CHAPTER 7

European Strategic Autonomy in the Field of Defence: Reconfiguration of Military Supply Chains Following Russia's Full-Scale Invasion of Ukraine in 2022

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Introduction

Following Russia's military interventions in Georgia (2008) and Crimea (2014), its imperial ambitions became increasingly apparent. These concerns intensified dramatically on 24 February 2022 with Russia's full-scale invasion of Ukraine. The outbreak of war triggered an unprecedented surge in demand for defence equipment. European donor nations were compelled to rapidly adapt logistics, supply chains, and ammunition production while simultaneously reinforcing their own military capabilities. This surge quickly exceeded available industrial capacity, with shell[1]

[1] In some texts the artillery munition is referred to as 'shells' and in other texts as 'grenades'. In official documents from, for example, the EU shells is the official designation. *Shells* is therefore the chosen designation in this text.

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production emerging as one of the most critically constrained segments of the defence sector (Boot, 2024).

The urgent need to expand production reshaped the European and global defence landscape, as states sought to strengthen industrial capacity both to support Ukraine and to bolster their own security. The war also exposed the European Union's limited military preparedness in relation to the Russian threat. As the conflict devolved into First World War-style trench warfare, Ukraine's need for shells became acute. By late 2022, EU Member States' stockpiles were severely depleted. Annual EU production of 155 mm shells stood at approximately 230,000—roughly one-third more than the US output—but was far from sufficient. In response, Member States aimed to increase production to 1.3 million shells by 2024 and 2 million by 2025. Yet coordination challenges and limited industrial capacity hindered timely delivery. In contrast, Russia was estimated to produce 5 million artillery shells and around 700 cruise missiles by 2024, far exceeding EU capabilities (European Commission, 2024a, 2024b; Fabbrini, 2024; Hellberg & Lundmark, 2025; Boot, 2024; McNeil, 2024a, 2024b).

This chapter's aim is to analyse how Russia's full-scale invasion of Ukraine in 2022 was a shock to the European organisation of military production as well as the EU aggregate war readiness and how initiatives within Europe have initiated dramatic coordination effects in defence in a short time. As is analysed and explained in this chapter, the Ukrainian war initiated far-reaching national, supranational transformations among institutions and the defence industry.

The chapter examines how Russia's 2022 invasion shocked Europe's military production systems, exposed weaknesses in EU defence readiness, and catalysed initiatives to strengthen European strategic autonomy. It analyses the evolving relationships among states, defence firms, and supranational authorities within European shell supply chains, employing the theoretical frameworks of strategic autonomy and dynamic capabilities.

It was apparent that the EU and its Member States were not sufficiently prepared nor organised to react to the security and military challenges rapidly introduced by the Russian full-scale invasion of Ukraine on 24 February 2022. The invasion showed that Russia truly constitutes an apparent threat to European security and the liberal, value-based world order. The drastically deteriorated threat situation demanded pervasive policy reforms to transform European strategic autonomy, war readiness, and security of supply of arms.

The research questions guiding this chapter are twofold. First: What policy initiatives and actions have the EU and its member states introduced and implemented post-2022 in order to strengthen strategic autonomy and the functioning of the EU defence industry, and how successful have they been? Second: What are the demands of an EU post-war defence market and security regime in order to be better prepared for a potential war?

The chapter begins by outlining Europe's defence and security challenges considering Russia's strategic and military advances in Ukraine. It then presents the theoretical framework, aim, and overall structure of the study. Subsequently, the analysis examines how the European Defence Technological and Industrial Base (EDTIB) has come to be regarded as a strategic asset for the European Union. The following section explores the shock induced by Russia's full-scale invasion of Ukraine in 2022 and the resulting transformations in both national and EU defence policy. Next, the chapter assesses supranational EU initiatives developed during Phase 1 to integrate defence-industrial and procurement strategies, expand production, support Ukraine, and reinforce Europe's strategic autonomy. This is followed by an analysis of the evolving relationships between the EU, Member States, and defence industries. The final sections summarise the main findings, outline the desired characteristics of Europe's post-war defence-industrial ecosystem, and provide policy recommendations for strengthening strategic autonomy, preparing for future crises, and increasing industrial output in order to meet the surge in arms' demand. The chapter concludes with reflections on the current turbulence surrounding EU strategic autonomy, its key contributions, and suggestions for future research.

Theory

European Strategic Autonomy in Defence

European leaders have long debated defence self-sufficiency, now commonly termed *strategic autonomy*. Although definitions vary, the concept broadly refers to the EU's capacity to meet its own military needs and sustain an independent defence industry. Strategic autonomy is best understood as a continuum of dependency rather than an absolute condition.

The concept evolved through successive strategic developments. Following the Balkan wars, 9/11, and the Iraq War, Europe adopted its first security strategy in 2003 (Bartels et al., 2017). The European Parliament's, 2013 strategy emphasised the creation of a competitive arms industry to underpin autonomy and ensure security (European Parliament, 2013). Achieving this goal requires reducing reliance on external actors (Zandee et al., 2020; Helwig, 2021; Håkansson, 2021). Responding to US calls for greater European responsibility in defence, the EU launched collaborative initiatives such as PESCO and the EDF (Fiott, 2018; Retter et al., 2021). By 2016, strategic autonomy was defined as the ability to act independently while retaining the discretion to cooperate with partners (Borrell, 2024). As Russia's aggression grew, the resilience of the European Defence Technological and Industrial Base (EDTIB) became a strategic priority. Member States' responses to EU initiatives, however, revealed diverging national perspectives (Beaucillon, 2023; Kleczka et al., 2024; Michaels & Sus, 2024). The 2022 invasion of Ukraine elevated European security integration to new political prominence (Csernatoni, 2022; Håkansson, 2024; Varma, 2024).

