NATO IN TRANSITION: MILITARY STRENGTH IN THE CONTEXT OF MODERN WARFARE

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Russia's full-scale war in Ukraine has reshaped the strategic environment in Europe and compelled NATO to reassess its defence posture, internal cohesion, and long-term credibility. This paper provides a comprehensive evaluation of the Alliance's evolving power dynamics, focusing on the distribution of military capabilities among its principal actors, the potential consequences of U.S. strategic retrenchment, and the implications of Russia's wartime adaptation. While NATO retains substantial aggregate superiority, persistent disparities in defence spending, divergent national threat perceptions, and Europe's structural dependence on U.S. leadership continue to challenge the Alliance's resilience. At the same time, Russia's simultaneous military degradation and accelerated defence-industrial mobilisation create a paradoxical trajectory in which significant battlefield losses coexist with rapid technological innovation, deeper partnerships with China, Iran, and North Korea, and the growing integration of unmanned and long-range strike systems. The study further analyses how the widespread use of drones and low-cost precision technologies has altered the cost-exchange ratios in modern conflict, exposing critical vulnerabilities in NATO's air and missile defence architectures. Incidents such as Russia's 2025 drone incursion into Polish airspace illustrate the increasing mismatch between inexpensive offensive systems and the costly defensive measures required to counter them. Drawing on comparative data, doctrinal analysis, and scenario-based reasoning, the paper argues that NATO's future effectiveness will depend not only on aggregate strength but on its capacity to adapt doctrinally, industrially, and technologically. The findings underscore the need for accelerated European defence-industrial revitalisation, more equitable burden-sharing, and the incorporation of unmanned and autonomous systems into NATO's integrated deterrence and defence planning.

Key words: *NATO, autonomous warfare, unmanned systems, burden-sharing, European defence, collective security, military capability, strategic adaptation, interoperability.*

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1. INTRODUCTION

The evolving European security environment shaped most profoundly by Russia's full-scale invasion of Ukraine has compelled NATO to re-examine its strategic posture, defence-industrial capacity, and internal cohesion. While the Alliance remains the most formidable politico-military institution in the world, its long-term credibility is increasingly being tested by structural uncertainties, including the potential recalibration of U.S. commitments to European security, the intensifying Russia–China–Iran–North Korea axis, and the rapid diffusion of disruptive military technologies such as unmanned and autonomous systems. These dynamics raise pivotal questions regarding the distribution of power within NATO, the Alliance's ability to maintain deterrence in a period of heightened geopolitical contestation, and the sustainability of its current defence model in light of shifting economic and technological realities.

Within this context, understanding NATO's aggregate military strength and the relative weight of its principal actors is of critical analytical importance. Although the U.S. remains the Alliance's cornerstone, the EU, the UK, Türkiye, and Canada collectively constitute a substantial share of NATO's military power. Comparative assessments, such as the 2025 Global Firepower Index and SIPRI data, underscore wide disparities in defence spending, manpower, and capabilities across the Alliance, but they also reveal a resilient foundation of combined strength that remains significantly superior to that of Russia, even in scenarios involving reduced U.S. engagement. At the same time, Russia's extensive wartime losses, escalating attritional costs, and persistently underwhelming battlefield performance contrast sharply with its accelerated military reforms, growing defence-industrial output, and deepening reliance on external partners. These contradictory trends complicate assessments of Russia's long-term military trajectory and shape NATO's planning assumptions.

The war in Ukraine has further highlighted transformative shifts in modern warfare. Unmanned aerial systems (UAS), robotic platforms, and low-cost precision-strike technologies have emerged as decisive instruments of battlefield advantage, challenging traditional doctrines and exposing the economic asymmetries embedded in NATO's air and missile defence architectures. Incidents such as Russia's 2025 drone incursion into Poland illustrate the stark imbalance between inexpensive offensive systems and the costly defensive measures required to counter them, underscoring

a structural vulnerability that adversaries may seek to exploit. This has spurred European efforts to accelerate defence-industrial revitalization, enhance counter-drone capabilities, and pursue more cost-effective, interoperable solutions, including emerging initiatives such as the EU–Ukraine drone alliance and NATO's Eastern Sentry mission.

