



The University of Tehran Press

Journal of Iran and Regional Studies

Online ISSN: 2645-6060

Home Page: <https://ijces.ut.ac.ir>

Guardians of the East Gate: Elevating U.S. Hegemony in NATO through Strategic F-35 Sales

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ARTICLE INFO

Article type:

Research Article

Article History:

Received 15 October 2023

Revised 15 November 2023

Accepted 08 December 2023

Published Online 20 December 2023

Keywords:

*F-35 Combat Aircraft,
Hegemony,
NATO,
Russia,
Russia-Ukraine War,
United States of America.*

ABSTRACT

Russia has consistently considered the expansion of North Atlantic Treaty Organization (NATO) as a significant security concern, prompting them to take various measures to hinder NATO's enlargement. These actions include the annexation of Crimea in 2014, frequent violations of Finnish airspace between 2014 and 2022, and the Russia-Ukraine war in 2022. Through these incidents, Russia has effectively demonstrated its military capabilities and superiority over NATO member states, thereby dissuading nations with aspirations to join NATO. Consequently, NATO members and those aspiring to join have actively sought advanced weaponry with superior technology and cost-effectiveness in order to counter and compete with Russia's military actions and advantages. Within NATO, the United States holds a crucial position as both the creator and a key member, as well as being the sole producer of fifth-generation aircraft fighters. This puts the United States at the forefront of technological advancements and grants it the ability to influence nations to view joining NATO as an attractive option. Hence, it comes as no surprise that numerous NATO members express a strong desire to engage in arms deals with the United States, either to acquire the stealth aircraft or establish bases for their deployment. The United States' role in providing cutting-edge military equipment further solidifies its importance within NATO and reinforces the alliance's collective deterrent against potential threats. The primary objective of this research is to demonstrate how the introduction of the F-35 can enhance U.S. hegemony within NATO, using the theory of hegemony as a conceptual framework. Specifically, this study will investigate how Russia's threats present a unique opportunity for the U.S. to consolidate its hegemonic influence within NATO by establishing a technological dependence on its advanced aircraft. This approach allows the U.S. to mitigate threats from Russia by imposing restrictions and sanctions on the sale of the F-35 to discourage arms trade between other NATO members and Russia. Furthermore, the study will highlight how the F-35 can serve as an incentive for non-NATO members to join the alliance, as it enhances the interoperability of combat networks with other European F-35s. Overall, this research aims to examine the role of the F-35 in strengthening U.S. dominance over fellow NATO members and its potential to shape the dynamics within the alliance.

Cite this article: Emamifar, A. & Sazmand, B. (2023). Guardians of the East Gate: Elevating U.S. Hegemony in NATO through Strategic F-35 Sales. *Journal of Iran and Regional Studies*, 6 (1), 29-45. DOI: <http://doi.org/10.22059/JICES.2023.95145>



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DOI: <http://doi.org/10.22059/JICES.2023.95145>

Introduction

During the historic Battle of Britain in 1940, Sir Winston Churchill acknowledged the vital importance of a strong air force and the pursuit of air superiority. In one of his famous quotes, he emphasized the significance of the Air force in winning the war and stated, "The Navy can lose us the war, but only the Air force can win it. Therefore, our supreme effort must be to gain overwhelming mastery in the Air. The Fighters are our salvation... but the Bombers alone provide the means of victory. In no other way at present visible can we hope to overcome the immense military power of Germany" (English n.d.).

In the present-day context, the air force serves as the backbone of the North Atlantic Treaty Organization (NATO), shouldering the responsibility of protecting and safeguarding the sovereign airspace of NATO members as an ongoing task in collective defense efforts. NATO's air power assumes a crucial role in supporting three core tasks: Collective Defense, Crisis Management, and Cooperative Security. These tasks encompass enhancing deterrence and defense capabilities, projecting stability beyond NATO's borders, and actively participating in the international community's fight against terrorism (NATO Publication, 2018). The recognition of the air force's significance, as demonstrated by Winston Churchill during the Battle of Britain, continues to resonate in the modern world. The NATO alliance relies on its air power to fulfill its commitments and objectives, underscoring the enduring importance and influence of air superiority in contemporary military strategies.

Following the collapse of the Soviet Union in 1991, Russia has pursued a resurgence of its global prestige and regional hegemony by revitalizing Soviet military traditions and modernizing its armed forces. Notable events such as the Russia-Georgia conflict in 2008, annexation of the Crimea Peninsula in 2014, the ongoing Russia-Ukraine war, and the modernization of the Russian Air Force and naval aviation, alongside the strategic deployment of advanced anti-air defense systems and the mass production of armored weapons, reflect Russia's assertive actions against NATO and neighboring countries. For example, in 2010, Russia conducted the test flight of the Sukhoi-57, the first fifth-generation jet in the Russian Air force. This aircraft combines attack and fighter capabilities and incorporates stealth technology, and innovative technologies. The Su-57 represents Russia's response to advanced U.S. planes such as the F-22 and F-35 (TASS, 2018a).

In response to these threats and to counter further Russian aggression, the U.S. has strategically introduced the F-35 stealth multirole combat aircraft to its NATO partners. As part of this endeavor, the U.S. plans to deploy F-35 squadrons in countries that face financial or operational challenges in acquiring the aircraft, while also facilitating its sale to key NATO members such as Italy, Britain, and Norway. Furthermore, the U.S. aims to exert leverage over NATO allies by pressuring them to terminate their arms deals with Russia, including agreements involving the S-400 air defense system and advanced military planes, thereby employing the F-35 as a decisive instrument in shaping the security landscape. Therefore, this research aims to comprehensively analyze the factors contributing to the augmentation of U.S. hegemony over NATO through the strategic sale of F-35s to counter Russia's threats.