The concept gained wider practical relevance as a means for states to manage an increasingly volatile and ambiguous security environment (Vu et al., 2024). With the US prioritising China in its strategic outlook, Washington has encouraged Europe both to assume greater responsibility and to align with its stance towards Beijing (Varma, 2024; Desmaele, 2025). Conversely, China welcomes increased European autonomy, viewing it as a counterbalance to US–EU alignment (Calcara et al., 2025; Su & Liu, 2025). The Ukraine war ultimately exposed the EU's unpreparedness for large-scale conflict and reinforced the political urgency of strengthening both industrial and strategic autonomy—understood as ensuring one's own security without dependence on external actors.

Dynamic Capabilities

Dynamic capabilities theory posits that organisations must adapt to unforeseen change while sustaining competitive advantage (Teece, 2010; Barney, 1991). Firms must determine which resources to retain, how to coordinate them, and which capabilities to source externally—a view rooted in the resource-based theory of the firm. The framework is particularly pertinent to defence supply chains, which face frequent disruption

and high security sensitivity. Even basic munitions, such as shells, require complex production processes and strict customisation.

Russia's 2022 invasion revealed the EU's limited flexibility to respond to sudden surges in ammunition demand. Subsequent initiatives by national governments, the EU, NATO, and coalition partners have sought to enhance dynamic capabilities, resilience, and strategic autonomy within European defence industries (Hellberg & Lundmark, 2025).

Defence Supply Chains

Effective procurement and supply management depend on understanding the dynamics between suppliers, buyers, and end-users. Private defence contractors operate under profit-driven incentives (Fletcher-Chen et al., 2022), while public-sector procurement has prioritised cost-efficiency, often at the expense of long-term relationships (Holma et al., 2022). Relational and network theory highlights trust, interdependence, and collaboration as essential for resilient partnerships (Axelrod, 1984; Johanson & Mattsson, 1987; Axelsson & Easton, 1992; Carr & Pearson, 1999; Håkansson & Gadde, 2018; Gadde, 2021).

Privatisation and globalisation have weakened national loyalties (Hirsch Ballin et al., 2020; Pałka, 2020) and diversified procurement, fragmenting supply chains and heightening geopolitical risks (Stevenson & Spring, 2007; Kolk & van Tulder, 2010; Bode & Wagner, 2015; Mackay et al., 2020). Despite cost advantages, the resulting vulnerabilities underscore the importance of maintaining domestic industrial capacity (DeVore, 2021). Strategic autonomy and war readiness thus depend on predictable supplier structures and scalable production capacity (Hartley, 2023). Robust defence supply chains are essential enablers of both autonomy and operational readiness.

Phases in the Defence Market

The evolution of the European defence market can be divided into three phases (Hellberg & Lundmark, 2025):

- Phase 0: The *peace-optimised* market before Russia's 2022 invasion, characterised by stable supply and demand.

- Phase 1: The post-2022 transformation, marked by urgent institutional and industrial responses within the EU and Member States.
- Phase 2: A projected post-war phase, envisioning how market and industrial structures may evolve once the conflict concludes.

This tripartite framework enables analysis of the institutional and market transformations triggered by the war. The chapter combines the perspectives of strategic autonomy, dynamic capabilities, and defence supply chain theory across these phases. No prior academic work has applied the dynamic capabilities lens to analyse the development of European strategic autonomy after 2022 in conjunction with defence production systems.

Accordingly, this chapter examines how Russia's 2022 invasion shocked Europe's military production structures and exposed deficiencies in EU military readiness, while also catalysing rapid coordination and integration towards enhanced strategic autonomy.

Europe's Technological and Industrial Defence Base as a Resource for Strategic Autonomy

The conditions shaping the European defence industry have evolved significantly over time. The pre-war configuration—referred to here as *Phase 0*—lacked the robustness and readiness required to meet Europe's dual challenge of supporting Ukraine's defence against Russia while reinforcing its own military capacity (Hellberg & Lundmark, 2025). Historically, EU efforts to liberalise and support the defence market relied heavily on *soft law* instruments, using non-binding guidelines to influence Member State decision-making (Caranta, 2023).

After the Second World War, much of Europe's defence industry lay in ruins. The US played a decisive role in its reconstruction, promoting a unified defence framework that later evolved into NATO. Through economic assistance, low-cost arms sales, and technology transfers, the US helped rebuild European defence-industrial capacity, motivated by both strategic idealism and the desire to prevent the spread of communism (Giovachini, 2000; Schmitt, 2000, 2001; Hèbert, 2003; Geiger, 2003; Lundmark, 2011; Dinan, 2004).