The hypothesis of the paper is that, despite Russia's transition to a wartime economy, force expansion, and external military support, NATO's collective conventional superiority continues to provide a credible and decisive deterrent against large-scale Russian aggression, even under scenarios of partial U.S. disengagement. The research question is to what extent does NATO retain credible conventional deterrence against Russia in the context of Russia's wartime military expansion? To operationalize the hypothesis, this study conceptualizes deterrence as NATO's ability to prevent large-scale Russian conventional aggression against Alliance territory by maintaining a credible capability to both retaliate militarily and deny Moscow the attainment of its strategic objectives. Deterrence would be considered to have failed if one of three empirically observable conditions were to occur: (1) a successful large-scale Russian conventional attack on NATO territory; (2) NATO's inability to halt or repel such an offensive within a reasonable operational timeframe; or (3) internal political fragmentation within the Alliance that obstructs a coordinated collective military response. By establishing these benchmarks, the study assesses whether NATO's current military balance, force posture, and level of technological adaptation remain adequate to avert such scenarios.

2. LITERATURE REVIEW

NATO's strategic adaptation and collective defence posture have been extensively examined in the context of conventional deterrence, burden-sharing, and alliance cohesion. Scholars such as Beaver and Kurzweil (2025) emphasize Europe's historical reliance on U.S. security guarantees, noting that recent shifts toward the Indo-Pacific challenge long-standing assumptions about transatlantic security. The debate over European responsibility highlights disparities in defence spending, capability development, and political commitment among NATO members, with countries like Poland, the Baltic states, and Germany often cited as leaders in assuming greater security responsibilities (Chow, 2025). Conversely, states with weaker defence traditions or fiscal constraints, such as Italy, Belgium, Canada, and Slovenia, are perceived as contributing less effectively, raising questions about

the sustainability of equitable burden-sharing. Iskandarov & Gawliczek (2025) examine NATO's New Force Model (NFM) and justify its introduction in response to an evolving and dynamic security environment. The authors delineate NATO's NFM as a desperate need after the war between Russia and Ukraine broke out, highlight the main differences from the Old Force Model.

The literature also underscores the impact of emerging technologies on NATO's operational calculus. The Russia–Ukraine war has served as a live case study demonstrating the transformative effect of autonomous and unmanned systems. Analysts such as Kirichenko (2025) and Foy et al. (2025) highlight Ukraine's innovative use of low-cost drones and unmanned ground vehicles, creating asymmetries that challenge conventional force structures and compel NATO to reconsider high-cost air and missile defence strategies. These studies indicate that autonomous systems not only augment battlefield effectiveness but also impose financial and operational burdens on established powers, necessitating new doctrines, joint industrial efforts, and interoperable technological solutions.

Furthermore, extensive research on Russian military strategy and performance, including studies by Paquette (2025), Marsh (2025), and Dyner (2024), provide insights into the limitations and vulnerabilities of Russian armed forces. Evidence of high equipment losses, attrition-driven strategies, and dependency on foreign support from actors such as Iran, North Korea, China, and Belarus emphasizes both the resilience and constraints of Russian military operations. These findings suggest that NATO's conventional superiority, when coupled with strategic innovation and collective investment, remains a decisive factor in deterrence.

Taken together, the literature converges on three key themes relevant to NATO's strategic adaptation: (1) the imperative for equitable burden-sharing and increased European responsibility, (2) the transformative impact of autonomous and unmanned systems on contemporary warfare, and (3) the enduring importance of collective deterrence against Russian aggression. These themes provide the conceptual and empirical foundation for analyzing NATO's evolving posture in the twenty-first century and framing policy recommendations for sustained Alliance effectiveness.

The study also builds upon both classical and contemporary deterrence theory. Seminal contributions by Lawrence Freedman (2004), Thomas Schelling (2008), Glenn H. Snyder and Paul Diesing (2015) conceptualize

deterrence as the capacity to shape an adversary's decision-making by influencing its perceptions of cost, risk, and credibility. Within the field of NATO studies, deterrence has traditionally been analyzed through the complementary concepts of deterrence by punishment and deterrence by denial, which underscore the Alliance's ability both to impose retaliatory costs and to deny potential territorial gains. More recent scholarship additionally emphasizes the growing significance of technological innovation, alliance cohesion, and economic resilience as critical factors underpinning credible deterrence in contemporary security environments.

Against this backdrop, this paper offers a comprehensive assessment of NATO's core power dynamics, focusing on the relative capabilities of its principal actors, the implications of potential U.S. disengagement, Russia's evolving military posture, and the strategic impact of unmanned and autonomous systems on Alliance defence planning. By integrating comparative military data, doctrinal analysis, and scenario-based reasoning, the study seeks to illuminate the conditions under which NATO's cohesion and credibility may be preserved or undermined in the face of accelerating geopolitical and technological change. In doing so, it contributes to broader debates on transatlantic burden-sharing, European strategic autonomy, and the future of collective defence in an increasingly contested security order.