The theoretical framework guiding this study is hegemony theory, asserting the extension of hegemonic power across nations, territories, regions, land, sea, or alliances. In multilateral alliances, the predominant hegemonic influences through varied means, encompassing charisma, morality, defense, assistance, deception, threats, intervention, or coercion. The establishment of joint commands within these alliances serves to protect shared interests, offering a theoretical underpinning for the assumptions explored in this research. The research posits that the U.S. aims to establish hegemony within NATO by cultivating technological interdependence through its state-of-the-art aircraft. This strategy is envisioned as a means to consolidate influence, allowing the U.S. to leverage its technological advantage for shaping the defense capabilities of fellow NATO members. Additionally, the study suggests that the U.S. may employ a nuanced approach by implementing restrictions and sanctions on the sale of the F-35. This tactic seeks to deter arms trade between NATO members and potential adversaries, thereby reinforcing the alliance's cohesion. Beyond its immediate impact on NATO dynamics, the deployment of the F-35 is theorized to function as a catalyst for non-NATO nations seeking alignment with the alliance. The allure of advanced capabilities inherent in the F-35 could serve as a powerful incentive for aspiring members, ultimately contributing to the expansion of NATO's hegemonic influence.

Literature Review

Numerous studies have sought to comprehend U.S. hegemony in the post-Cold War era. These studies can be categorized into three groups:

The first group examines the foundations of hegemony in international relations and the dynamics of alliances. G. Sørensen in "Introduction to International Relations: Theories and Approaches" asserts that each member in global politics tends to assert dominance over others (Sørensen et al., 2022:90). R. Cox (1987: 7), in "Production, Power, and World Order: Social Forces in the Making of History," emphasizes that the hegemonic force in world politics seeks to establish an order based on a broad measure of consent and functionality. J. Morgenthau, in "Analysis of the American Academy of Political and Social Science," identifies several factors that contribute to recognizing a state as a hegemon, such as geography, natural resources, industry, economic capacity, military strength, preparedness, population size, morale, unity, quality of diplomacy, government structure, and technological innovation (Morgenthau, 1965:13). Cox (1983) and L. Xing (2016) further elaborate on the three periods of various hegemonies from 1845 to 1875, 1875 to 1945, and from 1945 to the present (Xing, 2016:31-32; Cox, 1983:169). Additionally, G. Ikenberry and D. Nexon (2019) argue that contemporary hegemonic powers prioritize the logic and mechanics of hegemony as a distinct form of regional or global international order, rather than emphasizing hegemonic capabilities to sustain outcomes such as free trade or stable monetary systems (Ikenberry and Nexon, 2019:413-414). For instance, Ikenberry (2002) explains that hegemonic powers strive to neutralize objections to the existing order by redistributing insufficient capabilities to weaker secondary states (Ikenberry, 2002:9-10).

The second group examines the relationship between hegemony and weapon supremacy. Cox argues that nuclear weapons play a significant role in American security alliances, serving as a fundamental principle in regional security arrangements (Hayes, 1988:351). M. Dubey suggests that nuclear deterrence not only serves as a security doctrine but also contributes to maintaining dominance, hegemony, and the status quo (Dubey, 1985:28). For instance, nuclear power has been employed to monitor, control, reform, and penalize the nuclear ambitions of others, particularly subordinate members within alliances who defy hegemonic preferences. These actions, known as strategic inhibition, can be applied to both friends and adversaries, including aiding conventional arms sales, extending nuclear deterrence, imposing sanctions, and conducting military attacks. The United States has utilized such actions to coerce its allies, compelling countries like Germany, South Korea, and Taiwan to abandon their nuclear weapon programs (Gerzhoy, 2015:128). M. Griffiths and others argue that alliances offer benefits to their members, including offsetting defense costs and providing economic advantages to local economies. Alliances can contribute to maintaining a hegemonic continuum over allies by encouraging them to "bandwagon" with the great power rather than "balance" against it (Griffiths et al., 2008:23).

S. Hlatky and J. Rice (2018) contend that the U.S. is hesitant to fully capitalize on globalization in defense. This study examines the early stages of F-35 production, where U.S. co-developers faced a dilemma: endure economic/political fallout or opt out and suffer reputational/strategic consequences. The research underscores the impact of U.S. domestic policies and alliances on crucial foreign and defense policy decisions (von Hlatky and Rice, 2018: 35). M. Şengöz and M. Topcu (2016) underscored the imperative for the U.S. to produce the F-35, emphasizing the need to safeguard themselves and their allies against external threats. The study also cataloged challenges within the F-35 program, offering potential solutions to mitigate these issues (Sengöz and Topcu, 2016: 7). D. Trigaux (2012) highlighted the U.S. endeavor to widen the technological gap in military capabilities, particularly in air power and nuclear weapons, to maintain hegemony. However, China, recognizing the significance of rare earth materials to the U.S., strategically aims to narrow the military advantage distance by capitalizing on its access to these resources within its territory (Trigaux, 2012: 20).

According to B. Schreer (2019), NATO serves as a primary avenue for smaller states to gain access to U.S. military technology, training, logistics, maintenance, and crucial political support. Notably, countries such as Norway, Denmark, the Netherlands, and Belgium have opted for the F-35 Joint Strike Fighter, aligning themselves with NATO preferences. The research argues that the selection of the F-35 exemplifies the reliance of small states on U.S. hegemony for their security needs. Despite criticisms of NATO during the Trump administration, significant progress towards achieving greater European defense autonomy seems unlikely (Schreer, 2019: 15).

Building on this perspective, A. Emamifar and colleagues (2023) emphasize that military hegemony is contingent upon the quality and battlefield performance of weapons. Their study draws upon the example of the Ukraine-Russia war to illustrate how Russia is experiencing a gradual erosion of its military hegemony over India. This decline is attributed to the underwhelming performance of Russian weapons, exacerbated by the impact of Western sanctions on Russia. These sanctions have resulted in a reduced production rate and compromised performance of Research and Design Bureaus within the Russian army (Emamifar et al., 2023: 692). In consequence, Schreer and Emamifar's work sheds light on different aspects of military hegemony and its implications for smaller states and Russia, respectively. Access to advanced military technology through NATO contributes to security for smaller states, while the quality and performance of weapons play a crucial role in maintaining or eroding military hegemony.