The original 1957 EC Treaty (Article 296, now Article 346 TFEU) excluded defence equipment from the internal market, allowing Member States to prioritise national procurement and self-sufficiency. Limited

cooperation occurred through NATO and early European initiatives such as the Western European Armaments Group (WEAG) and the Organisation for Joint Armament Cooperation (OCCAR). From the 1950s, leading industrial powers—France, the UK, Italy, and Germany—initiated joint projects in missile and aircraft development, resulting in firms such as Airbus, Eurocopter, and MBDA (Schmitt, 2000).

Nevertheless, national self-sufficiency remained the dominant paradigm, constraining cross-border integration. Article 346 continues to grant Member States broad discretion to restrict cooperation on security grounds. While such protectionism may be legitimate, it has hindered the creation of a fully integrated European defence-industrial base. The question of Europe's ability to sustain its own defence needs has thus evolved into a pressing political issue in the 2020s.

Defence-equipment cooperation deepened during the 1960s, coinciding with a transatlantic debate on industrial integration. Shared goals of interoperability, standardisation, and cost-efficiency encouraged collaboration, while escalating technological complexity and cost-reinforced interdependence (Lundmark, 2011). Long development cycles, often spanning decades, further necessitated sustained multilateral cooperation.

Article 346 TFEU continues to permit exemptions from internal-market rules for essential national security interests, though these must be justified to the European Commission. As a result, Member States vary considerably in their application of defence-procurement rules, which operate within a complex system of national and international regulations (Trybus, 2002; Bratanova, 2004).

From the 1980s, public-sector reforms inspired by New Public Management (NPM) reshaped the European defence sector. Governments increasingly relied on private providers, transitioning from producers to customers and redefining their relationship with industry (Heidenkamp et al., 2013; Hartley, 2023). The UK led these reforms, privatising state assets and outsourcing services, while many other Member States retained partial state ownership to preserve strategic control.

By the early 2000s, defence manufacturing across Europe had become largely privatised and transnational, with ownership structures extending across borders (Hood, 1991, 1995; Grimsey & Lewis, 2004; Mundebo, 2008; Ettinger, 2011). Sweden pursued a particularly liberal approach, permitting full foreign ownership and promoting international collaboration in defence production (Deverell, 2025).

Although NPM reforms enhanced transparency and cost-efficiency, they often created bureaucratic rigidity, strained trust between authorities and industry, and limited the ability to respond to rapid external shocks (Mundebo, 2008; Ettinger, 2011). By the early 2020s, these shortcomings prompted renewed interest in more collaborative and adaptive governance models.

Directive 2009/81/EC marked a milestone in harmonising EU defence procurement, seeking to promote transparency and competition while safeguarding national security (Gombos & Szűcs, 2019). Yet, despite formal integration into the single market, many defence companies rely on international supply chains, leaving national self-sufficiency below 50 percent in some cases.

Globalisation and privatisation have weakened traditional notions of national loyalty and increased reliance on foreign suppliers. While diversification has delivered efficiency gains, it has also fragmented supply chains and heightened exposure to geopolitical risks—a vulnerability exposed during the COVID-19 pandemic. Conversely, strong domestic defence industries enhance military adaptability and national resilience (Stevenson & Spring, 2007; Kolk & van Tulder, 2010; Bode & Wagner, 2015; Mackay et al., 2020; DeVore, 2021; Hartley, 2023).

The evolution of the European defence market since the Ukraine war—and the EU's subsequent reform initiatives—can thus be interpreted as a reaction to decades of globalisation and declining state control over an increasingly *peace-optimised* defence industry (Hellberg & Lundmark, 2025).

Russia's Geopolitical Ambitions Jumpstart EU Security and Defence

Russia's full-scale invasion of Ukraine triggered a sharp and sustained surge in demand for defence equipment. To support Ukraine's armed forces, European nations rapidly adapted logistics, production systems, and ammunition supply chains—most notably in the shell market, which was among the first and hardest-hit segments (Boot, 2024).

At the same time, donor nations sought to reinforce their own military capabilities, exposing structural weaknesses in Europe's defence-industrial base. By the mid-2020s, demand for munitions and related equipment had reached unprecedented levels, far exceeding existing production

capacity. The need to expand manufacturing reshaped the global defence landscape, as states raced to strengthen their industrial foundations in response to the war's prolonged demands. In response to Kyiv's urgent requests, the previously mentioned ambitious EU goals to raise annual production to 1.3 million shells by 2024 and 2 million by the end of 2025 were formulated. Progress however fell short, hampered by limited industrial capacity, fragmented coordination, and logistical bottlenecks across Member States.

Rapid Awakening to European Strategic Autonomy in Defence

The concept of European strategic autonomy has gained renewed prominence post-2022, with defence-sector initiatives emerging largely in response to Russia's war against Ukraine (Fiott, 2024). The geopolitical shock resulting from Russia's 2022 invasion at first overturned beliefs in the value-based, liberal world order. Around six months after the February invasion, arms donations and military support to Ukraine commenced. The donations required elaborate logistical supply chains that gradually expanded in volume, but struggled to keep pace with the European surge in demand. In parallel with the massive donations to Ukraine, European nations had to replace donations as well as strengthen their military capabilities in numbers as well as sophistication. The nature of the war in Ukraine also turned out different from expected with an escalation especially of drone warfare. The EU self-imposed commitments to support Ukraine thus resulted in an enforced priority on enhancing European defence-industrial production capacity, developing and producing novel weapon systems, and achieving self-sufficiency in arms. This shift aimed to decrease dependency on the US for arms supply—hence the encompassing priority on the credibility and robustness of EU military strategic autonomy.