3. METHODOLOGY

This study employs a qualitative analytical framework combining comparative military capability analysis, doctrinal evaluation, and scenario-based reasoning to assess NATO's ability to sustain credible conventional deterrence against Russia in the evolving European security environment.

First, the research applies comparative capability analysis to examine the distribution of military power between NATO's principal actors (the United States, the European Union, the United Kingdom, Türkiye, and Canada) and Russia. This analysis relies on open-source defence data, including the Global Firepower Index, SIPRI defence expenditure statistics, and institutional assessments from organizations such as the International Institute for Strategic Studies (IISS) and the RAND Corporation. Key indicators examined include defence spending, manpower, equipment inventories, and force structure.

Second, the study incorporates doctrinal and strategic analysis to evaluate Russia's wartime military transformation, including reforms in force structure, expansion of manpower, and defence-industrial mobilization following the 2022

invasion of Ukraine. This component also examines external military support to Russia from actors such as Iran, North Korea, China, and Belarus.

Third, the research employs scenario-based reasoning to explore the implications of potential structural shifts within NATO, particularly scenarios involving partial U.S. strategic retrenchment and increased European responsibility for defence. These scenarios are used to assess whether NATO's aggregate capabilities remain sufficient to sustain credible conventional deterrence.

Finally, the study integrates technological analysis focusing on the operational and economic implications of emerging military technologies, particularly unmanned aerial systems (UAS), autonomous platforms, and counter-drone defence architectures. The Russia–Ukraine war serves as an empirical case illustrating how these technologies reshape modern conflict dynamics and affect deterrence calculations.

By combining comparative military data, doctrinal analysis, and technological assessment, the study evaluates whether NATO's current force posture, industrial capacity, and strategic cohesion are adequate to deter large-scale Russian conventional aggression.

4. RESULTS AND DISCUSSIONS

4.1. NATO's strategic balance

4.1.1. Comparative Military Capabilities

When discussing NATO's overall power, five primary actors stand out: the U.S., the EU, the UK, Türkiye, and Canada (Nasirov et al., 2017; Sadiyev & Iskandarov, 2018; Iskandarov et al., 2019). According to the 2025 Global Firepower, these actors can be compared with each other and against Russia (as the central threat to NATO) based on more prominent parameters.

A comparative assessment of the military capabilities of the U.S., key NATO allies, the EU, and Russia reveals significant asymmetries in defence spending, force structure, and technological capacity. In terms of defence expenditure, the U.S. continues to dominate the transatlantic security architecture, allocating approximately $895 billion in 2024, a figure that far exceeds the military budgets of all other actors considered. Russia's defence spending, estimated at approximately $126 billion, remains substantially lower in absolute terms but nevertheless reflects a high level of militarization relative to the size of its economy. Among other actors, the U.K. allocated roughly $72 billion, while Türkiye and Canada spent approximately $47 billion and $41 billion, respectively. When aggregated, the defence spending of

the EU, estimated at approximately €326 billion, illustrates the considerable but often fragmented military potential of European states.

In terms of personnel strength, the EU collectively maintains the largest pool of active military personnel, numbering approximately 1.5 million troops, slightly exceeding both the U.S. and Russia, each of which maintains around 1.3 million active personnel. Türkiye also possesses a sizeable standing force of approximately 355,200 troops, reflecting its strategic role within NATO's southern flank. By contrast, the UK and Canada maintain significantly smaller active forces of approximately 184,860 and 68,000 personnel, respectively. When reserve components are considered, Russia maintains a substantial mobilization potential with nearly two million reservists, while the EU collectively fields approximately 1.5 million reserve personnel. The UK and the U.S. also possess considerable reserve structures, with approximately 924,000 and 799,500 personnel, respectively.

A pronounced disparity is particularly evident in the domain of air power. The U.S. maintains overwhelming quantitative superiority, operating approximately 13,043 aircraft, a fleet that significantly surpasses those of other actors. Russia fields approximately 4,292 aircraft, while the combined air forces of the European Union amount to roughly 5,000 aircraft. Türkiye maintains approximately 1,083 aircraft, reflecting its substantial regional military capacity, whereas the UK and Canada possess comparatively smaller fleets of 631 and 351 aircraft, respectively.