One significant gap in prior research and existing literature, as mentioned, is the inadequate consideration of the impacts of modern warfare and advanced weaponry, especially in the post-annexation of the Crimea Peninsula era. This gap becomes even more evident given the intensification of major powers' use of sophisticated arms to enhance their hegemony, as exemplified by actions like the restrictions on exporting F-35s to Turkey following its purchase of the S-400 from Russia. This research and study is thus of paramount importance as it contributes to filling this existing gap by providing a distinctive perspective. It scrutinizes the dynamic interaction between the F-35 fighter jet and U.S. hegemony within NATO, shedding light on the influence of modern warfare in strengthening U.S. hegemony over the alliance. Moreover, it illuminates the previously underexplored implications of Russian threats against NATO members, emphasizing the significance of this aspect in the broader analysis.

Theoretical Framework

Hegemony is a prominent theory in international relations that posits countries strive to establish dominance over the entire system to deter other states or combinations of states from contemplating war (Sørensen et al., 2022:90). According to Sørensen and colleagues (2022), understanding hegemony provides a valuable framework for analyzing power dynamics and motivations behind countries' actions in the international system. In the context of the current study, examining the F-35 fighter jet and its impact on U.S. hegemony within NATO aligns with the principles of this theory. The possession and deployment of advanced weaponry, such as the F-35, contribute to a country's efforts to establish dominance and deter potential adversaries, offering a crucial perspective to further explore the intricacies of power dynamics within the evolving geopolitical landscape.

Hegemony in International Relations

According to Robert Cox, hegemony encompasses more than the mere dominance of a single world power. It entails the creation of an ideologically-based order that relies on broad consent and aims to perpetuate the supremacy of the leading state and its associated social classes (Cox, 1987:7). Most studies in international relations agree that coercion and influence are essential features of hegemony, while excluding forms of domination such as annexation, occupation, or territorial acquisition (Antoniades, 2008:3). Antonio Gramsci (1891-1937) distinguishes between two types of political control: domination based on coercion and hegemony based on consent (cited in Gill, 1993:62). He argues that hegemony is exercised through universal norms, institutions, and mechanisms that dictate general rules of behavior for states and transnational actors in civil society.

Several factors demonstrate the superiority of a hegemon, including but not limited to geography, natural resources, industry, economic capacity, military strength, preparedness, population size, morale, and unity, quality of diplomacy, government structure, and technological innovation (Morgenthau, 1965:13). Additionally, there is an alternative approach to hegemony outside the realm of traditional international relations that considers additional parameters. This approach seeks to overcome the limitations of conventional studies by focusing on the hegemon and the various types of power it employs to maintain its hegemony. According to the agential approach, hegemony is conceptualized as a relationship between agents and the other units/actors in the system (Antoniades, 2008:5). This perspective suggests that material incentives and substantive beliefs are two factors through which power can be exercised, securing the compliance of other nations. A hegemon can manipulate material incentives and influence members through threats and promises, thereby altering political or economic incentives (Ikenberry and Kupchan, 1990:286).

Hegemony and the World Order

Order emerges as a product of the ongoing process of adjustment among states under conditions of anarchy. A hegemonic state creates and upholds order to organize relations among states. The dominant state's superior power compared to others enables it to offer positive and negative incentives to other states in exchange for their continued participation within the hegemonic order (Ikenberry, 2002:9).

The neo-Gramscian approach views hegemony as a form of international order. According to this approach, an international hegemony establishes a ruling class and social forces, allowing it to assume a leading position within a nation-state and extend its influence globally, thereby shaping the international order. This approach considers various interconnected components in defining hegemony, including ideas, material capacities, institutions, social forces, forms of the state, world orders, and interactions between national and international actors and institutions (Cox, 1983:169). Cox examined U.S. hegemony through the lens of international organizations, assessing the legitimacy of the US-led world order by examining instruments such as rules, products, ideology, elites, and the introduction of counter-hegemonic ideas. This evaluation helps us understand how the hegemonic power can shape the development of the world system through national ruling classes and interest groups. It is structurally shaped and systematized by international organizations and regimes that enable the hegemon to maintain its advantageous position in the world order with the support of its core state allies (Xing, 2016:31-32).

A hegemonic power will challenge its opponents and suppress them. Excess power should be allocated not only for deterrence but also to extend the power's interests and influence throughout the entire system. It is important to exceed the capabilities of rivals by a comfortable margin in strategy, diplomacy, and the economy, while also ensuring sway over critical outcomes (Ikenberry, 2002:155). However, any reforms, whether voluntary or involuntary, should not undermine the core of hegemony—the economic order. Losing the economic order would lead to a loss of the material foundation on which the hegemon relies to sustain its dominance (Xing, 2016:32).

To understand the concept of hegemony and its operation in the world order, it is essential to examine the periods of various hegemonies. There have been three distinct periods of hegemony: from 1845 to 1875, 1875 to 1945, and from 1945 to the present.

The first period (1845-1875) encompassed a world economy with Great Britain at its center. During this period, Britain maintained the balance of power in Europe and held supreme control over sea routes, thus dominating markets (Cox and Sinclair, 1996:221).

In the second period (1875-1945), other countries challenged British supremacy. The balance of power in Europe became destabilized, and protectionism replaced free trade. This period can be characterized as non-hegemonic (Cox and Sinclair, 1996:221).

The third period (1945-present) saw the rise of the United States as the new global power, sharing many similarities with 19th-century Britain but with institutions and doctrines adapted to a more complex world economy and more sensitive national societies (Cox and Sinclair, 1996:221; Xing, 2016:32). The United States remains the sole remaining global superpower unaffected by war. Figure 1 provides an illustration of the foundation of the existing world order.



Figure 1. The four foundations of American Hegemony in the world order
Source: (Xing, 2016:33).

The Hegemonic Continuum

The presence of a nation-state endowed with superior military prowess, economic leverage, and political clout constitutes a defining characteristic of a superpower or an empire within the international order (Wyne, 2006:76). The theory of hegemonic stability posits that the dominance of a single actor is directly linked to cooperation and the effective functioning of the global economy. A dominant hegemonic power represents an optimal scenario for ensuring and upholding an open and stable world economy (Grunberg, 1990:431).

