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STRUCTURAL CONDITIONS AND STRATEGIC IMPLICATIONS OF SOUTH KOREA–SWEDEN DEFENCE INDUSTRIAL COOPERATION

Abstract:

The international security environment has undergone significant transformation following Russia's invasion of Ukraine, resulting in accelerated military build-ups in Europe and a restructuring of global defence-industrial cooperation. In this context, South Korea and Sweden, as technologically advanced middle powers, face growing incentives to strengthen their defence industries and expand international cooperation. Despite increasing political engagement, however, systematic analyses of the structural conditions underpinning defence-industrial cooperation between the two countries remain limited.

The purpose of this study is to compare the defence-industrial structures of South Korea and Sweden and to analyze the strategic implications of bilateral cooperation. The study employs Michael Porter's Diamond Model as the primary analytical framework, complemented by SWOT and TOWS analyses to identify strengths, weaknesses, opportunities, and threats and to formulate strategic cooperation options.

The findings indicate that South Korea and Sweden possess complementary strengths: South Korea benefits from large-scale production capacity, cost competitiveness, and strong government-led export support, while Sweden holds a competitive advantage in high-end technological niches such as aerospace, sensors, submarines and systems integration. At the same time, constraints related to export controls, industrial scale, and geopolitical considerations are identified. The study concludes that a gradual and institutionally anchored cooperation strategy can enhance industrial competitiveness and strategic autonomy for both countries, provided that political and regulatory risks are carefully managed.

Keywords: Defence industry, Defence cooperation, Middle powers, Porter's Diamond Model, SWOT and TOWS analysis

Strukturella förutsättningar och strategiska implikationer av försvarsindustriellt samarbete mellan Sydkorea och Sverige

Sammanfattning:

Den förändrade internationella säkerhetsmiljön efter Rysslands invasion av Ukraina har lett till en omfattande upprustning i Europa och en omstrukturering av globala försvarsindustriella samarbeten. I detta sammanhang har både Sydkorea och Sverige, som teknologiskt avancerade stater, fått nya incitament att stärka sina försvarsindustrier och utveckla internationellt samarbete. Trots ökade kontakter och politiska initiativ saknas dock systematiska analyser av de strukturella förutsättningarna för försvarsindustriellt samarbete mellan dessa två länder.

Syftet med denna studie är att jämföra de försvarsindustriella strukturerna i Sydkorea och Sverige samt att analysera de strategiska implikationerna av ett fördjupat bilateralt samarbete. Studien använder Michael Porters diamantmodell för att analysera nationell konkurrenskraft, kompletterad med SWOT- och TOWS-analyser för att identifiera samarbetsmöjligheter och formulera strategiska handlingsalternativ.

Resultaten visar att Sydkorea och Sverige uppvisar komplementära styrkor: Sydkorea kännetecknas av storskalig produktionskapacitet, kostnadseffektivitet och starkt statligt exportstöd, medan Sverige besitter avancerad teknologisk kompetens inom nischområden såsom flyg, sensorer, u-båt och systemintegration. Samtidigt identifieras begränsningar kopplade till exportkontroller, industriell skala och geopolitiska hänsyn. Studien drar slutsatsen att ett stegvis, institutionellt förankrat samarbete kan bidra till ökad industriell konkurrenskraft och strategisk handlingsfrihet för båda länderna, under förutsättning att politiska och regulatoriska risker hanteras på ett medvetet sätt.

Nyckelord: försvarsindustri, försvarssamarbete, medelstora stater,
Porters diamantmodell, SWOT- och TOWS-analys

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1. Introduction

1.1. Research Background and Problem Statement

As the international security environment moves toward the middle of the twenty-first century, it is facing overlapping structural transformations, including the Ukraine war, strategic competition between the United States and China, and simultaneous military buildups in Europe and the Indo-Pacific region (SIPRI, 2025a). In particular, Russia's invasion of Ukraine in 2022 significantly heightened threat perceptions across Europe, triggering the most rapid expansion of military expenditure and restructuring of defence industries since the end of the Cold War (Andersson, 2023; SIPRI, 2025a). European states have mobilized extensive efforts to rebuild military capabilities that had been reduced over several decades and to restore defence supply chains, which has in turn intensified debates on defence industrial integration and external cooperation, while also driving structural transformations in European defence supply chains toward greater resilience, long-term partnerships, and supranational coordination (Hellberg and Lundmark, 2025). These changes in the international environment and the transition toward a new security order require middle powers such as South Korea and Sweden—states that have maintained relatively stable identities within the previous security framework—to explore new strategic options along multiple directions.

Sweden, in particular, had long adhered to a policy of traditional military non-alignment. However, in response to repeated territorial violations by Russia and its invasion of neighboring states, Sweden applied for NATO membership in 2022 and formally joined the Alliance in 2024. In parallel, the Swedish government has pursued historically unprecedented increases in defence spending and an ambitious strategy to strengthen its defence industrial base. Sweden's military expenditure increased by SEK 26.6 billion in the Budget Bill for 2026, reaching approximately 2.8 percent of GDP (Government Offices of Sweden, 2025a). Furthermore, the Defence Industry Strategy for a Stronger Sweden, published in June 2025, formally articulated the modernization of Sweden's defence industry by emphasizing innovation, production capacity, and international cooperation, with a particular focus on expanding ammunition production, strengthening air and missile defence and drone capabilities, and securing long-range precision strike capabilities (Government Offices of Sweden, 2025b).

Meanwhile, South Korea has consistently strengthened its self-reliant defence capabilities under the structural security constraints posed by the persistent North Korean nuclear threat and the division of the Korean Peninsula. Since the early 2000s, successive defence reform initiatives have directed substantial resources toward advanced force development and military structural reform (Ministry of National Defense [MND], 2022). More recently, South Korea has accelerated policies aimed at fostering its defence industry as a high-tech strategic sector and a key driver of exports (Paik, 2024). As a result, South Korea's defence expenditure has increased steadily over the period 2020–2024, growing at an annual rate of approximately 3–5 percent and remaining consistently 2.6 percent of GDP. In parallel, South Korea's arms exports, measured in SIPRI Trend Indicator Values (TIV), exhibit a marked upward trajectory following a temporary decline in 2021–2022. From a low point of 220 TIV in 2022, arms exports rose sharply to 631 TIV in 2023 and further to 964 TIV in 2024, indicating a rapid expansion of South Korea's role in the global arms market after the Ukraine war (SIPRI, 2025b).

The above changes in defence expenditure and arms exports in South Korea and Sweden are summarized in **Table 1**.