Under Phase 1, a transformation is underway to strengthen Europe's military preparedness, resilience, and cross-border supply chains, while advancing harmonisation and integration within the European defence market. Member States continue to prioritise the protection of national industries and technologies (Lundmark, 2019, 2022). Nonetheless, the war in Ukraine has accelerated coordination in defence-materiel production across Europe.

Understanding the relationships between suppliers and buyers is crucial for effective procurement and supply-chain management. In practice, cost considerations often override long-term security-of-supply concerns. Under New Public Management (NPM), buyer–supplier relations became transactional and governed by formal contracts, with limited scope for trust or continuity. This contrasts with insights from civilian supply-chain research, which emphasises the role of collaboration, shared objectives, and mutual trust in achieving resilience and efficiency (Håkansson & Gadde, 2018; Holma et al., 2022).

Achieving strategic autonomy requires self-sufficiency in key technologies, reduced dependence on external suppliers of strategic materials, and greater supply-chain resilience. These objectives are central to the EU's ambition to navigate an increasingly volatile geopolitical environment (Teer & Bertolini, 2022; Fiott, 2024; Hellberg & Lundmark, 2025; Andersson & Britz, 2025). By the mid-2020s, the EU has sought to reinforce the European Defence Technological and Industrial Base (EDTIB), reduce reliance on the US, and strengthen its own defence-industrial and military capacity.

States and defence companies operate according to distinct logics. Governments are guided by security policy and national defence strategies, while firms act according to market rationality, profitability, and competitiveness. Since the mid-2010s, European states have prioritised weapons security of supply and societal resilience. Military readiness can no longer remain 'peace-optimised', as during Phase 0. Thus, national demand for armaments has risen sharply, both to support Ukraine and to replenish domestic stockpiles. Meanwhile, the European Commission has sought to foster supranational cohesion in the defence-industrial domain (Fiott, 2024).

For industry, rapid production increases have been constrained by shortages of skilled labour and critical inputs. Final producers, such as ammunition and shell manufacturers, are cautious about large-scale investments without long-term guarantees, limiting the pace of capacity expansion (Boot, 2024; Politico, 2024). This places defence firms in a favourable negotiating position vis-à-vis both national governments and EU institutions regarding co-financing.

The EU has established several mechanisms to enhance harmonisation and cooperation in defence procurement. The European Defence Agency (EDA), created in 2004, supports Member States in developing joint capabilities and fostering collaboration. Directive 2009/81/EC on

defence procurement (European Commission, 2009) introduced rules to ensure transparency and non-discriminatory tendering processes (European Commission, 2014). Building on the Lisbon Treaty, the Permanent Structured Cooperation (PESCO) framework was launched in 2017, committing participating states to devote at least 20 percent of their capability development funds to multilateral EU projects (Calcara, 2020). By October 2025, 75 PESCO projects were active (European Council, 2025).

The war in Ukraine underscored the need for genuine strategic autonomy—encompassing resilience, flexibility, and endurance—to manage unforeseen crises. It exposed deficiencies in Europe's rapid-response capacity, revealing that strategic autonomy had remained largely aspirational. By the mid-2020s, the debate now encompasses both Europe's military capabilities and its industrial foundations. Key dimensions include dependence on the US, the balance between EU and NATO roles, internal political unity towards Russia, security of supply, and the employment implications of defence-industrial policy (Brøgger, 2025; Ostanina & Tardy, 2024).

The EU–US capability gap has long shaped this debate. The US maintains a dominant position in defence technology, reinforced by strict export controls such as the International Traffic in Arms Regulations (ITAR), which restrict modification or use of US-made systems without prior authorisation. Between 2005 and 2015, US defence procurement outpaced the EU's by a factor of two to three annually, while its research and development spending was six to seven times higher. Over 95 percent of US defence R&D supports domestic firms, whereas EU investments remain fragmented across Member States (Lundmark, 2019; Knutsen, 2022).

EU Initiatives Post-2022 Strengthening European Strategic Autonomy

Act in Support of Ammunition Production

In the summer of 2022, Ukraine consumed ammunition at three times the rate of Western production. By mid-2023, Russia was firing three times as many shells daily as Ukraine, rising to nine times by April 2024 (Boot, 2024). Efforts to drastically increase EU production had commenced, but

with results far below formulated goals. Increasing from the 2022 EU level of 230,000 155 mm shells per year to much higher levels proved difficult. The 2022 commitment to donate 1 million shells in 2023 was nowhere close to being met. Assessment of the annual production capacity was 400,000 by November 2023 (Boot, 2024).

The massive consumption of ammunition and equipment in Ukraine has placed additional strain on Europe's defence industry. EU realised that supporting Ukraine's war efforts also strengthened the EU strategic autonomy by keeping the war at a distance. Expanding production capacity requires recruitment, training, and capital investment—processes dependent on long-term order commitments. To address these challenges, the EU launched the *Act in Support of Ammunition Production* (ASAP) in October 2023 to strengthen the donations to Ukraine, targeting annual shell output of 2 million units by the end of 2025 (European Commission, 2024b).