Bargaining emerges as one of the approaches to consolidate a hegemony. Hegemonic powers often grapple with the inherent tension between consent and coercion, as well as cooperation and contestation. Security and economic dimensions are two crucial pillars of hegemonic orders, and establishing order without addressing these dimensions poses significant challenges. Such challenges may arise from a group of secondary states that either support the hegemon's leadership or question the legitimacy of international rules and institutions. Nonetheless, these bargaining processes play a pivotal role in shaping the legitimacy and efficacy of hegemonic orders. Hegemons strive to cultivate partnerships and diminish the likelihood of secondary states challenging, sabotaging, or undermining the prevailing order. According to Mastanduno, the Cold War-era American hegemony relied on the aggregation of regional orders, facilitating strong partnerships with Japan and Western European states (Ikenberry and Nexon, 2019:413).

The second approach to stabilizing hegemony involves systemic incentives. In the post-Cold War era, the American hegemonic order shifted from reliance on partnerships and bargains to a greater emphasis on systemic incentives. Mastanduno argues that hegemonic powers are less likely to rely on their ability to sustain international outcomes like free trade or stable monetary systems. Instead, the focus shifts towards understanding the logic and mechanics of hegemony as a distinct form of regional or global international order. Meanwhile, Norrlof and Wohlforth contend that American hegemony is bound to decline due to escalating security costs and diminishing economic benefits. They suggest that reducing the costs of hegemony and increasing its benefits can be achieved through the use of social networks associated with military alliances (Ikenberry and Nexon, 2019:413-414).

Lastly, during a hegemonic order, weaker secondary states dissatisfied with their subordinate position may attempt, if feasible, to disrupt the existing order. Hence, another method of stabilizing hegemony involves hegemonic powers neutralizing such threats by redistributing inadequate capabilities to weaker secondary states. This action can be seen as establishing an informal imperial order, where coercive power serves to maintain the overall stability of the order (Ikenberry, 2002:9-10).

Russia's Threats to NATO and F-35's Role in Bolstering Deterrence

Russia's threats to NATO members can be categorized into three groups which are as follows:

The initial factor is posed by Russia's Air Threats, stemming from its historical legacy inherited from the Soviet Era, which endows it with the capacity to present multifaceted challenges to NATO members. The consistent production of maneuverable, cost-effective, and high-performing fighters and bombers has remained a pivotal aspect of Russia's military doctrine and defensive strategy. Russia's air threats to NATO can be categorized into two groups: 1) Supermaneuverable fighters and 2) Fifth-generation fighters.

The Russian Air Force possesses two supermaneuverable aircraft that pose significant threats to NATO fighters and bombers due to their agility and capabilities. These aircraft are the Sukhoi Su-30 and Sukhoi Su-35, both of which have the ability to defeat NATO planes in close combat or evade NATO's anti-aircraft missiles. The Sukhoi Su-30 and Su-35 are twin-engine fourth-generation heavyweight aircraft primarily designed for air superiority. The Su-30 exhibits exceptional maneuverability thanks to its 2-D thrust vectoring control, which allows the pilot to direct the engine's thrust in any direction, along with its canards. On the other hand, the Su-35 can carry up to 12 air-to-air guided missiles or six air-to-surface missiles in a single sortie. It is equipped with a powerful radar system capable of detecting aerial targets up to 400 kilometers away and engaging up to eight targets simultaneously (Chaudhry, 2021; Snow, 1990; Rostec, 2014). The Su-30's unique capabilities enable pilots to effectively challenge NATO planes such as the American F-18, F-15, and British and German Eurofighter Typhoon in close combat. In a close combat air exercise in 2015, the Indian Su-30 achieved a remarkable victory over the British Royal Air Force with a score of 12-0 (Haynes, 2015).

Another aircraft worth mentioning in this research is the Mikoyan MiG-31. While it may not be categorized as a supermaneuverable fighter, its formidable capabilities make it a worthy inclusion. Introduced in 1981, the MiG-31 serves as a high-speed interceptor designed to intercept and engage high-altitude, high-speed bombers, low-altitude cruise missiles, and low-level, high-speed threats. The aircraft's remarkable feature is its unmatched speed, surpassing that of any operational Western fighter today (Roblin, 2021). Additionally, the MiG-31 can eliminate opponent fighters and bombers with its R-37M missile, known as "The AWACS Killer," which boasts a maximum range of over 200 kilometers, depending on the engagement geometry and target radar cross-section (Barrie, 2019; IBP, 2013). Also, the concept of a fifth-generation fighter revolves around five key characteristics: stealth, high maneuverability, advanced avionics systems, multirole capabilities, and network capabilities (Hollings, 2021). The Sukhoi Su-57, a Russian-made fifth-generation multirole fighter, encompasses these features. It incorporates stealth technology and utilizes composite materials extensively, allowing for supersonic cruising speed. The aircraft is equipped with a powerful onboard computer known as the electronic second pilot and features a distributed radar system across its body. It boasts a high degree of maneuverability and has an internal payload capacity (TASS, 2022). Further details of the Su-57's capabilities have yet to be revealed. However, in 2018, Russian President Vladimir Putin announced that the fighter would be equipped with the hypersonic Kh-47M2 Kinzhal missile, capable of carrying a nuclear payload and possessing a range of 2,000 kilometers, making it difficult to detect by air defense systems (TASS, 2018b; Episkopos, 2021). Although the production line for the Su-57 is currently limited in capacity and efficiency, Russia's Aerospace Force is expected to receive 76 Su-57 aircraft by 2027 (Axe, 2022). Additionally, in 2021, Russia introduced the Sukhoi Su-75 Checkmate as its new fifth-generation fighter. The aircraft boasts various appealing specifications such as reduced fuel consumption, stealth characteristics, advanced artificial intelligence (AI), an advanced onboard computer, and the ability to coordinate with drones. These features may attract potential foreign buyers (Carlin, 2022). Rostec's United Aircraft Corporation (UAC) plans to manufacture 300 single-engine light tactical fighter jets, including the Su-75 Checkmate, over the next 15 years (TASS, 2021).