Table 1. Trends in Defence Expenditure and Arms Exports in South Korea, Sweden

	Indicator	2020	2021	2022	2023	2024
South Korea	Defence expenditure (USD)	46,497	48,523	47,504	47,801	48,473
	Defence expenditure (% of GDP)	2.6	2.6	2.6	2.6	2.6
	Arms exports (TIV)	772	510	220	631	964
Sweden	Defence expenditure (USD)	6,519	7,185	7,962	8,754	11,718
	Defence expenditure (% of GDP)	1.2	1.2	1.3	1.5	2.0
	Arms exports (TIV)	266	239	83	375	381

Note: Data are sourced from SIPRI. Arms exports are measured in Trend Indicator Values (TIV)

These developments in both countries have generated strong incentives to enhance industrial competitiveness through expanded defence exports and international cooperation. In particular, in the aftermath of the war in Ukraine, Sweden's accession to

NATO and South Korea's deepening engagement as a NATO partner have served as critical turning points in redefining the roles of both countries within a rapidly evolving international security environment. Within this context, the renewal of the Memorandum of Understanding (MOU) on Defence Cooperation between South Korea and Sweden, which includes key areas such as information exchange, joint research and development, and military technology cooperation, at the Seoul Defence Dialogue (SDD) in September 2025, demonstrated the potential for a substantial expansion of bilateral cooperation as both countries recalibrate their strategic identities (Shim, 2025).

Moreover, the growing prospects for bilateral cooperation are not limited to symbolic or one-off events. They have been further substantiated by the first-ever reciprocal visit of the South Korean Minister of National Defence to Sweden in November 2025, underscoring the increasing institutionalization and continuity of defence cooperation between the two countries. **Table 2** illustrates the key changes exhibited by South Korea and Sweden in the period following the outbreak of the war in Ukraine.

Table 2. Key Post-Ukraine War Developments in South Korea and Sweden

Date	Event
May 2022	Sweden applies for NATO membership
July 2022	South Korea participates in the NATO Madrid Summit as a partner country
Nov 2022	South Korea establishes a diplomatic mission to NATO
July 2023	NATO-Korea Individually Tailored Partnership Programme (ITPP) approved
Mar 2024	Sweden becomes a full member of NATO
July 2024	NATO and South Korea sign an agreement on mutual recognition of military airworthiness certification
Mar 2025	South Korea joins NATO's Science & Technology Organization (STO)
Mar 2025	High-level meeting between the head of Korea's Defense Acquisition Program Administration(DAPA) and the Swedish Defence Minister
Sep 2025	Renewal of the Korea–Sweden defence cooperation Memorandum of Understanding (MOU) in Seoul (vice-ministerial level meeting)
Nov 2025	First official visit by the Minister of National Defence of South Korea to Sweden (ministerial-level meeting)

However, despite the fact that both South Korea and Sweden are technologically advanced middle powers with robust defence industrial capabilities, they differ significantly across a range of conditions, including their security environments, alliance

structures, industrial scale, and export control regimes. South Korea operates within a security architecture centered on the ROK–U.S. alliance, supported by a large domestic market and a well-developed civil–military dual-use industrial ecosystem (FOI, 2026). Sweden, by contrast, has historically maintained a tradition of military non-alignment, possesses a relatively small domestic market, and operates within the regulatory and normative framework of the European Union (FOI, 2025a). Consequently, defence industrial cooperation between South Korea and Sweden extends beyond simple arms transactions and constitutes an intriguing test case for how middle powers with distinct structural conditions can build strategic partnerships in the defence sector. Such cooperation holds the potential not only to create new market opportunities for defence firms in both countries, but also to form a new axis of security and industrial cooperation linking Europe and Asia.

1.2. Research Objectives and Research Questions

The objective of this study is to systematically compare and analyze the structural conditions of the defence industries of South Korea and Sweden, and on this basis to derive the strategic implications of defence industrial cooperation between the two countries. To this end, the study addresses the following research questions:

- RQ1: ***What characteristics define the factor conditions, demand conditions, related and supporting industries, firm strategy and competitive structure, government roles, and chance factors of the defence industries in South Korea and Sweden, respectively?***

- RQ2: ***Based on these structural conditions, what strengths, weaknesses, opportunities, and threats can be identified with regard to defence industrial cooperation between South Korea and Sweden?***

- RQ3: ***Taking these factors into account, how can defence industrial cooperation between South Korea and Sweden be designed from short-, medium-, and long-term perspectives, and what kind of policy roadmap can be envisaged?***

To address these questions, this study adopts a three-stage analytical approach. First, Michael Porter's Diamond Model of national competitive advantage (Porter, 1990) is employed as the overarching analytical framework. Second, the comparative findings derived from this analysis are reorganized through SWOT analysis (Helms and Nixon, 2010). Third, cooperation strategies are formulated using the TOWS matrix (Weihrich, 1982). Conceptually, the study follows a logical sequence in which the foundations for cooperation are diagnosed through structural analysis (Porter's Diamond), internal strengths and weaknesses as well as external environmental factors are classified through SWOT analysis, and actionable cooperation strategies are prescribed through TOWS-based strategic formulation. Through this approach, the study aims to contribute theoretically by identifying the determinants of national competitiveness in the defence industry, and practically by presenting a strategic blueprint for defence industrial cooperation between South Korea and Sweden.

1.3. Research Scope and Structure of the Study

The substantive scope of this research is set at the macro level of defence industrial structures and policy environments, rather than at the level of technical details of individual weapon systems. That is, instead of analyzing the performance characteristics of specific platforms such as tanks or aircraft, the study focuses on comparing the underlying structures of human resources, technology, markets, institutions, and strategic frameworks that shape defence industries. Temporally, the analysis encompasses the rapid changes that have emerged since Russia's invasion of Ukraine in 2022 and extends to the most recent developments observed in the mid-2020s. Geographically, the primary focus is on South Korea and Sweden; however, in order to contextualize bilateral cooperation, security and industrial trends within the EU, NATO, the Indo-Pacific region are also considered secondary factors.

To date, direct comparative analyses of the defence industries of South Korea and Sweden in this form have been extremely limited, with the study by Kwon (2023) being one of the few notable exceptions. In contrast to existing research, this study advances the literature by incorporating post–Ukraine war transformations in the international security environment, changes in the roles of both countries, and the expanded possibilities for bilateral cooperation.

The structure of the thesis is as follows. Chapter 2 outlines the theoretical background, including the concept of middle-power cooperation, Porter's Diamond Model, and the SWOT/TOWS analytical framework. Chapter 3 presents the research design and methodology, explaining the rationale for the case study approach, data sources, and analytical procedures. Chapter 4 compares the defence industrial structures of South Korea and Sweden based on Porter's model and synthesizes the findings into SWOT factors. Chapter 5 constructs a TOWS matrix on the basis of the SWOT analysis and proposes short-, medium-, and long-term strategies and a policy roadmap for defence industrial cooperation between South Korea and Sweden. Finally, Chapter 6 summarizes the main findings of the study, discusses their theoretical and policy implications, and suggests directions for future research.