In terms of armoured warfare capabilities, the EU collectively operates approximately 7,000 combat tanks, representing the largest aggregated armoured force among the actors considered. Russia follows with approximately 5,750 tanks, while the U.S. maintains roughly 4,640 tanks. Türkiye also possesses a substantial armoured inventory of approximately 2,238 tanks, reflecting its longstanding emphasis on conventional land warfare capabilities. In contrast, the UK and Canada maintain relatively limited armoured fleets of 227 and 74 tanks, respectively.

Russia's comparative strength becomes particularly visible in the domain of artillery, a capability that has proven decisive in high-intensity conventional warfare, especially in the ongoing conflict in Ukraine. Russia maintains approximately 5,168 self-propelled artillery systems and around 8,505 towed artillery pieces, significantly exceeding the inventories of most NATO actors. By comparison, the EU collectively operates approximately 2,523 self-propelled systems and 5,678

towed artillery pieces, while the U.S. maintains 671 self-propelled and 1,212 towed artillery systems. Türkiye fields approximately 1,038 self-propelled and 1,707 towed artillery pieces, whereas the UK maintains comparatively modest numbers.

Naval capabilities demonstrate another dimension of power distribution. The U.S. Navy remains the world's most powerful maritime force, operating approximately 440 naval assets, enabling global force projection. Russia maintains around 419 vessels, though many are regionally concentrated and technologically heterogeneous. The European Union collectively fields approximately 500 naval platforms, while Türkiye maintains 182 vessels, reflecting its strategic maritime posture in the Black Sea, Aegean, and Eastern Mediterranean. The United Kingdom and Canada maintain 109 and 73 naval assets, respectively.

Finally, the nuclear dimension remains a central pillar of strategic deterrence. Russia possesses the world's largest nuclear arsenal, estimated at approximately 4,380 nuclear warheads, while the U.S. maintains roughly 3,700 warheads. Within NATO's European members, the UK maintains approximately 225 nuclear warheads, while France possesses roughly 300 warheads, forming the European component of NATO's nuclear deterrent. Neither Türkiye nor Canada maintains independent nuclear arsenals, although Türkiye hosts U.S. nuclear weapons under NATO's nuclear sharing arrangements.

It is evident that Canada wields less influence within NATO compared to the U.S., the UK, Türkiye, and several key European states, including France, Italy, Germany, Spain, Poland, and Sweden. Nevertheless, Canada provides significant added value beyond NATO's EU-centric capabilities. While not a top-tier power within the Alliance, Canada plays an important role in contributing to operational capacity, strategic expertise, and cohesion of the Alliance. For instance, Canada leads NATO's Enhanced Forward Presence (eFP) battlegroup (Multinational Brigade) in Latvia. Additionally, Canadian forces participate in NATO-led missions such as the Kosovo Force (KFOR) and Operation Reassurance in Eastern Europe, contributing to deterrence, collective defence, and multinational interoperability. These commitments underscore Canada's reliability as a NATO member and its ability to enhance Alliance readiness, even without the strategic weight of larger powers.

It is important to note that figures vary across different sources. For example, SIPRI (2025) reports defence expenditures of $997 billion for the U.S., $149 billion

for Russia, $82 billion for the U.K., $62 billion for Türkiye, and $29.3 billion for Canada. Accordingly, any comparison should be understood as relative. Additionally, there are slight differences in the membership of NATO and the EU. For instance, Austria is a member of the EU but not NATO, whereas Albania and Norway are members of NATO but not the EU. In our analysis the EU reflects the influence of its NATO member states rather than the European pillar as a whole. If we rule out nuclear war as an option for confrontation, the analysis clearly shows that, even if the U.S. were to disengage from NATO, the combined power of the remaining four actors would still be significantly stronger than that of Russia. Multiple institutional and think-tank assessments indicate that NATO continues to possess a significant conventional advantage over Russia when evaluated in terms of aggregate military expenditure, advanced capabilities, and force-projection capacity (eurasia.ro, 2025; Kamp, 2026). Analyses conducted by organisations such as the International Institute for Strategic Studies and the RAND Corporation consistently argue that, although Russia maintains considerable regional military strength, NATO's combined economic resources, technological edge, and integrated command structures would constitute substantial barriers to any large-scale conventional offensive against the Alliance (Binnendijk & Franklin, 2018; Arnold, 2024; Barry et al., 2025; Hoffmann, 2025). This would remain a primary deterrent against Russian aggression, as it is commonly described by Western officials. Moreover, Russian equipment losses during Ukraine War have been high: over 1,100 armored vehicles, 3,000+ infantry fighting vehicles, 1,865 tanks, with unfavorable ratios compared to Ukraine (2–5:1). Casualties are also extraordinary: ~250,000 Russian fatalities and over 950,000 total casualties; far exceeding Soviet/Russian wars since WWII (Paquette, 2025). Some estimates suggest losses amounting to roughly 11,329 tanks, 34,273 artillery systems, 1,237 air defence systems, and, most notably, around 1,146,570 total casualties (minfin.com.ua, 2025), although the accuracy of these figures remains contested. As of October 2025, the UK Ministry of Defence reports that Russian forces have sustained approximately 1,118,000 casualties, including both killed and wounded since the onset of the full-scale invasion (Ukrinform, 2025). According to the General Staff of the Armed Forces of Ukraine, Russian personnel losses are estimated at approximately 1,202,000 from February 24, 2022, to December 25, 2025 (RBCUkraine, 2025). Taking the time difference into account, these figures appear to