Complementary national and regional initiatives have emerged, notably in the Nordic region. In March 2024, Sweden and ammunition manufacturer Nammo received EU support to boost production; Norway and Finland likewise secured EU funding for their facilities. Sweden, Finland, and Norway had earlier agreed (in 2018 and 2022) to pursue joint long-term self-sufficiency in ammunition production, including detonator manufacturing. Denmark joined this cooperation in October 2023 through a seven-year agreement. In 2024, Sweden's Defence Materiel Administration (FMV) formalised an ASAP implementation agreement with Nammo, co-financed by the Swedish state and the EU. However, Sweden's influence is complicated by Nammo's ownership structure—jointly controlled by the Norwegian and Finnish governments—and its tri-national production footprint (Hellberg & Lundmark, 2025).

Scaling up shell production extends beyond building new factories. Bottlenecks persist throughout subcontractor networks and upstream supply chains. Shell bodies are manufactured in Norway and Finland, while a key explosive compound is produced solely in Poland—creating critical dependencies that demand close cross-border coordination. New facilities must also meet stringent security standards, adding cost and complexity. Although ASAP supports expansion in explosive production, shortages of other raw materials and components remain pressing. By late 2025, supplier bases for several key inputs remain narrow, with many production units relying on the same vendors. Industry estimates suggest that capacity investments typically require one to two years before full production is achieved (Politico, 2024).

European Defence-Industrial Strategy (EDIS) and the European Defence Industry Programme (EDIP)

In March 2024, the European Commission introduced the European Defence Industrial Strategy (EDIS) to address deficiencies in EU defence preparedness revealed by the war in Ukraine. EDIS aims to establish, over the long term, a more coherent EU-wide framework for joint defence procurement and capability development, increase intra-EU procurement, and strengthen the European Defence Technological and Industrial Base (EDTIB). Through a series of interlinked measures, the Commission seeks to expand the EU's supranational role in defence—an ambition that has historically faced resistance, particularly from Member States with advanced national defence industries. EDIS also challenges procurement practices that prioritise acquisitions from the US (Ostanina & Tardy, 2024).

Linked to EDIS, the European Defence Industry Programme (EDIP) was presented in May 2024 as a targeted investment plan to reinforce the EDTIB. Its initial proposed budget amounted to €1.5 billion. In 2022, only 18 percent of intra-EU investment in multinational military development projects—and an equivalent 18 percent of total defence procurement—was collaborative, leaving 82 percent at the national level. The Commission's target of 35 percent joint procurement represents a significant shift towards multilateral coordination. At the same time, approximately 40 percent of Member States' procurement was directed to the US, a share that rose following the outbreak of war in Ukraine (Hellberg & Lundmark, 2025).

While EDIS serves as a strategic policy framework rather than a binding legal instrument, EDIP's adoption requires approval from both the Council of Ministers and the European Parliament. To reinforce supranational governance of the EDTIB, the Commission created the Commissioner for Defence and Space on 4 June 2024. This role complements the High Representative for Foreign Affairs and Security Policy, who retains responsibility for broader EU military strategy through the *Strategic Compass*. The Defence Commissioner's mandate focuses on industrial integration and capability development, reducing the influence of the internal market portfolio over the defence sector. A potential challenge arises from the division of responsibilities: PESCO projects remain under the Commissioner for the Internal Market, while EDIP projects fall within the Defence and Space portfolio. Andrius Kubilius of Lithuania was appointed as the first Defence Commissioner on 26 September 2024. In

his inaugural statement in October 2024, Kubilius called for a substantial budget increase, proposing that EDIP's allocation should reach €10 billion by 2028 (Håkansson, 2024).

The debate on European defence self-sufficiency intensified further in 2025 following remarks by US President Donald Trump, who suggested that the US might not uphold NATO's Article 5 collective defence commitment for allies failing to meet spending targets. This statement reignited calls for the EU to strengthen its independent defence capabilities and deepen its strategic autonomy.

Changing Relationships Between Buyers, Sellers, and EU Member States

Despite rising industrial output, aggregate shell production remained far below demand. Many ammunition manufacturers had adapted their processes during a prolonged period of peace, creating 'peace-optimised' production systems geared towards stable, predictable requirements. International backlogs among major Western producers further delayed deliveries (Hellberg & Lundmark, 2025). Upgrading defence capabilities is inherently time-consuming, encompassing government commitments, industrial orders, production, and eventual deployment by the armed forces.

Supply chains, long optimised for cost-efficiency and lean production, proved ill-suited to sudden surges in demand. Previous closures of industrial capacity, especially for critical inputs, and the centralisation of chemical and explosive production further constrained responsiveness. As a result, many countries began strengthening coordination with domestic suppliers in 2023–2024, adopting longer-term planning horizons.