2. Theoretical Background

2.1. The Concept and Significance of Middle Power Cooperation

In international politics, the term middle power refers to states that do not possess the military or economic capabilities of great powers, yet seek to exercise a certain degree of influence on regional and global issues and to contribute to the formation of norms and institutions (Jordaan, 2003). Traditionally, middle powers have tended to rely less on raw military power and more on forms of "indirect influence," such as multilateralism, norm entrepreneurship, and mediation, seeking to compensate for their limited hard power through creative diplomacy (Ravenhill, 1998; Petersson Ivre, 2025).

Middle power cooperation refers to the process by which such states coordinate policies, form networks, and align with one another in pursuit of shared diplomatic, security, and economic objectives, particularly within multilateral settings. By engaging in what is often described as "niche diplomacy," middle powers can play roles in mitigating competition among great powers or in advancing new agendas within the international system. At the same time, such cooperation is not without challenges, as it requires reconciling shared values and interests with differing regional contexts and foreign policy priorities (Ditrych & Kučera, 2022).

Although geographically distant, South Korea and Sweden are frequently cited as representative cases of middle-power diplomacy. South Korea has been characterized as a "bridge state," leveraging its development experience, advocacy of free trade and participation in United Nations peacekeeping operations to position itself between developed and developing countries, as well as between great powers and smaller states (Kim, 2016). Sweden, by contrast, has cultivated the image of a "moral middle power" through its long-standing tradition of military non-alignment, among the world's highest levels of ODA per capita, and its commitment to humanitarian diplomacy through the United Nations (OECD, 2025).

These middle-power identities offer two important implications for defence industrial cooperation between South Korea and Sweden. First, they suggest a foundation of shared values and norms. Both countries emphasize liberal democratic principles, human rights, and the rule of law, and have sought to apply international norms and transparency to arms exports. As a result, it may be relatively easier for them to reach common ground on issues such as the peaceful use of dual-use technologies and

responsible arms exports to third countries. Second, however, middle-power cooperation is inherently subject to strategic constraints. When cooperation among middle powers conflicts with the interests of major powers, it may entail diplomatic costs or economic retaliation (Lim and Ferguson, 2022). Consequently, defence industrial cooperation between South Korea and Sweden must account not only for commercial benefits, but also for consistency with their diplomatic identities and roles as middle powers.

2.2. Porter's Diamond Model: Analyzing the Structure of National Competitive Advantage

In *The Competitive Advantage of Nations*, Michael Porter (1990) identifies four broad categories of factors that determine a country's ability to achieve international competitive advantage in a particular industry. This framework is commonly referred to as Porter's Diamond Model. The four core determinants are factor conditions, demand conditions, related and supporting industries, and firm strategy, structure, and rivalry, which interact dynamically to shape the performance of national industries (Porter, 1990: 71–73). Porter further incorporates the roles of government and chance as auxiliary factors, resulting in an analytical framework often depicted as a diamond with six interrelated facets. This model is illustrated in **Figure 1**.

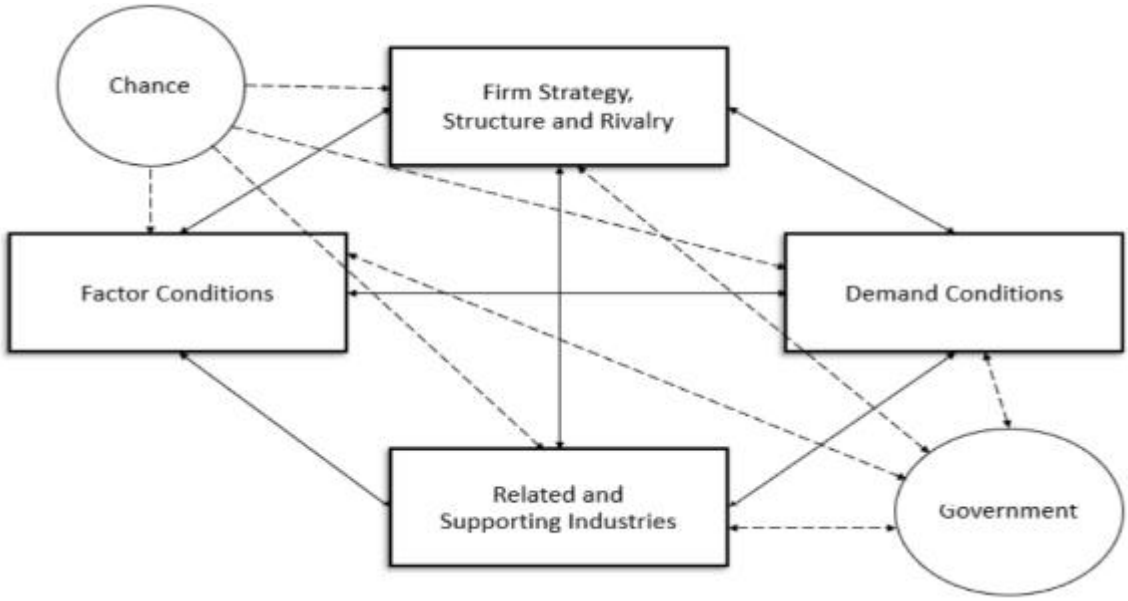

Figure 1. Porter's Diamond Model (Porter, 1990: 127)

Factor conditions refer to the level and quality of the "inputs" required for industrial production. These include not only the traditional economic factors of land, labor, capital, and natural resources, but also the skill level of the workforce, technological capabilities, research and development capacity, and infrastructure. Porter emphasizes that competitive advantage derives not primarily from "endowed factors," such as natural resources, geographical conditions, or other inherited advantages, but from "created advanced factors" generated through education, training, and innovation (Porter, 1990: 77).

Demand conditions denote the size and sophistication of the domestic market. The larger and more demanding domestic demand is, the greater the pressure on firms to innovate and improve quality, thereby enhancing international competitiveness (Porter, 1990: 86–87). In particular, "sophisticated" domestic demand continuously challenges firms to develop products capable of competing at the global level.

Related and supporting industries refer to the level of development of supply chains, component suppliers, and service industries connected to a given sector. The presence of industrial clusters facilitates innovation, cost reduction, and the diffusion of knowledge (Porter, 1990: 100–101).

Firm strategy, structure, and rivalry encompass corporate governance, management culture, and the nature of domestic competition. Porter argues that intense domestic rivalry "trains firms for success in international markets," functioning as a school that disciplines firms through competition (Porter, 1990: 117). National differences in corporate strategies and organizational cultures also shape industrial competitiveness.