overlap to some extent. Russia's war strategy has largely failed to achieve Kremlin objectives and demonstrates attrition warfare costs. Contrary to some claims that "Russia holds all the cards", evidence shows poor Russian battlefield performance, limited gains, high equipment losses, and massive casualties. Russia's strategy of attrition is costly and unsustainable, while Ukraine's defences and Western support continue to constrain Russian advances. Strategic leverage lies with the U.S. and its allies, who can shape the outcome by applying economic and military pressure (Jones & McCabe, 2025).

4.1.2. Russian Wartime Military Transformation

It should also be noted that the outbreak of full-scale war with Ukraine and initial Russian setbacks prompted systemic reforms within the Russian Armed Forces. In December 2022, Defence Minister Sergei Shoigu inaugurated a major reform programme, including an increase in manpower to 1.5 million personnel. Shoigu announced the establishment of three new motorized divisions, the reconstitution of seven mechanized brigades into divisions across the Western, Central, and Eastern Military Districts and the Northern Fleet, the creation of two additional airborne divisions, and the transformation of naval infantry brigades into five divisions. He also outlined plans for three new airborne division commands, multiple bomber and fighter regiments, and six Army aviation brigades. These measures signal Russia's intent to enhance its capacity for sustained, large-scale ground operations and reflect broader military, political, and economic pressures on potential adversaries. In 2023, the Russian Ministry of Defence reported the formation of two Combined Arms armies, one air corps, and 50 additional units, including four divisions, 18 brigades, and 28 regiments. The Pacific, Black Sea, and Baltic Fleets were placed under the Navy's direct command, while the Air Force and Air Defence Forces were removed from military district control and subordinated to the Russian Aerospace Forces. Naval infantry units were upgraded from brigade to division structures, and a corps-level command was added to the land forces, creating a four-tier hierarchy: military district, army, corps, and division. These reforms aimed to strengthen command and control and prepare the armed forces for simultaneous, large-scale operations across multiple regions. Russia has consistently expanded the size of its armed forces. In 2021, approximately 900,000 soldiers and officers served in the army. By August 2022, President Putin signed a decree increasing the armed forces by 137,000 personnel,

followed in December 2023 by another increase of 170,000 posts, bringing total strength to 1,320,000. Official figures indicate that 490,000 personnel joined the armed forces in 2023, with over half (~277,000) being conscripts. The expansion has facilitated the gradual rebuilding of capabilities lost during the fighting in Ukraine and supported an increase in the Russian military contingent stationed in occupied Ukrainian territories, which numbered 470,000 troops at the beginning of 2024 (Dyner, 2024). On 15 September 2025, President Putin ordered an increase of 180,000 troops to bring the Russian Army's active strength to 1.5 million, making it the second largest in the world after China's. Simultaneously, Russia significantly ramped up production of military equipment: tank production increased 5.6-fold, armored personnel carriers 2.6-fold, unmanned aerial vehicles (UAVs) 16.6-fold, and artillery ammunition 17.5-fold. UAV production is a particular priority, with plans to produce 6,000 units by 2025, reflecting their growing importance on the battlefield. As one of its most significant recent reforms, Russia has formally established a new military branch dedicated to unmanned systems (drones), a major initiative reflecting lessons learned from the war in Ukraine (Ukrainska Pravda, 2025). Most armaments plants have expanded employment and moved to 24-hour production cycles. For example, while in 2021 Russian plants produced and refurbished approximately 400,000 artillery shells annually, production rose to 3.5 million units in 2023 and 4 million units in 2024.

