In this respect, the article responds to a gap in scholarship that has often examined security policy, industrial policy, and sustainability-related resilience in partial isolation.

Overall, the findings suggest that Europe is entering a phase in which security, industrial policy, and economic resilience are increasingly interconnected. The success of this transformation will depend on the ability of the European Union and its member states to align political ambitions with material capabilities, overcome structural fragmentation, and manage the inherent trade-offs associated with a more demanding security environment.

## 5. Conclusions

This article has examined the transformation of the European security environment, the structural weaknesses of the European defence industry, and the evolving institutional role of the European Union in response to these developments. The analysis demonstrates that the return of high-intensity interstate conflict to Europe has fundamentally altered the conditions under which security, economic stability, and sustainable development are pursued.

The findings indicate that Europe is undergoing a systemic shift in which security can no longer be treated as a separate policy domain but must be understood as an integral component of long-term economic and societal resilience. Structural weaknesses of the European defence-industrial system—particularly fragmentation, limited production scalability, and external dependencies—represent critical constraints on the EU's ability to respond effectively to current and future security challenges.

At the same time, the European Union has significantly expanded its role through a range of financial and institutional instruments aimed at strengthening defence capabilities and industrial resilience. However, the effectiveness of these measures remains uneven, as they continue to be shaped by coordination challenges, resource constraints, and the persistence of national priorities.

From a policy perspective, the results highlight several key priorities. Strengthening production scalability, securing access to critical raw materials, and improving coordination in procurement and investment are essential steps toward enhancing Europe's defence-industrial capacity. At the same time, ensuring stable and predictable financing mechanisms will be crucial for transforming short-term crisis responses into long-term structural solutions.

Looking forward, the success of this transformation will depend on several interrelated factors. Among the most critical are the political willingness of member states to deepen cooperation, the ability to align national and European interests, and the capacity to balance defence priorities with other strategic objectives, including economic stability and the green transition. The next phase of European defence policy will therefore be defined not only by external threats but also by internal choices regarding resource allocation and institutional design.

In the next two to three years, several variables are likely to be decisive for the success or failure of this transformation. These include the willingness of member states to accept deeper procurement coordination, the capacity of European industry to expand production without major supply bottlenecks, the availability of stable long-term financing, and the future level of American engagement in European security. The most critical political decisions will concern whether temporary crisis instruments are converted into permanent

institutional mechanisms and whether national industrial preferences can be reconciled with the requirements of collective resilience.

From a research perspective, the study points to the need for further empirical and interdisciplinary work. In particular, future research could operationalise industrial resilience through indicators such as surge production capacity, stockpile replenishment speed, supply-chain diversification, and dependency ratios for critical inputs, while strategic autonomy could be assessed through the degree of external reliance in key capability areas, procurement structures, and crisis-response readiness. Future research should focus on the operationalisation of key concepts such as industrial resilience and strategic autonomy, the quantitative assessment of defence-industrial capacity, and the long-term interaction between security policy and sustainable development. Such research would contribute to a more precise understanding of how Europe can adapt to an increasingly complex and uncertain security environment.

Overall, the current transformation represents both a challenge and an opportunity. While it exposes structural weaknesses in Europe's security and industrial systems, it also creates momentum for deeper integration and institutional innovation. Whether the European Union can translate this momentum into durable and effective structures will ultimately determine its capacity to emerge as a resilient and credible security actor in the evolving international order.

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## Abbreviations

The following abbreviations are used in this manuscript:

| | |
|---|---|
| EU | European Union |
| NATO | North Atlantic Treaty Organisation |
| EDTIB | European Defence Technological and Industrial Base |
| EPF | European Peace Facility |
| EDF | European Defence Fund |
| EDIP | European Defence Industry Programme |
| EDIPRA | European Defence Industry Reinforcement through Common Procurement Act |
| ASAP | Act in Support of Ammunition Production |

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