Although Porter's Diamond Model was originally developed to explain competitiveness in general manufacturing and service industries, recent scholarship suggests that it can also be applied to strategic sectors such as the defence industry, where market dynamics are heavily shaped by state intervention and security imperatives (Mueller, 2025). In particular, the defence market differs from civilian industries in that governments frequently act not only as regulators but also as dominant buyers and, in some cases, as owners or strategic sponsors of firms. Moreover, external security shocks and shifting threat perceptions can rapidly reshape demand, production priorities, and investment decisions. Mueller (2025) employs the Diamond Model as an organising framework while conceptualising "government" and "chance" as analytically active

forces rather than peripheral add-ons.

Rather than providing a complete explanation of defence-industrial dynamics, the Diamond Model remains valuable as a structuring device for organising complex causal factors and enabling cross-national comparison. In this study, Porter's model is adopted as the primary framework for structural analysis, while the distinctive characteristics of the defence industry are incorporated through an explicit and active consideration of government and chance factors, in line with Mueller's (2025) approach. Specifically, after comparing the four core determinants, the analysis extends to each country's industrial policies, procurement and regulatory settings, and the broader international security environment. This integrated approach supports a more comprehensive understanding of competitive advantage in the defence industry, where political, security, and economic logics intersect rather than operate independently.

2.3. SWOT and TOWS Analysis: Diagnosing Competitive Advantage and Formulating Strategy

SWOT analysis is a classic strategic tool used to identify an organization's or project's internal strengths and weaknesses, as well as external opportunities and threats, in a concise and intuitive manner. Owing to its simplicity and clarity, SWOT analysis has been widely applied not only in corporate management, but also in policy evaluation and project planning (Pickton and Wright, 1998). Its principal advantage lies in its ability to summarize complex situations into a four-quadrant framework that readily communicates key insights to decision-makers. However, scholars have also criticized SWOT analysis for its tendency to devolve into a mere "listing" of advantages and disadvantages, without providing clear strategic direction (Helms and Nixon, 2010).

The TOWS matrix was introduced by Heinz Weihrich of Harvard Business School in 1982 as a method for generating concrete strategies by systematically combining the elements identified through SWOT analysis (Weihrich, 1982). The acronym TOWS reverses the order of SWOT and distinguishes four types of strategies: SO strategies(leveraging strengths to exploit opportunities), ST strategies(using strengths to mitigate threats), WO strategies(addressing weaknesses in order to exploit opportunities), and WT strategies(minimizing weaknesses and avoiding threats). Through this process, analytical findings are translated into actionable strategic

prescriptions (Helms and Nixon, 2010). For example, an organization with abundant strengths and opportunities may pursue SO strategies oriented toward aggressive growth, whereas one facing both significant weaknesses and threats may adopt WT strategies focused on defensive retrenchment. Helms and Nixon (2010) highlight that many SWOT analyses fail precisely because they do not connect analytical outcomes to subsequent strategic action, and therefore advocate the use of the TOWS matrix to operationalize combinations of strengths and opportunities and to mitigate weaknesses and threats.

In this study, insights derived from the comparative analysis based on Porter's Diamond Model are first reorganized into a SWOT matrix and subsequently developed into TOWS-based strategies. This process is intended to bridge abstract analysis and concrete policy recommendations. In summary, Porter's Diamond Model corresponds to the stage of diagnosis, SWOT analysis to classification, and the TOWS matrix to prescription(Weihrich, 1982). This three-stage approach represents an academic attempt to integrate theories of national competitiveness with strategic management theory, while also offering practical utility by generating a feasible roadmap for defence industrial cooperation.

3. Research Design and Methodology

3.1. Case Study Design: The Rationale for Comparing South Korea and Sweden

This study adopts a multiple case study strategy that conducts an in-depth comparative analysis of South Korea and Sweden (Yin, 2018). These two countries are selected because, while both are technologically advanced middle powers with established domestic defence industrial bases, they have followed markedly different security and alliance trajectories. This contrast enhances the analytical balance and explanatory potential of the comparison. One case, South Korea, has developed its defence industry within a divided-state security structure centered on the ROK–U.S. alliance, whereas the other case, Sweden, represents a transitional security structure that maintained military non-alignment for decades before recently acceding to NATO. Although both countries share common characteristics—such as middle-power status, a strong orientation toward advanced technologies, and a commitment to self-reliant defence—they differ substantially in terms of alliance alignment, domestic market size, and export control practices.

This research design corresponds to what comparative social science literature describes as a most-similar systems design that allows key variables to be controlled while isolating the effects of critical contextual differences (George and Bennett, 2005). In other words, similarities between the two cases facilitate the identification of general factors shaping defence industrial cooperation, while differences enable the analysis of how specific contextual variables influence outcomes.

In addition, the selection of these cases is timely, as the two countries have recently begun to institutionalize defence industrial cooperation. Following the renewal of the bilateral defence cooperation MOU in 2025, and amid intensified discussions on South Korea–NATO defence cooperation after Sweden's accession to NATO, South Korea–Sweden defence industrial cooperation has the potential to emerge as a new axis of middle-power collaboration linking Europe and the Indo-Pacific. **Figure 2** illustrates the defence industrial capabilities of South Korea and Sweden in 2022, showing that even prior to the outbreak of the Ukraine war, the two countries occupied comparable positions. This suggests that, under current transformative conditions, cooperation can be initiated from relatively balanced starting points rather than being skewed in favor of one side. Consequently, this background underscores that the present analysis extends

beyond theoretical comparison and can be meaningfully connected to practical policy recommendations.