4.1.3. External Military Support to Russia

Despite battlefield losses, Russia remains capable of conducting intensive military operations in Ukraine, leveraging preexisting stockpiles of heavy equipment, expanding production, and acquiring weaponry and dual-use technologies from external partners, including Belarus, Iran, North Korea and China (Dyner, 2024). Open-source intelligence and satellite imagery suggest that North Korea has transferred an estimated four million artillery shells to Russia since mid-2023, significantly mitigating Moscow's ammunition shortages. By January 2025, approximately 4,000 North Korean troops were reported killed or wounded while fighting alongside Russian forces in Ukraine. In mid-February 2025, Pyongyang dispatched an additional 3,000 soldiers, who were reportedly better trained and more combat-ready than earlier deployments (Balmforth & Zafra, 2025). Multiple intelligence and media reports indicate that Iran has supplied Russia with substantial military assistance,

including hundreds of ballistic and short-range guided missiles, strike drones, and training for Russian personnel on advanced systems such as the Fath-360. This cooperation has significantly enhanced Russia's long-range strike capabilities and bolstered its capacity to sustain high-intensity operations against Ukraine (Deutsch et al., 2024). The U.S. and allied intelligence assessments reveal that Chinese-linked companies and supply-chain networks have facilitated Russia's ability to acquire critical materials and technologies including electronic components, semiconductors, and drone parts despite extensive Western sanctions. These transfers have enabled Moscow to sustain and expand its defence-industrial production, thereby mitigating the intended impact of international export restrictions (U.S.-China Economic and Security Review Commission, 2025). In 2023 alone, as much as 90% of Russia's microelectronics imports were sourced from China (Madhani, 2024). The patterns of technology transfer and cooperation reinforce the scenario dimension of China–Russia strategic convergence, which must be considered in the context of future NATO planning and scenario development. Furthermore, Belarus has periodically deployed substantial forces along the Ukrainian border and has formalized deeper military cooperation with Russia through joint formations, exercises, and hosting of Russian units. This partnership provides Moscow with forward basing, enhanced logistical corridors, and expanded avenues for force projection into Ukraine and the broader region (Reuters, 2024). Independent assessments, including those by the IISS and various intelligence summaries, indicate substantial Russian equipment losses in 2024, particularly in tanks and infantry fighting vehicles (IFVs). However, these analyses stress that external imports and increased defence spending have enabled Russia to refurbish, replace, and procure new systems, allowing it to maintain sustained operational capabilities, even as overall qualitative readiness remains under strain (Clavilier & Gjerstad, 2025). Drawing on his extensive expertise on Vladimir Putin and Russian strategic culture, Philip Short (Putin biographer) argues that Russia having transitioned to a wartime economy and supported by a resilient political system may be better positioned than many Western analysts commonly assume, particularly if the European Union and its allies are unable to offset any future reduction in U.S. military assistance to Ukraine. He further suggests that, although Putin may seek to orchestrate an orderly succession, the feasibility of such a transition is highly contingent on achieving a favourable outcome in

Ukraine. In this regard, the dynamics of domestic Russian politics and the trajectory of the war are profoundly interlinked (Marsh, 2025).

In conclusion, despite Russia's ongoing military expansion and foreign support, NATO's collective strength led by the U.S., key European states, Türkiye, and supported by Canada remains decisively superior. Russian losses and an unsustainable attrition strategy limit its operational reach, making large-scale aggression strategically unattractive. NATO's deterrence posture, multinational interoperability, and capacity to project power collectively provide a credible counterbalance, ensuring that any large-scale aggression by Russia would be strategically unattractive and politically costly.