The second factor comprises Russia's Air Defense Threats. The Soviet Union and its successor, Russia, have consistently emphasized their air defense strategy. Faced with technological disparities compared to the United States, the Soviet army heavily leaned on their air defense units to counter U.S. bomber and reconnaissance planes attempting to breach Soviet airspace. This reliance on air defense units has continued in Russia, as they seek to bridge the gap between their aerospace technology and that of the U.S. military. This research aims to explore Russian medium and long-range air defense systems, which are crucial to NATO's defense plan. Specifically, the focus will be on the S-400, as it stands out with its unique features not found in the arsenals of other NATO members or China. The S-400 Triumph is a fourth-generation air and missile defense system designed to protect valuable military, economic, and political targets from enemy air attacks, ballistic missiles, and cruise missiles (Episkopos, 2020). In a test conducted by the Chinese army in 2018, the S-400 defense system successfully intercepted a simulated ballistic missile target, which was moving at a speed of three kilometers per second, at a distance of nearly 250 kilometers (Indiatimes, 2018). The S-400's capabilities and its absence of equivalent systems in other NATO members' and China's arsenals make it a significant subject of analysis in this research. Understanding its features and effectiveness will provide valuable insights into the air defense capabilities of Russia and their implications for NATO's defense planning.

The final factor involves Russia's Ground Force Threats. Both the Soviet Union and its successor, Russia, have consistently deemed their Ground forces as a pivotal element in addressing NATO members. The substantial power and readiness of the Red Army's tanks and artillery enabled Soviet strategists to formulate a plan known as "Seven Days to the River Rhine," aiming to repel or eliminate NATO forces and reunify Germany under East Germany in a remarkably brief seven-day timeframe. (Watt, 2005). Despite the Russian military's poor performance and significant losses in the Russia-Ukraine war, it remains a formidable and robust force due to its extensive combat experience in various conflicts, including the World Wars, the Georgia War, the Syria War, the Chechen Wars, and valuable experiences gained during the Cold War. Moreover, Russia currently possesses the second strongest military in the world and maintains a substantial tank fleet comparable to that of the United States and China (Hecht, 2022). The Russian military could exhibit significant power and maneuverability if it were able to neutralize enemy air activities and establish air superiority. A comparison between the

Russian military and NATO member states reveals that Russia's army is noticeably larger than that of most NATO countries, including Poland, Estonia, Latvia, and Lithuania. This suggests that if Russia were to launch a surprise attack on these NATO members, these countries would likely lose their territories within the initial weeks of the conflict. Consequently, recapturing these territories would exact a heavy toll on NATO members or risk escalation into a nuclear war.

In February 2022, prior to the Russian invasion of Ukraine, Russia already had control over approximately 17,000 square miles of Ukrainian territory, equivalent to the size of New Jersey. However, since then, Russia has expanded its occupied territory in Ukraine by almost threefold. Presently, Russia controls approximately 20% of Ukraine's land, amounting to about 47,000 square miles (Hayda et al., 2022). During the illegal annexation of four oblasts (administrative regions) in Ukraine, Russian President Vladimir Putin went so far as to threaten NATO with the use of tactical nuclear weapons if Ukrainian forces posed a threat to the Russian occupation (Alberque, 2022). Table 1 provides a comparison between the armies of Russia, Poland, Estonia, Latvia, and Lithuania, outlining various aspects of their respective military capabilities.

Table 1. A comparison between the Russian, Polish, Estonian, Latvian, and Lithuanian army

Item	Russia	Poland	Estonia	Latvia	Lithuania
Active Personnel	900,000	114,000	7,100	6,250	22,000
Reserve	2,000,000	Not Determined	17,500	11,000	7,100
Tanks	12,000	800	Not Determined	Not Determined	Not Determined
Armored Vehicles	29,000	4,000	200	260	570
Artillery	13,000	550	75	60	70

Source: (The International Institute for Strategic Studies (IISS) 2021:98).

In the recent Russian-Ukraine war, the performance of Russian tanks and their commanding officers was noticeably poor. The Russian military has suffered significant tank losses, with reports indicating that at least 774 tanks have been lost since the invasion of Ukraine. The primary reason for these losses can be attributed to the effectiveness of Western anti-tank guided missiles (ATGMs) and armed drones employed by Ukrainian forces (The Economist, 2022). However, it is important to note that the new generation of Russian tanks, such as the T-14 Armata, represents a departure from the design principles of older models like the T-72 and T-80. The T-14 Armata incorporates several key advancements, including the sensible decision to enclose the crew within an armored compartment while retaining the autoloader mechanism. Additionally, the Armata boasts the advantage of an active protection system (APS) equipped with radar sensors that can detect incoming rounds and deploy projectiles to intercept and neutralize them (The Economist, 2022). It is evident that if Russia had allocated sufficient military resources and budget towards the design and mass-production of these new tanks, the outcome of their next conflict could have been significantly different.

The F-35's Role in Bolstering Deterrence

The F-35 Lightning II is a fifth-generation variant and multiservice air system. This plane is capable of outstanding fighter-class aerodynamic performance, supersonic speed, all-aspect stealth with weapons, and highly integrated and networked avionics (Wiegand, 2018:1). The F-35's capabilities to challenge the Russian Armed Forces categorized as Air-Superiority, Air-Defense threats, and massive ground forces will be discussed in the next section.

The F-35 can control the sky over the European battlefield with Russia because of its superior technology and mass production. The F-35 indeed holds significant superiority over both Russian fifth-generation and fourth-generation fighters, owing to its advanced technology and radar-absorbent materials. The F-35's cutting-edge mission systems, long-range, high-resolution sensors, advanced targeting capabilities, computing power, extended weapons range, and guidance systems set it apart. Moreover, its enemy targeting sensors analysis and AI combat system enable weapon firings with unprecedented levels of guidance technology, while its ability to jam enemy weapons guidance systems and intercept communications further enhances its combat effectiveness. While the Russian Su-57 incorporates various attributes associated with stealth aircraft, such as internally buried engines, thermal

management, and radar-absorbent coating materials, its stealth characteristics are not as pronounced as those of the F-35 (Osborn, 2021d). As a result, the F-35 possesses the capability to detect and engage supermaneuverable fighters like the Su-30 and Su-35 using long-range air-to-air missiles before being detected by hostile aircraft.