By the mid-2020s, the EU and its Member States were shifting from transactional buyer–seller relations towards more trust-based, long-term partnerships. Governments and industry increasingly sought to reconcile economic realities with strategic imperatives, though most transformation occurred at the national level as states prioritised self-sufficiency and war preparedness (Hellberg & Lundmark, 2025). EU initiatives such as ASAP and EDIS sought to enhance coordination and synchronisation across the European Defence Technological and Industrial Base (EDTIB). In the absence of a formal EU–NATO agreement, responsibilities gradually diverged under an implicit division of labour: the Commission coordinated industrial and supply-chain policy; NATO focused on military

capability development; and donations to Ukraine were managed bilaterally, with logistics jointly coordinated.

By 2025, shell manufacturing remained largely global due to limited domestic access to raw materials and key components. Ensuring supply security therefore required proactive risk management, international coordination, and technological solutions. Resilient supply chains depend on trust, access to alternative suppliers, flexible components, and adaptable production capacity.

Member States have launched a range of national investments to expand ammunition production and strengthen industrial resilience. Companies, often backed by state funding, have undertaken capacity expansions facilitated by EU mechanisms such as ASAP. Nonetheless, by the mid-2020s, desired levels of resilience and capacity had not yet been achieved, and production still fell short of demand.

Since 2022, both Member States and the European Commission have demonstrated a stronger commitment to building a robust defence-industrial base. This shift marks a departure from traditional New Public Management (NPM) governance, which had prioritised efficiency over adaptability. While the term 'dynamic capabilities' is rarely invoked explicitly, the evolving approach reflects its principles: flexibility, learning, and responsiveness. Trust has re-emerged as a cornerstone of resilient defence supply chains and strategic cooperation between suppliers, buyers, and end-users (Kalaitzi & Tsolakis, 2023).

A central challenge remains unresolved: should strategic autonomy be pursued primarily through national policy or a supranational EU framework? Historically, Member States have prioritised national strength, security of supply, and domestic procurement, while the Commission advocates greater European coordination.

The turbulence of Phase 1 exposed the limitations of the Phase 0 peace-optimised market model. Nations, NATO, and the EU alike were unprepared for a large-scale European war. The surge in demand, coupled with fragmented supply chains and simultaneous rearmament efforts, revealed insufficient dynamic capability and coordination. Governments were compelled to rebuild closer, trust-based relationships with defence industries, reminiscent of pre-NPM models.

Phase 1 thus represents a period of radical transformation in which Member States and the EU implement far-reaching changes in cross-border cooperation, strategic autonomy, and industrial adaptation. Phase 2 anticipates two potential trajectories:

1. Stabilisation, marked by a calmer security environment with enhanced readiness, robust supply chains, and sustained production; or
2. Prolonged tension, where persistent Russian aggression necessitates continuously high defence output.

In either case, strengthened European coordination will be essential. Initiatives such as EDIS and EDIP are likely to remain central, though their scope may be moderated by divergent national interests. Expected outcomes include stronger long-term, trust-based partnerships between states and defence firms; a more resilient and integrated EDTIB; and greater supranational governance, alongside a partial departure from NPM practices.

Member States will need to determine how far to align with the Commission's initiatives on strategic autonomy, challenging entrenched procurement traditions. These developments will also influence approaches to defence cooperation, security policy, and relations with NATO and the US.

Some states are expected to retain firm national control over their defence industries, only partially aligning with the Commission's vision. Political developments, such as the re-election of Donald Trump in 2024, have raised further questions about NATO cohesion and future US support for Ukraine. Divergent national stances within the EU—particularly in Slovakia and Hungary—complicate efforts to maintain a unified European position.

Nonetheless, strengthening European strategic autonomy remains a central EU objective. Uncertainty over US commitments has reinforced the drive to enhance independent capabilities. In March 2025, the EU Readiness 2030 Plan was launched to provide financial instruments for expanding defence capacity through innovative loan arrangements. It invites Member States to activate the *national escape clause* of the Stability and Growth Pact to coordinate defence investments. Central to this initiative is the Security Action for Europe (SAFE) instrument—a €150 billion loan facility designed to mobilise public and private capital for defence investment (European Commission, 2025a). In parallel, negotiations are ongoing to reintegrate the UK into EU rearmament processes (The Guardian, 2025).

On the NATO side, the Capability Plan, presented under the Hague Summit Declaration on 25 June 2025, sets concrete spending commitments: allies pledged to allocate 5 percent of GDP to defence and security,

with 3.5 percent for national defence and 1.5 percent for critical infrastructure contributions to NATO. The Alliance reaffirmed continuous support for Ukraine and pledged to strengthen transatlantic defence-industrial cooperation through innovation and emerging technologies (NATO, 2025).

A wide range of innovation initiatives is now mobilising significant resources—among them the NATO DIANA programme, the European Defence Fund, the Hub for EU Defence Innovation (HEDI), and EDIRPA, alongside national schemes. Many explicitly support Ukraine and encourage collaboration between defence and civilian industries, further reinforcing the EDTIB and advancing Europe's overall defence capabilities.

Strengthening EU's Strategic Autonomy and War Preparedness Post-2025 Through Coordination and Dynamic Capabilities

Europe has clearly moved beyond the peace-optimised Phase 0, entering a period of rapid, well-financed defence market expansion to meet significantly higher demand. While Phase 1—the full realisation of this transformed market—is still unfolding, Phase 2, representing the post-Ukraine war defence landscape, promises a larger, more integrated, and more resilient European defence market, underpinned by both national and supranational ambitions and moving decisively towards higher strategic autonomy.