5. EUROPEAN DEFENCE IN A TRANSFORMING NATO

5.1. Defence Spending Commitments

If the U.S. significantly scales back its presence in Europe, NATO will likely abandon its expansionist agenda of recent decades and focus solely on defending its existing members. However, this shift could generate considerable tensions among NATO allies regarding their approach to Russia. The EU column represents the combined military capabilities of all EU member states, with key countries like France, Italy, Germany, Spain, Poland, Sweden, and Greece ranking within the top 30. These nations account for 72% of the overall EU defence budget, totaling approximately €235 billion, and 70% of the EU's overall manpower, which amounts to approximately 1,050,000 personnel. It is not difficult to imagine the repercussions if a rift were to emerge among the EU states within the top 20. The U.S. disengagement, combined with a potential schism within the Union and the alienation of Türkiye and the UK, would undoubtedly signal the demise of NATO. This would represent the worst-case scenario for the Alliance. However, it must be acknowledged that the Russia-Ukraine war has strengthened cohesion within the Union, as well as with the UK. Additionally, the potential U.S. disengagement has brought relations with Türkiye to the forefront. At this juncture, it is important to reflect on certain key uncertainties surrounding the statistical figures. Beaver & Kurzweil (2025) state that, for decades, Europe has relied heavily on U.S. security guarantees within NATO, but this dependency is now being questioned as Washington pivots toward the Indo-Pacific. At the 2025 NATO Summit, allies formally pledged to increase defence spending to 5% of GDP by 2035, 3.5% on core defence and 1.5% on infrastructure and civil preparedness. This marks a significant shift toward

greater European responsibility for collective defence. Several nations, particularly Poland, the Baltic states, the Nordics, and Germany, have taken the lead by setting ambitious timetables to meet or exceed the new benchmark well before the deadline. Their strong commitments reflect a broader recognition that Europe, with its vast economic resources, is more than capable of defending itself if the political will exists. Other allies, such as France, Greece, the UK, and a cluster of Central and Eastern European states, have pledged to meet the 2035 target but face steeper challenges in scaling up their budgets. Meanwhile, countries like Italy, Belgium, Canada, and Slovenia have offered commitments that appear less credible due to weak defence traditions or fiscal constraints. Spain stands out as the only member rejecting the new goal outright, drawing criticism for its unwillingness to shoulder greater responsibility. According to Brian Chow (2025), the Hague Summit commitment risks collapse without a pragmatic and incremental roadmap. Delaying action until 2034 would render the abrupt doubling of defence budgets politically untenable, echoing the shortcomings of the 2014 pledge. With Russia entrenched in Ukraine, supported by China, North Korea, and Iran and continuing to pose broader threats to European security, NATO must initiate immediate and sustained increases in defence expenditure. Preserving the 2023 baseline of $1.28 trillion while adding $115 billion annually would not only smooth the transition toward 2035 but also generate $6.3 trillion over the decade, thereby strengthening readiness in the near term. Although the U.S. carries a disproportionate share of this effort, approximately $2.3 trillion, or 37% of the total, the proposed framework of equitable burden-sharing aligns contributions with GDP disparities among allies. Ultimately, only gradual and systemic increases can preserve Trump's hard-won 5% commitment, bolster NATO's deterrence posture, and demonstrate that democratic alliances can outlast authoritarian coalitions. Still, the overall trajectory is encouraging: if Europe follows through on its spending promises and the U.S. concentrates on countering China, NATO will be better positioned by the 2030s to safeguard both European and transatlantic security interests.

5.2. Drone Warfare and Cost Asymmetry

Almost four years into the Russia–Ukraine war, unmanned and autonomous systems have emerged as defining features of the conflict. Ukraine has relied extensively on low-cost drones and, increasingly, unmanned ground vehicles (UGVs) to offset Russia's superior firepower, developing what

has been described as a "drone wall" to blunt assaults. Operations such as Spider's Web illustrate how inexpensive systems can strike deep into Russian territory, inflicting damage on critical infrastructure and imposing substantial economic costs. Russia, however, has adapted in parallel, accelerating domestic drone production, integrating Iranian designs, and experimenting with robotic platforms ranging from basic supply carriers to sophisticated weaponized UGVs. This iterative cycle of innovation and counter-innovation has created what analysts call a "global adaptation war", with Moscow actively sharing lessons with partners such as China, Iran, and North Korea. For the West, this dynamic presents both an urgent challenge and a strategic opportunity. On the one hand, prolonged conflict allows Russia and its partners to refine, test, and proliferate new technologies in real time. On the other, Ukraine provides unparalleled battlefield insights into how unmanned systems can be developed, deployed, and countered at scale. European states, already collaborating with Ukraine on joint production ventures, are particularly well positioned to leverage these lessons to reinforce their defence-industrial base. The erosion of traditional models of land warfare demonstrates that autonomous and robotic systems are no longer peripheral innovations but have become enduring instruments of modern conflict (Kirichenko, 2025). The Russia–Ukraine war highlights the centrality of unmanned and autonomous systems in contemporary warfare. The conflict has evolved into a laboratory of adaptation, where both sides continually innovate to gain tactical and strategic advantage. For NATO and European partners, the implications are profound: the ability to integrate, scale, and counter such technologies will increasingly determine battlefield effectiveness. If harnessed strategically, the lessons learned from Ukraine could serve not only to strengthen European defence capabilities but also to shape the broader trajectory of warfare in the twenty-first century. The Russian drone incursion into Poland on September 9, 2025, involving 19 drones, some of which penetrated more than 100 miles inland has underscored both the escalating threat posed by unmanned aerial systems and the significant financial burden they impose on NATO's defence infrastructure. While Russia's drones are relatively inexpensive, costing approximately $10,000 –$50,000 each (Gerbera drones cost approximately $10,000 and Shahed drones cost around $50,000) (Melchior, 2025), the cost for NATO to intercept (by deploying fighter jets and activating surface-to-air missile systems) these threats is significantly higher. For instance, the deployment of advanced systems such as the F-35 fighter jets and Patriot missile defence