Also, the Russian military currently maintains a limited fleet of fifth-generation stealth fighters. Officials from Russia have confirmed their intention to acquire approximately 76 Su-57 aircraft (Osborn, 2021b). However, it is estimated that Russia currently possesses fewer than 10 Su-57s in active service, and there is no evidence to suggest that this aircraft has been deployed in Ukraine (Culp, 2022). In contrast, the U.S. Air Force already operates a significant fleet of F-35As, with 280 aircraft in service and plans to acquire an additional 1,763 units. The U.S. Air Force also has plans to manufacture 353 F-35Bs and 67 F-35Cs for the Marine Corps, along with 273 F-35Cs for the Navy (Osborn, 2021a).

The F-35's remarkable capabilities extend to the detection and engagement of anti-air defense systems through its advanced electronic warfare system. This system enables the F-35 to passively detect emissions from enemy air defense systems and accurately geo-locate these targets in conjunction with its other integrated systems. The F-35 can effectively neutralize these threats by employing anti-radiation missiles. The U.S. Air Force foresees the F-35, with its stealth characteristics, assuming a pivotal role as the primary weapon for conducting suppression of enemy air defense missions in the near future (Leone, 2020). An assessment conducted by a Hellenic Air Force Colonel, comparing the radar detection capabilities of stealth aircraft, suggests that the S-400 system may be able to target aircraft such as the F-35, albeit at a range of approximately 35 kilometers from the S-400 radar system (Zikidis et al., 2014:154; Throm, 2016). In light of this analysis, it is challenging to envision a scenario where the F-35 would be at a disadvantage in a one-on-one confrontation with the Russian S-400 system.

In the realm of the U.S. Army, the F-35, while not officially designated as a close air support aircraft, possesses a formidable capability to provide support to friendly forces, allowing for a reduction in the number of troops conventionally deemed necessary for stability operations. Notably, the F-35 showcases its close air support proficiency through the utilization of precision air-to-ground weapons, which enable the tracking and engagement of enemy ground targets from extensive standoff distances. This lethal machine further benefits from its incorporation of advanced tank-killing technology, granting it the ability to effectively neutralize heavy armor vehicles. Particularly noteworthy is the StormBreaker, an air-launched precision weapon capable of tracking and destroying multiple moving targets at impressive ranges of up to 75 kilometers. Remarkably, the F-35 has the capacity to carry up to 20 StormBreakers during a single mission, amplifying its impact on the battlefield (Osborn, 2021a).

Discussion

The F-35 is poised to strengthen U.S. hegemony over NATO members for several reasons. In the face of contemporary threats from the advanced military technology of Russia, China, and their allies, NATO is compelled to acquire cutting-edge weaponry to counter these challenges. This research elucidates how the U.S. can fortify its hegemonic position by leveraging the F-35 as a strategic trump card in addressing and overcoming these evolving security threats.

Making NATO Members Dependent on U.S. Weapons and Technology

One approach to stabilize and reinforce hegemonic power involves the strategic use of arms transfers and military aid. These measures aim to shape the attitudes and beliefs of key actors towards the hegemonic power, illustrating how such assistance and transfers can bolster the hegemonic power (Krause, 1991:327). The provision of arms creates a system of feudal dominance, wherein clients become reliant on a single supplier, leading them to resist significant changes to the existing world order. Moreover, arms transfers establish a pattern of cumulative dominance that generates economic and technological dependencies (Kinsella, 1998:8). For instance, arms sales can result in the replication of the military-industrial complex of the supplying/hegemonic power (Barnett and Wendt, 1992:101).

The F-35 indeed provides the United States with a significant advantage within NATO due to its advanced capabilities and the lack of immediate alternative options for European countries to counter Russian threats. As mentioned, the F-35 is considered more capable than other fourth and fifth-generation aircraft currently available. While European countries have initiated the development of new stealth aircraft to compete with the F-35 and Russian counterparts like the Su-57 and Su-75, the

completion and deployment of these new models are projected to be far into the future. The Tempest aircraft, developed by the United Kingdom, aims to incorporate cutting-edge technology and maintain the country's global leadership in combat air capabilities. However, its projected delivery date is set for 2035, which means it will be some time before it can replace the existing Eurofighter Typhoon aircraft. In 2017, Germany, France, and Spain initiated the Future Combat Air System (FCAS) project to replace their respective fighter aircraft, the France Rafale and the German Eurofighter. This new fighter is expected to outperform the F-35 in terms of capabilities, but production is slated to begin around 2040 (Aboulafia, 2022). Consequently, other NATO members seeking to safeguard their airspace should explore alternative solutions, such as the available fifth-generation F-35 aircraft from the United States. Currently, several NATO member states, including Finland, Belgium, Poland, Denmark, Italy, Norway, the United Kingdom, and the Netherlands, operate or have orders for F-35 variants (Reuters, 2022; Atlamazoglou, 2022). Moreover, Greece, Spain, the Czech Republic, Romania, and Germany have expressed interest in acquiring the F-35. This widespread interest underscores the recognition of the F-35's superior production capabilities, advanced technology, and performance (Alizadeh and Emamifar, 2022: 18).

Furthermore, the cost of each F-35, exclusive of maintenance, simulation, and miscellaneous expenses, is significantly lower than that of its counterparts. The heightened global demand for this fighter has played a pivotal role in reducing its overall cost. As depicted in Table 2, despite being a fifth-generation aircraft with stealth capabilities, the price of the F-35 is notably lower than other European, American, and Asian alternatives. This affordability becomes a compelling incentive for NATO members, motivating them to invest in F-35s to fortify their territories against potential threats. The remarkable demand for this aircraft has even resulted in the closure of production lines for some advanced fighters like the F-18 Super Hornet. Consequently, NATO members weigh the combination of price, quality, and stealth capabilities of the F-35 as a strategic opportunity to secure their territories, establishing a direct dependence on the United States for the procurement of F-35s.