Nevertheless, significant uncertainties remain, largely dependent on the outcome of the Russia–Ukraine war and the strategic choices of Member States and the EU. The current trajectory demonstrates strong momentum, but the ultimate scope and structure of European strategic autonomy remain to be determined.

Regarding the first research question, a multitude of initiatives and actions have been presented in this chapter that have gradually deepened the supranational policy integration regarding strategic autonomy and the functioning of the EDTIB. Disagreements between Member States, however, halted the comprehensive financing arrangements introduced in 2025 for long-term EU policy integration and support to Ukraine. The more profound outcome of the political context is at the end of 2025 unclear and holds considerable uncertainties. The majority of Member

States show firm support for the continued strengthened strategic autonomy, but the policy dissonance shown by a smaller number of Member States can present a breadth of outcomes. The analysed initiatives and actions have pushed EU security and defence policy integration to unforeseen levels. Member States have in parallel after 2022 raised defence funding to levels not seen since the Cold War. The NATO Capability Plan from June 2025 served as a strong enabler to enforce commitment to fundamentally raising rearmament and defence readiness.

Regarding the second research question, based on insights from this chapter, two overarching challenges stand out in the effort to strengthen the EU defence autonomy.

Firstly, EU Member States must individually and collaboratively enhance their dynamic capabilities in production, capability development, and military capacity to meet current and future security challenges. Some countries, such as Sweden, have historically pursued peace-optimised defence postures more rigorously than others, leaving significant gaps in readiness. During Phase 0—prior to the 2022 outbreak of the Ukraine war—relations and communication between defence authorities and the domestic defence industry were largely transactional, focusing on the execution of existing contracts rather than long-term strategic alignment. The war in Ukraine has necessitated a shared strategic vision with a longer-term perspective, prompting closer, trust-based relationships between governments and defence companies. Similar efforts are emerging across EU Member States, although substantial work remains before the necessary dynamic capabilities are fully realised.

Secondly, effective coordination between states, military procurement authorities, and the defence industry must evolve towards joint value creation, underpinned by trust-based cooperation. This transformation requires new business models that guarantee the long-term presence and stability of defence companies. Achieving this vision also demands more integrated, long-term investment arrangements. However, this chapter suggests that initiatives such as EDIS and EDIP are unlikely to be fully realised in the near term. Their ambitious supranational scope challenges Member States' traditional autonomy over defence policy and industrial priorities. The tension between national security priorities, defence-industrial policy, and EU-level strategic goals represents a particularly complex equation.

While the strength and credibility of Europe's strategic autonomy remain insufficient at the end of 2025, ongoing reforms, investments, and

trust-building initiatives indicate a trajectory of considerable growth and maturation. Building a resilient, flexible, and integrated European defence capability will require sustained commitment, coordination, and strategic foresight at both the national and EU levels.

Present Challenges in the Context of EU Strategic Autonomy at the End of 2025

Since 2022, the EU has launched numerous ambitious initiatives to strengthen European defence capabilities while providing substantial support to Ukraine. By late 2025, several overlapping programmes aim to culminate in a major phase of investment in EU strategic autonomy. However, the degree of Member State acceptance and the long-term impact of these measures remain uncertain.

Debate continues over the potential use of frozen Russian financial assets to fund Ukraine's ongoing defence and post-war reconstruction. This proposal, revived in September 2025, gained urgency after the US administration indicated that Europe would need to shoulder the primary financial burden for the continent's security. As of October 2025, frozen Russian assets totalled approximately €250 billion, with €140 billion proposed as an interest-free 'reparation loan' to Ukraine (Reuters, 2025; EuroNews, 2025a).

The EU's overarching goal of strengthening strategic autonomy remains unchanged. Uncertainty over US commitment to NATO and to Ukraine has intensified Europe's determination to develop its own defence capacity. In March 2025, the EU Readiness 2030 Plan was introduced to provide new financial instruments for expanding defence capability across Member States (European Commission, 2025b). The Plan invites governments to activate the 'national escape clause' of the Stability and Growth Pact to coordinate defence investments. Its central mechanism, the Security Action for Europe (SAFE) instrument, is a €150 billion loan facility designed to mobilise public and private capital (European Commission, 2025a). In parallel, negotiations have begun to reintegrate the UK into EU rearmament processes (The Guardian, 2025).

In parallel, a broad range of innovation initiatives—such as the NATO DIANA programme, the European Defence Fund, the Hub for EU Defence Innovation (HEDI), and EDIRPA—are mobilising significant resources. Many of these programmes explicitly support Ukraine and foster collaboration between defence and civilian industries, thereby reinforcing the European Defence Technological and Industrial Base (EDTIB).

Europe has clearly moved beyond the peace-optimised Phase 0 and entered a period of rapid, well-financed defence-market expansion to meet sharply increased demand. While Phase 1—the ongoing transformation—continues to unfold, Phase 2, representing the post-Ukraine war landscape, is expected to yield a larger, more integrated, and more resilient European defence market, underpinned by both national and supranational ambitions. Yet considerable uncertainty remains, dependent on the war's outcome and Member States' strategic choices.