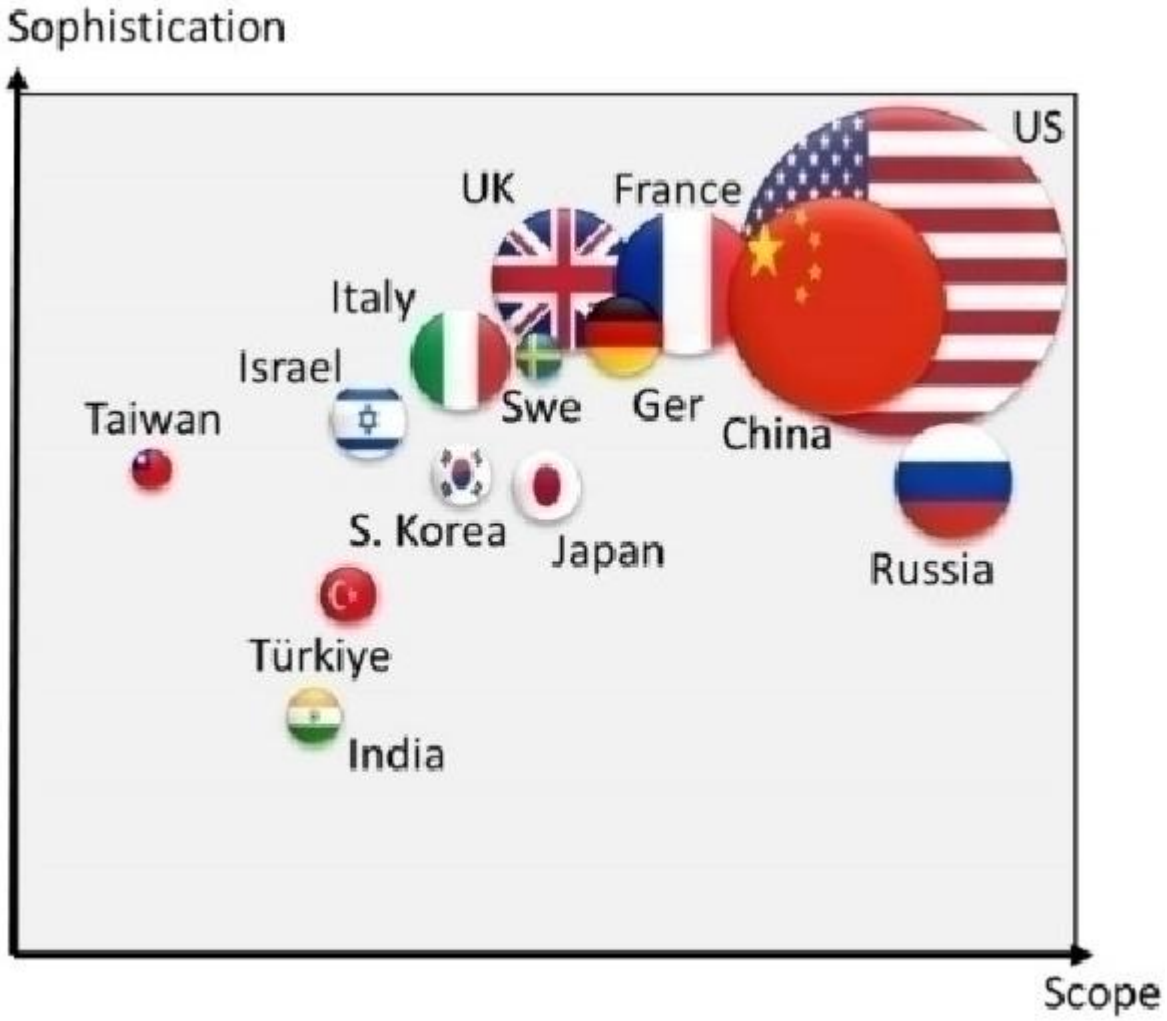

Figure 2. Comparison of the Largest Defence Industrial Countries, 2022

* Source : FOI (Swedish Defence Research Agency) (2025), Defence Industrial Outlook 2025.

To enhance comparative validity, the same analytical framework—Porter's Diamond Model—and an identical set of analytical questions are applied to both cases (Yin, 2018). The unit of analysis is defined as the national defence industrial base, encompassing major defence firms, research institutions, government agencies, institutional arrangements, and markets within each country (Nicastro, 2024). This macro-level perspective enables the identification of sources of competitive advantage and cooperation, while references to specific weapon systems or firm-level cases are used only illustratively to exemplify broader structural characteristics.

3.2. Data Collection: Official Documents and Secondary Sources

Data collection is conducted primarily through a document-based research approach that combines official government materials (primary sources) with academic and policy-oriented publications (secondary sources). Government and public-sector materials include publications from South Korea's Ministry of National Defense (MND), as well as reports from Sweden's Ministry of Defence and the Swedish Defence Research Agency (FOI). These documents provide up-to-date statistics, institutional perspectives, and policy orientations, forming the core empirical foundation for the structural analysis.

In addition, materials from international organizations and think tanks are incorporated, including arms expenditure and trade statistics from OECD, SIPRI, and the World Bank, official statements from NATO, analytical reports from institutions such as the French Institute of International Relations (IFRI) and Sweden's Institute for Security and Development Policy (ISDP). Sources in English, Korean, and Swedish are used, and multilingual cross-referencing is conducted where necessary to enhance data accuracy. Specialized defence media outlets, including Defence News and Reuters, are used selectively to supplement the analysis with publicly available industry perspectives and contemporary case developments.

To complement documentary sources, the study also draws on practitioner-oriented insights obtained through informal expert interactions, including discussions with military practitioners and defence professionals from South Korea and Sweden, as well as academic–professional seminars conducted at the Swedish Defence University. These interactions are not treated as systematically collected interview data, but rather as contextual inputs that support interpretation, triangulation, and analytical reflection. Publicly available interviews with defence industry executives are likewise referenced selectively to illustrate evolving strategic narratives within the defence market.

By drawing on a wide range of quantitative and qualitative materials, the research seeks to enhance both validity and reliability through methodological triangulation. To mitigate common limitations of document-based research—such as time lags, selective reporting, or author bias—the study prioritizes recent sources, cross-verifies key datasets across institutions, and adopts a balanced interpretative approach when divergent perspectives appear in the literature.

3.3. Analytical Procedure: Porter → SWOT → TOWS

The analytical procedure consists of three sequential stages, as outlined below.

3.3.1. Porter's Diamond Analysis

First, for both South Korea and Sweden, the four core determinants—factor conditions, demand conditions, related and supporting industries, and firm strategy, structure, and rivalry—are examined alongside the roles of government and chance. Drawing on the theoretical framework outlined in the previous chapter, qualitative coding is employed to systematically analyze the collected data. This stage enables a structured identification of each country's strengths and weaknesses at the structural level.

3.3.2. Integrated SWOT Analysis

Second, the key findings derived from the Porter-based analysis are reorganized into a SWOT matrix. In this step, strengths and weaknesses are defined in terms of shared or complementary internal capabilities that can be jointly leveraged by both countries. For example, South Korea's large-scale production capacity combined with Sweden's advanced technological expertise is classified as a strength of cooperation, whereas South Korea's dependence on foreign suppliers for critical components and Sweden's limited mass-production capacity are categorized as weaknesses. Opportunities and threats are conceptualized as external environmental factors affecting both countries. For instance, the expansion of European defence spending following the Ukraine war is treated as an opportunity, while the tightening of EU regulations on extra-regional procurement is identified as a threat. This classification allows for a simultaneous assessment of internal capabilities and external conditions shaping bilateral cooperation.