Table 2. The Cost of Leading Fighter Jets

Fighter	Generation	National origin	Estimated Cost
F-16 Fighting Falcon	4	United States	63\$ million USD
F/A-18 Super Hornet	4	United States	67\$ million USD
F-35 Lightning II	5	United States	85\$ million USD
JAS 39 Gripen	4	Sweden	85\$ million USD
Rafale	4	France	107\$ million USD
J-20	5	China	110\$ million USD
F-15EX Eagle II	4	United States	117\$ million USD
Eurofighter Typhoon	4	Multinational	120\$ million USD

Source: (Murray, 2023; Seibt, 2021; Venckunas, 2023)

In addition to its strategic military advantages, the F-35 program presents compelling opportunities for international industrial collaboration with the U.S. defense industry. Participating countries have the chance to engage in the manufacturing of specific components of the aircraft, fostering economic benefits and technological expertise. By hosting F-35 parts production lines, these nations not only contribute to the global defense supply chain but also address domestic employment concerns, potentially lowering unemployment rates within their defense sectors. Furthermore, this collaborative framework opens avenues for shared benefits and revenues derived from F-35 production. For instance, Lockheed Martin facilitates domestic production of around 400 F-35 canopies and transparencies. Plans also include establishing a maintenance hub in Switzerland to support European F-35 users in maintaining canopies and transparencies, along with the establishment of a Swiss cyber center of excellence (Insinna, 2021). Additionally, active participation may confer a priority status, ensuring these countries receive F-35 squadrons ahead of other customers, adding an element of strategic advantage and timely access to cutting-edge military capabilities. The latest defense report from the Canadian

government highlights Canada's initial intent to replace its aging CF-18 fleet with the F-35. However, due to budget constraints and cost escalation within the F-35 program, Canada withdrew from the Joint Strike Fighter (JSF) initiative as outlined in its new defense policy. Over a decade later, Canada expressed interest in rejoining the project, only to discover that the advantages and bonuses it once enjoyed had been forfeited. Consequently, this has led to a prolonged timeline for the acquisition of F-35s, shifting from the initially projected reception in 2018 to the extended timeframe of 2026. Consequently, Canada has found itself compelled to forge a collaboration with the U.S. Air Force stationed in Alaska bases. (Defense, 2023). These industrial linkages further deepen the interdependence between European countries and the United States, as they rely on the U.S. for advanced technology and production capabilities. The F-35's superiority in terms of production rate, technology, performance, and cost has resulted in European countries becoming reliant on the U.S., which, in turn, aids in addressing threats from Russia.

Imposing Limits and Excluding Members from the F-35 Jet Programme

A hegemonic power employs various coercion tools, such as sanctions, threats, and political pressure, to advance its objectives and assert dominance over rebellious states (Destradi, 2008:16). Coercion is exemplified by the actions taken by a hegemon when it perceives a state as a source of threat, aligning its behavior with the desired outcomes or values of the threatening party. These actions may include issuing warnings regarding the transfer of technology, suspending export purchases, or even terminating valued treaties between the two states (Myers, 2019:38).

An illustrative example of the U.S.'s concerted efforts to prevent NATO members from acquiring advanced Russian weapons and safeguard the integrity of its stealth capabilities and technology is observed in the case of Turkey. Despite being one of the initial customers for the F-35 and participating in The Joint Strike Fighter (JSF) program, the U.S. banned the sale of F-35s to Turkey. The Joint Strike Fighter (JSF) program represents a monumental endeavor in the defense industry, aiming to design and produce the versatile F-35 aircraft to meet the diverse requirements of various armed forces. Turkey's involvement in the JSF program had the potential to provide significant opportunities for Turkish defense industries, including ASELSAN, AYESAŞ, and Fokker Elmo, to participate as subcontractors and benefit from work shares (Lockheed Martin, 2021). In 2014, Turkey initially placed an order for 30 F-35 fighters, which was later increased to 100 F-35s in subsequent months (konular, 2018). However, the partnership between Turkey and the JSF program faced suspension and discontinuation due to rising tensions between the United States and Turkey. The strained relationship between the two countries jeopardized Turkey's participation in the program and its ability to benefit from the technological advancements and economic opportunities associated with the F-35 project. Turkey's aspiration has long been to enhance its military capacity, establish a self-sufficient arms industry, and reduce dependence on Western suppliers by the year 2053 (Wasilewski, 2019:1). As a result, Turkey made the decision to acquire the S-400 air defense systems, becoming the third country, following Belarus and China, to receive such systems and the first NATO member to purchase the S-400 (Gabrielyan, 2022:54).

In 2019, Turkey began receiving the S-400 air defense systems from Russia, which raised concerns among NATO officials regarding their compatibility with the F-35 fighter and the potential compromise of NATO's air defense system. It was argued that the S-400 system had the capability to detect the F-35's stealth capabilities, posing a risk to the integrity of NATO's defense infrastructure (Akca, 2020). According to NATO officials, the S-400 radars have the potential to identify vulnerabilities in stealth capabilities, detect radar and sensor systems, target systems, communication links, and friend-or-foe identification systems, among others (Tucker, 2019). As a consequence of Turkey's decision to acquire the S-400 system from Russia, the United States imposed sanctions under the Countering America's Adversaries through Sanctions Act (CAATSA) (Pompeo, 2020). These sanctions have had significant implications for Turkey, including restrictions on the granting of export licenses and authorizations for goods and technology. The impact of the sanctions has been felt particularly in Turkey's defense industry, which heavily relies on imported parts for the production of high-quality export products. The Turkish Armed Forces, for example, have faced delays in projects such as the Altay tank due to a lack of appropriate engines and transmissions. Additionally, Turkey's military export revenue has been affected, leading to challenges such as the inability to fulfill a sale of 30 units of T129 ATAK helicopters to Pakistan worth \$1.5 billion due to the U.S. embargo (TRT World, 2022; Işık, 2021). Also, the

exclusion of Turkey from the F-35 program has had significant implications for the capabilities and aspirations of the Turkish Air Force and Navy. The Turkish military's ability to effectively challenge and compete with the Hellenic Air Force has been impacted by this development. Greece, on the other hand, has bolstered its air force through the acquisition of 24 fourth-generation Rafale fighter jets from France and is planning to further enhance its capabilities by procuring at least 20 F-35A aircraft from the United States. This shift in the strategic balance in favor of Athens (Greece) poses a challenge for the Turkish Air Force (Gabrielyan, 2022:59).