systems, which were activated during the Polish airspace violation, incurs costs in the millions of dollars (Burrows, 2025). This disparity underscores the mounting financial strain on NATO, as the Alliance is compelled to invest heavily in sophisticated countermeasures to counter the rising prevalence of low-cost drone attacks. Such circumstances necessitate a thorough reevaluation of defence strategies to ensure responses that are both cost-effective and sustainable within the evolving landscape of modern warfare. Repeated incursions, in particular, risk imposing a substantial financial burden on member states, as inexpensive threats consistently demand disproportionately expensive responses. While NATO is fully cognizant of the widening asymmetry between low-cost drone capabilities and high-cost conventional defences and has begun exploring cost-efficient alternatives, it remains insufficiently prepared to confront large-scale, sustained incursions executed exclusively with inexpensive technologies. Foy et al. (2025) contend that, in the aftermath of the incursion, the EU has accelerated investments worth billions to establish a "drone wall" along its eastern frontier, drawing on technologies battle-tested in Ukraine. NATO's reliance on costly jets and missiles to counter relatively inexpensive drones has exposed a vulnerability that Moscow could exploit, prompting European capitals to pool resources in pursuit of cost-effective, integrated solutions. Central to this effort is a €6 billion EU–Ukraine "drone Alliance" aimed at industrializing Ukrainian innovations, while frontline states such as Poland, the Baltic countries, and Finland seek to fortify their borders within a coordinated framework. In the interim, NATO has activated the Eastern Sentry air defence mission, deploying fighter jets, naval assets, and reconnaissance systems. Ukrainian operational experience has been particularly influential, demonstrating the effectiveness of acoustic sensors for detecting low-flying drones and mobile units equipped with anti-aircraft cannons for interception, an approach far more economical than conventional missile systems. Several EU states have begun to adopt similar tactics, underscoring the growing imperative for affordable, innovative, and unified counter-drone measures in response to the evolving threats of modern warfare. According to the authors, research and development are also advancing in directed-energy weapons, electronic warfare systems, and drone-on-drone interception technologies, with some of these capabilities expected to reach operational readiness within the next three to five years. The cost asymmetry between low-cost

offensive drones and expensive defensive systems also has important implications for the credibility of deterrence. If adversaries are able to impose repeatedly disproportionate financial burdens on NATO's defensive infrastructure, the long-term sustainability of deterrence by denial may gradually weaken. Accordingly, the Alliance's capacity to preserve credible deterrence will increasingly depend on the development of scalable and economically sustainable countermeasures, including advanced electronic warfare capabilities, directed-energy technologies, and low-cost interception systems.

6. CONCLUSIONS

NATO's strategic posture in the contemporary security environment demonstrates both resilience and adaptability in the face of evolving threats. While the U.S and key European allies provide the backbone of conventional military power, middle-tier contributors such as Canada play a critical role in sustaining operational capacity, cohesion, and multinational interoperability. The Russia–Ukraine war has highlighted the transformative impact of autonomous and unmanned systems, emphasizing the need for cost-effective, innovative responses and lessons-driven defence planning. Despite Russia's ongoing military expansion, foreign support, and technological adaptation, its unsustainable attrition strategy, high equipment losses, and constrained operational reach render large-scale aggression strategically unattractive. NATO's deterrence capability rests on a combination of collective strength, coordinated burden-sharing, and the integration of emerging technologies, particularly in counter-drone and autonomous warfare. Looking ahead, maintaining Alliance readiness will require sustained European investment, technological innovation, and flexible strategic planning to ensure that NATO remains a credible and effective guarantor of transatlantic security in the twenty-first century.

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