3.3.3. Derivation of TOWS Strategies and Scenarios

Finally, TOWS-based strategies are derived from the SWOT matrix. Cooperation strategies are formulated across the four strategic combinations (SO, ST, WO, and WT), with concrete policy options proposed for each. For example, an SO strategy may involve joint development of advanced technologies, supported by a roadmap that includes the conclusion of joint R&D agreements in the short term, prototype development and testing in the medium term, and joint exports in the long term. Similarly, a WT strategy may emphasize confidence-building through cooperation in non-military domains, such

as the joint development of disaster-relief drones. This phased approach ensures a coherent logical progression from structural diagnosis, through factor classification, to strategic formulation, thereby reinforcing the internal consistency of the analysis.

Table 3. Research Design and Analytical Framework

Stage	Related Research Question	Analytical Tool / Method
0	Background & Problem Definition	Contextual analysis
1 (RQ1)	How do the defence-industrial structures of South Korea and Sweden differ?	Porter's Diamond Model
2 (RQ2)	What are the strengths, weaknesses, opportunities, and threats of South Korea–Sweden defence-industrial cooperation?	SWOT Analysis
3 (RQ3)	What strategic cooperation options can be derived from the SWOT analysis?	TOWS Matrix
4	Strategy Implementation	Roadmap design

As summarized in **Table 3**, the above procedures generate concrete analytical outcomes in Chapters 4 and 5 for each research question, corresponding respectively to the Porter-based comparative analysis and the SWOT/TOWS-based strategic recommendations. This methodological design represents an attempt to combine the analytical depth of qualitative case study research with the practical utility of strategic analysis tools. Ultimately, the study implements a multi-layered analytical approach that respects the contextual specificity of each case while drawing insights from general theory and translating them into policy-relevant recommendations.

4. Analysis Results

4.1. Comparative Analysis of Defence Industrial Competitiveness

4.1.1. Factor Conditions

4.1.1.1. South Korea

The factor conditions of South Korea's defence industry can be broadly characterized by a skilled workforce, advanced manufacturing technologies, and large-scale industrial infrastructure. South Korea has successfully transferred production technologies and process management capabilities accumulated in civilian manufacturing sectors into the defence sector (Paik, 2024). In addition, sustained government investment has led to the development of a robust research and development infrastructure centered on the Agency for Defense Development (ADD), reflecting a state-driven innovation model highlighted in recent defence-industrial analyses (Paik, 2024; FOI, 2026). Entering the 2020s, South Korea has pursued a policy objective of expanding defence R&D expenditure to approximately 10 percent of the total defence budget, with a particular focus on future warfare domains such as AI, unmanned systems, space, and cyber capabilities (MND, 2022). As a result, South Korea has secured indigenous development capabilities for major platforms, including the K2 main battle tank, K9 self-propelled howitzer, and the KF-21 fighter aircraft, which are frequently cited as emblematic outcomes of South Korea's industrial catch-up trajectory (Paik, 2024).

Nevertheless, complete technological self-reliance has not yet been achieved across all areas. Dependence on foreign technologies persists for certain critical components and materials, particularly in propulsion systems, advanced sensors, and high-end electronics, reflecting structural limitations identified in comparative assessments of Korea's defence industry (Paik, 2024; FOI, 2025b). Fighter engines, AESA radars, and satellite navigation systems have relied largely on U.S. and European technologies, and although South Korea successfully launched its first indigenous military reconnaissance satellite in 2023, its optical technologies are still assessed to draw heavily on foreign technological baselines (Paik, 2024). Accordingly, South Korea's factor conditions can be summarized as a "broad industrial base with partially incomplete core technologies." That said, overall industrial capabilities are rapidly improving, and the government has announced plans to achieve self-reliance in key components and equipment by the early 2030s (MND, 2022).

4.1.1.2. Sweden

Although Sweden's population of approximately 10 million is significantly smaller than the population of South Korea, the country possesses highly advanced factor conditions concentrated in aerospace, underwater systems, sensors, and electronic warfare. Historically, Sweden maintained a technologically sophisticated defence-industrial base capable of developing combat aircraft, submarines, surface vessels, and advanced sensor systems, reflecting a long-standing ambition to safeguard essential security interests through domestic capabilities (Lundmark, 2019; Lundmark, 2022).

This legacy remains visible in contemporary Swedish platforms such as the Gripen multirole fighter and advanced submarine programs developed for operations in the Baltic Sea environment, which illustrate Sweden's comparative strengths in system integration, software-intensive architectures, and naval stealth design (FOI, 2025a). At the same time, Sweden's defence research and technology trajectory has not followed a consistent expansion. Following the post–Cold War restructuring period, defence R&T/FoT funding declined significantly and remained constrained for several years, before recent changes in the European security environment renewed political and strategic attention toward defence innovation and capability development (Lundmark, 2019; Hellberg and Lundmark, 2025).

A structural limitation of Sweden's factor conditions lies in its restricted industrial scale. The small domestic market and the contraction of the defence industrial base after the Cold War have constrained large-volume production and rapid surge capacity despite high technological sophistication (Lundmark, 2022; Andersson and Britz, 2025). Recent policy initiatives—including NATO-related cooperation and updated defence industry strategies—seek to mitigate these constraints through selective capacity expansion and closer integration with European defence supply chains (FOI, 2025a).

Taken together, **Figure 3** and **Figure 4** highlight the contrasting factor conditions underpinning the defence industries of South Korea and Sweden. While both countries possess advanced technological bases shaped by sustained defence innovation, South Korea's industrial structure remains constrained by incomplete technological self-reliance in certain key components, whereas Sweden's primary limitation lies in restricted industrial scale and limited mass-production capacity.