In March 2025, the SAFE instrument was launched, followed in June by the announcement of a forthcoming roadmap for EU defence readiness. The Defence Readiness Roadmap 2030, presented on 16 October 2025, builds on the EU White Paper for Defence Readiness (European Commission, 2025c). As a non-binding communication outlining the implementation of *ReArm Europe*, the Roadmap identifies four European capability gaps to be addressed by 2030 through *European Readiness Flagships*: the European Drone Defence Initiative, Eastern Flank Watch, European Air Shield, and European Space Shield. Together, these initiatives aim to reduce dependency on the US and counter the Russian threat, while consolidating long-term support for Ukraine. Unanimous agreement by all 27 Member States is required for implementation (EuroNews, 2025b; European Commission, 2025c).

The most financially consequential decision—whether to use frozen Russian assets to fund Ukrainian support—was due at the European Council meeting on 23 October 2025. However, no consensus was reached. Hungarian President Viktor Orbán declined to participate in the Roadmap discussion, while Belgium opposed the proposed financing model, arguing that its banks would bear disproportionate risk as custodians of the majority of frozen assets. As a result, the Roadmap was not adopted; a less ambitious version is expected to be presented in December 2025. Legal disputes among Member States regarding the legitimacy of using frozen Russian assets as loan collateral have further delayed progress (European Parliamentary Research Service, 2025; European Council, 2025).

Shell production, a key indicator of rearmament of Europe and of the support to Ukraine, has reflected the mixed results of the ASAP initiative. The EU's goal, set in 2023, was to raise annual production from 230,000 to 2 million shells by the end of 2025. According to Commission data and industry estimates (European Commission, 2025d), actual capacity will reach only 500,000–600,000 shells—significant growth, but well below

target. Constraints in the supplier base mean full realisation will not occur until the late 2020s.

Further complications have arisen within the Union. Hungary and Slovakia have distanced themselves from EU policy, aligning more closely with Russian narratives and questioning continued support for Ukraine. Both remain dependent on Russian energy supplies. Hungary, in particular, has obstructed EU and NATO policy initiatives. The Czech presidential election of October 2025 brought to power a government less supportive of the Commission's agenda for European strategic autonomy. At the end of October 2025, Hungary expressed that it strives to join forces with Slovakia and the Czech Republic in a Ukraine-sceptic alliance. This nascent bloc could obstruct EU initiatives for long-term support to Ukraine and seek like-minded allies through the European Parliament (Politico, 2025).

Transatlantic relations also present growing uncertainty. The Trump administration has made clear that Europe must bear primary responsibility for supporting Ukraine's defence and reconstruction. The US has also reduced the level of advanced military technology supplied to Ukraine—particularly in long-range missiles, intelligence, and surveillance—thereby weakening Ukraine's strategic capabilities.

A striking example of evolving European commitment is Sweden's ambitious plan, announced on 22 October 2025, to supply 100–150 Gripen E fighter aircraft to Ukraine (Swedish Government, 2025). The joint letter of intent pledged to strengthen Ukraine's air defence, with initial deliveries scheduled within three years. However, the plan faces major challenges: financing depends on the reparation loan decision; existing Gripen production is committed to delayed deliveries for Sweden and Brazil; and potential US restrictions on the transfer of ITAR-controlled technologies, such as the General Electric engine, could hinder implementation. Furthermore, EU guidelines stipulate that no donated military system should contain more than 35 percent non-EU or non-Ukrainian components, while the Gripen's foreign content is roughly 50 percent (including the US, the UK, and Italian systems) (Simple Flying, 2024). The future course of the war may also render the loan scheme untenable if Russia achieves its strategic objectives.

The Gripen initiative, along with other elements of *ReArm Europe* and the Roadmap, was not adopted at the October European Council meeting. Significant uncertainties therefore persist regarding the realisation of the EU's ambitious plans for strategic autonomy and war readiness.

Concluding Remarks

The main contribution of this chapter lies in its analysis of the interactive dynamics between defence companies, states, and supranational institutions. It deepens the understanding of how military and security challenges are managed, with particular emphasis on preparedness, resilience, and capability-building within transnational defence supply chains. The chapter also anticipates a changed defence market and industrial landscape after the Ukraine war (Phase 2).

This chapter puts forward a novel theoretical combination by combining the perspectives of strategic autonomy, dynamic capabilities, and supply chain management. This combination of theory and perspectives brings a deepened explanation to the interplay between EU and the Member States' actions as a response to the Ukraine war while explaining the corporate inclusion in radically improving European arms production and war readiness.

The chapter also raises further questions for future research and policy. One key challenge is addressing supply chain bottlenecks to create robust, sustainable, and flexible solutions. Member States must deepen relationships with defence companies to secure resilient and adaptable value chains, which cannot be managed solely at the national level due to their inherently cross-border dependencies. Sustainable business models and investment structures are necessary to align the capability goals of companies, states, and the EU.

Another research venue is how the supranational EU initiatives will materialise and to what extent—on the Union level compared to the national level.

The respective mandate between EU and NATO for defence-industrial integration and capability development, and the outcome of the future military capability and security of Europe is in a state of transformation. Linked to this is how the US president—Trump or other—sets the US defence priorities between Europe, NATO, Ukraine, Russia, the US homeland defence, all in relation to the US engagements in the Indo-Pacific.

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