This practice extends even to U.S. allies outside of NATO, where the U.S. actively seeks to dissuade its allies from procuring advanced weaponry and technologies from U.S. adversaries. An exemplar of this approach is evident in the case of the United Arab Emirates (UAE), a non-NATO U.S. ally. The UAE suspended its negotiations to purchase 50 F-35s shortly after normalizing relations with Israel under the 2020 Abraham Accords. Emirati officials revealed that the U.S. requested the UAE government refrain from acquiring Huawei's 5G mobile phone network from China. The concern stemmed from the U.S. apprehension that the extensive Huawei 5G network in the UAE, comprising numerous cell towers, could potentially gather intelligence on the stealth aircraft without the Emirati government's knowledge (Iddon, 2023).

Motivating Non-NATO Members to Join NATO

The United States has assumed a dominant role as a structuring force, primarily driven by its unparalleled military strength, which safeguards its foreign interests and effectively neutralizes significant challenges (Larsen, 2020:28). Moreover, the dynamics of state interactions can be influenced by the establishment and negotiation of institutions. Within NATO, the United States has redefined the security landscape by replacing anarchical structures, such as the balance of power, with hierarchical structures based on hegemonic governance. This shift has resulted in a framework of institutional governance within NATO, where the less powerful states willingly subscribe to the leadership of the United States (Gilpin, 1981; Ruchhaus, 2007:177).

Joining NATO offers non-NATO members a valuable opportunity to enhance their air defense systems by integrating into a collective force equipped with 5th-generation aircraft. Acquiring F-35s would enable non-NATO members to establish their own fleet of advanced fighters and collaborate with a multinational network of F-35s, thereby strengthening their security capabilities (Osborn, 2022a). Finland's strategic position in the region surpasses its existing borders with Estonia, Latvia, Lithuania, Poland, and Norway, as it shares a 1300-kilometer border with Russia. Notably, its proximity to Saint Petersburg, Russia's second-largest city, which is less than 160 kilometers away, further underscores its significance. The country's history of conflict with the Soviet Union from 1939 to 1944 resulted in territorial losses of approximately 10% and the displacement of 11% of its population. This challenging past, accompanied by substantial war indemnities totaling \$300 million (equivalent to around 4.9 billion euros or \$5.3 billion today), adds to the gravity and context of Finland's security concerns (Kauranen and Ahlander, 2022).

While Finland has not formally joined NATO, its airspace has witnessed repeated violations following the Russian Federation's annexation of Crimea in 2014. These violations have escalated further in the wake of the Russian invasion of Ukraine, exemplified by instances such as the breach of Finnish airspace by two Russian Mig-31 fighter jets in August 2022 (Aljazeera, 2022). To address these evolving security challenges and reinforce its defense capabilities, Finland made the strategic decision in 2022 to procure 64 F-35s for the modernization of its air force, specifically targeting the interception of Russian bombers and fighters (Osborn, 2022b).

The acquisition of the F-35 by Finland could indeed play a pivotal role in Finland's decision to join NATO. The introduction of the F-35 into the Finnish Air Force would facilitate enhanced collaboration with the Air Forces of Norway, Poland, Denmark, and the Netherlands. A notable advantage of the F-35 is its secure data-link, which enables seamless connectivity and information exchange among all F-35 aircraft. This capability facilitates the sharing of targeting, surveillance, and intelligence data, thereby enabling integrated and coordinated operations that serve as a potent deterrent. The presence of F-35s in the Baltic region would significantly augment the combat readiness and response time to intercept Russian fighters and bombers. This increased proximity and quick response capability would bolster regional security and provide a robust defense against potential Russian threats (Osborn, 2022a).

Furthermore, the deployment of F-35s in Finland and the Baltic States would pose a significant challenge to the Russian S-400 air defense system stationed in Kaliningrad, enhancing the overall defensive posture of the region (National Post, 2022). This is important as joining or remaining within NATO provides nations with a collective security framework, strengthening their defense capabilities and deterring potential aggression. The mutual support and commitment among NATO members foster a sense of unity, ensuring a coordinated response to security challenges and promoting stability in the region. Joining NATO also provides access to shared intelligence, military expertise, and resources, further enhancing a nation's security and strategic position.

Conclusion

This study employs hegemony theory to scrutinize the impact of F-35 sales on U.S. dominance within NATO, a pertinent inquiry amidst escalating Russian threats. Against the backdrop of the Russia-Ukraine War and recurrent airspace violations, NATO members are compelled to fortify defenses against potential aggression. The export of the F-35 augments U.S. hegemony through multifaceted dimensions. Firstly, it champions military interoperability, cultivating a unified defense network and aligning member states with U.S. military standards. Secondly, F-35 sales solidify strategic alliances, fostering mutual dependence as NATO nations rely on U.S. technology, maintenance, and support. Thirdly, it amplifies U.S. regional influence by deploying advanced military hardware, fortifying American leadership in the geopolitical arena. Additionally, the F-35 acts as a potent deterrent, enhancing collective deterrence and fortifying overall alliance security. Economic ties forged through F-35 exports deepen reliance on U.S. capabilities, establishing the U.S. as a pivotal ally. The F-35 ensures NATO's technological edge, underpinning the alliance's security posture and highlighting U.S. leadership in military innovation. Ultimately, political alignment achieved through F-35 sales strengthens NATO members' cohesion under U.S. leadership, consolidating American influence. This research contends that U.S. hegemony within NATO is poised to endure due to its technological superiority, particularly in aerospace technology. While some NATO members engage in fifth-generation fighter development, the U.S. strides towards sixth-generation fighters, showcasing unprecedented advancements and stealth capabilities. This trajectory underscores the pivotal influence wielded by technological superiority, positioning those at its forefront to shape the global order. In conclusion, as the U.S. continues to lead in military innovation and maintain its technological edge, it is poised to solidify its dominant position within NATO, bolstering alliance cohesion and safeguarding collective security in the face of evolving geopolitical challenges.

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