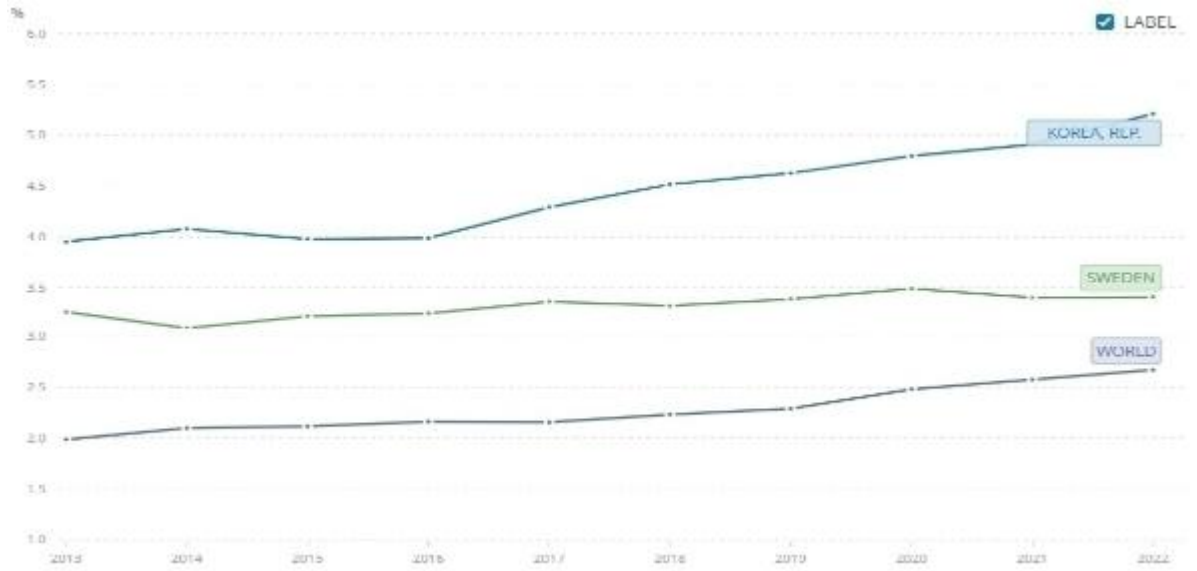

Figure 3. National R&D Expenditure as a Share of GDP in South Korea and Sweden

* Source: World Bank (2025). World Development Indicators.

Country	Combat Aircraft	Attack Hel	MBT	IFV	SP Art	Surface Comb	Subs
1. US	D	D	D	D	D	D	D
2. China	D*	D*	D*	D*	D*	D	D*
3. UK	P	I*	D	D	D	D*	D
4. France	D	C	D	D	D	D*	D
5. Russia	D	D	D	D	D	D	D
6. Italy	P	D	D	D	C	D*	C
7. Israel	I	I	D	D	I	D*	I*
8. Germany	C	C	D	D	D	D*	D
9. S. Korea	I	P	D*	D*	D	D*	D*
10. Japan	I*	I	D	D	D	D*	D
11. Türkiye	I	C	I	P	I*	P	I*
12. India	I*	P	P	I*	P	D*	I
13. Sweden	D*	–	I	D	D	D	D
14. Taiwan	P	I	I*	-	I*	P	I
15. Singapore	I	I	I	D	D	P	I

D = domestically developed and produced equipment, D* = mainly domestically developed and produced with some imported equipment or large share of imported components, P = partly domestically developed and produced equipment, C = developed and produced through cooperation, I = imported equipment, I* = mainly imported equipment with local production or components- - = country does not have equipment in service.

Figure 4. Defence Industrial Development and Production Capabilities of Selected Countries

* Source : FOI (Swedish Defence Research Agency) (2025). Defence Industrial Outlook 2025.

4.1.2. Demand Conditions

4.1.2.1. South Korea

South Korea's demand conditions are shaped by a dual structure combining strong domestic demand driven by persistent security threats and rapidly expanding overseas demand. Domestically, the need to maintain readiness against North Korea's nuclear and missile capabilities has required continuous modernization across major platforms, including the K2 tank, K9 howitzer, naval systems, and next-generation fighter programs, creating technologically demanding procurement conditions for domestic firms (MND, 2022; FOI, 2026). From Porter's perspective, this reflects a sophisticated domestic market that pressures firms to innovate and upgrade capabilities (Porter, 1990: 86).

Externally, global demand for South Korean weapons surged in the early 2020s amid European rearmament following the Ukraine war. Large-scale contracts with Poland—covering K2 tanks, K9 howitzers, FA-50 aircraft, and rocket artillery systems—demonstrated a model combining rapid delivery, competitive pricing, and local production arrangements, which significantly increased Korea's visibility in the European defence market. Similar procurement interest from several European states further illustrates how rising overseas demand has reinforced Korea's export-oriented defence industry trajectory (Paik, 2024; FOI, 2026).

In response, the South Korean government has pursued an explicit strategy to expand defence exports through export financing, government-to-government arrangements, and integrated military diplomacy. These policies have enabled domestic firms to benefit simultaneously from demanding national requirements and expanding foreign markets, generating economies of scale and accelerated learning effects within the defence industrial base (Paik, 2024).

4.1.2.2. Sweden

Sweden's demand conditions have undergone significant transformation over time rather than reflecting a constant export-dependent structure. During the Cold War and into the late 1990s, domestic procurement accounted for the majority of defence production—approximately 70 percent—reflecting Sweden's emphasis on territorial defence and national self-sufficiency (Lundmark, 2019). However, post–Cold War force reductions and declining defence budgets led to a contraction in domestic demand, prompting Swedish defence firms to rely increasingly on export markets to sustain

production and technological capabilities (Lundmark, 2022; Hellberg and Lundmark, 2025).

In recent years, this trajectory has begun to shift again. Russia's actions in Ukraine and the deterioration of the regional security environment triggered a reassessment of national defence priorities, resulting in renewed emphasis on domestic procurement and long-term capability planning (Hellberg and Lundmark, 2025; FOI, 2025b). Central to this change is the Swedish Defence-Industrial Strategy—the country's first official national strategy of its kind—which explicitly identifies the domestic defence industry as a strategic national asset and calls for strengthened national production capacity alongside deeper European and NATO cooperation (Government Offices of Sweden, 2025b; Andersson and Britz, 2025).

Taken together, Sweden's demand conditions can be understood as evolving from a historically domestic-driven model to an export-oriented structure after the Cold War, and more recently toward a hybrid configuration in which revitalized domestic demand complements continued reliance on international markets. This shift reflects not only changing threat perceptions but also deliberate government efforts to reframe defence procurement as a tool for strengthening industrial resilience and strategic autonomy.

In summary, South Korea exhibits a dual demand structure characterized by a large and sophisticated domestic market alongside rapidly expanding export demand, whereas Sweden's demand conditions have evolved from a historically domestic-driven model toward a more export-oriented structure after the Cold War and are now showing signs of renewed domestic procurement. South Korean firms operate under simultaneous pressures from domestic and international customers, while Swedish firms are navigating a gradual rebalancing between export reliance and strengthened national demand. These contrasting demand conditions suggest both opportunities for complementarity and coordination challenges in bilateral cooperation. South Korea's large-scale production capacity may align with Sweden's efforts to expand domestic procurement, while Sweden's established export-oriented industrial networks provide potential avenues for collaboration. At the same time, differences in policy cycles and market orientation underscore the need for careful alignment in future cooperation.

4.1.3. Related and Supporting Industries

4.1.3.1. South Korea

South Korea's defence industry is closely embedded within a broad civilian manufacturing ecosystem structured around large diversified conglomerates, commonly referred to as *chaebol*. These conglomerates—such as Hyundai and Hanwha—combine activities across automotive, electronics, chemicals, and energy sectors, enabling extensive spillovers of civilian technologies into defence production. This *chaebol*-based industrial structure has facilitated rapid scaling, vertical integration, and system-level coordination in defence manufacturing, including armored vehicles, missile systems, and naval propulsion (Paik, 2024; FOI, 2026).

In addition to large firms, South Korea benefits from strong civilian ICT, semiconductor, and energy-storage sectors, from which dual-use technologies are increasingly transferred to defence applications through government-led civil–military cooperation programs. Such mechanisms support the integration of advanced electronics, communications, and power systems into modern weapons platforms and reinforce the depth of the defence-industrial supply chain (MND, 2022; FOI, 2026).

At the same time, critical assessments persist. While *chaebol* dominance has strengthened system integration capabilities, it has also constrained the role of small and medium-sized enterprises at higher tiers of the defence value chain. Continued reliance on foreign suppliers for certain high-end components—such as aircraft engines and composite materials—creates supply chain vulnerabilities that limit full technological autonomy (Paik, 2024; FOI, 2026). In response, the government has launched localization initiatives targeting strategically important defence components, aiming to raise domestic content levels over the medium term (MND, 2022).

4.1.3.2. Sweden

Sweden's related and supporting industries are relatively limited in scale but highly specialized, reflecting a long-standing ecosystem built around advanced engineering, telecommunications, metallurgy, and naval systems. Historically, collaboration between major system integrators and technologically advanced subcontractors has enabled high-quality niche capabilities despite a small domestic industrial base (Lundmark, 2019; FOI, 2025a). Civil–military technological overlap has been particularly visible in communications, sensors, and materials engineering, where Swedish firms have

developed internationally competitive expertise.

At the same time, structural constraints have shaped the supporting industrial base. Post–Cold War consolidation and market pressures led to significant foreign ownership within parts of the defence sector, integrating into broader European industrial networks while also raising questions about long-term technological autonomy (Lundmark, 2022). In response, Sweden's first official defence-industrial strategy emphasizes strengthening domestic supply chains, supporting SMEs and innovation actors, and reinforcing cooperation between government, industry, and research institutions to sustain critical capabilities (Government Offices of Sweden, 2025b).

In sum, South Korea's defence industry benefits from strong integration with civilian manufacturing and a broad supplier base, but continues to face challenges related to conglomerate dominance and reliance on imported core technologies. Sweden, by contrast, derives strength from specialised high-end technologies and advanced system-integration capabilities, yet remains constrained by a small domestic market and limited production scale. If cooperation deepens, South Korea's mass-production capacity and industrial base could complement Sweden's niche technological strengths, while Swedish advanced components and system design expertise could enhance the performance of South Korean platforms. At the same time, issues related to technology protection, intellectual property, and regulatory coordination would require careful prior alignment.

4.1.4. Firm Strategy, Structure, and Rivalry

4.1.4.1. South Korea

South Korea's defence firms are largely organized as comprehensive system integrators embedded within large diversified conglomerates (*chaebol*), including Hanwha Aerospace, Hyundai Rotem, and LIG Nex1. Supported by group-level capital, industrial networks, and close institutional ties with the Defense Acquisition Program Administration (DAPA), these firms dominate the domestic procurement market, where competition is often limited to one or two prime contractors per major platform (Paik, 2024; FOI, 2026). This structure reflects both the strategic nature of defence procurement and the distinctive organizational characteristics of Korea's chaebol-based industrial system.

Rather than intense domestic rivalry, South Korean firms typically pursue strategies that combine cooperation and selective competition. Joint development arrangements and functional specialization across firms are common, while competition tends to intensify primarily in export markets rather than within the domestic arena (Paik, 2024). As a result, the strategic behavior of Korean defence firms is shaped less by internal price competition and more by coordinated industrial scaling and export expansion.

Three core strategic patterns can be identified. First, firms emphasize price competitiveness and mass-production efficiency, enabling strong performance-to-cost ratios that appeal to mid-tier defence markets (FOI, 2026). Second, companies pursue continuous product upgrades and customer-specific variants to expand demand and increase lifecycle value. Third, South Korean firms rely on integrated package exports supported by state-led industrial policy and defence diplomacy, a model that has proven particularly effective in European and emerging markets during the 2020s (Paik, 2024). Together, these strategies illustrate a coordinated export-oriented approach shaped by both industrial policy and the organizational logic of the chaebol system.

4.1.4.2. Sweden

Sweden's defence industry is characterized by a highly concentrated structure dominated by a small number of technology-driven firms specializing in niche markets. Saab occupies a central position as a system integrator with capabilities spanning air, naval, missile, sensor, and electronic warfare domains, while other firms operate in specialized segments within a tightly interconnected industrial ecosystem (Lundmark, 2019; FOI, 2025a). Rather than competing on scale or price, Swedish firms prioritize technological sophistication, system integration, and long-term customer relationships.

Domestic rivalry within Sweden is minimal, as most defence-industrial segments are effectively dominated by a single firm rather than characterized by intra-national competition. Competitive pressure therefore arises primarily in international markets, where Swedish companies face major global exporters as well as emerging competitors. To manage these conditions, Swedish firms frequently adopt cooperative strategies, including international co-development, industrial partnerships, and participation in multinational programmes, allowing them to access larger markets while preserving niche technological strengths (Lundmark, 2022; Andersson and Britz, 2025).

A distinctive competitive advantage of Swedish defence firms lies in their ability to

structure export contracts around cooperation-based arrangements. Export deals are often designed to include industrial participation, technology sharing, and long-term capability development, rather than focusing solely on transactional sales. This capacity to embed cooperation into export agreements enables Swedish firms to offset disadvantages related to market size and production scale, and has become a defining feature of Sweden's firm strategy in highly competitive international defence markets (Lundmark, 2022; Andersson and Britz, 2025).

Overall, South Korean defence firms tend to pursue competitiveness through scale-oriented production, cost efficiency, and strong government-backed export support, whereas Swedish firms emphasize niche technological specialization, system integration, and cooperation-based export strategies. These contrasting firm-level approaches create potential complementarities in bilateral cooperation: South Korea's industrial scale and production capacity could reinforce Sweden's advanced technological offerings, while Swedish firms' experience in structuring long-term cooperative export arrangements may enhance the strategic positioning of joint projects. At the same time, differences in corporate governance traditions, industrial organization, and risk-sharing practices may require careful coordination, particularly in joint ventures and co-development initiatives.

4.1.5. Role of Government

4.1.5.1. South Korea

The South Korean government has historically exercised strong involvement across the full spectrum of the defence industry—planning, procurement, and export promotion—by treating it as both a strategic industry and a core national security asset. The Ministry of National Defense and the Defense Acquisition Program Administration (DAPA) provide overarching direction through instruments such as the Medium-Term Defence Plan and the master plan for defence industry promotion, which shape budget priorities and long-term capability development (MND, 2022; Paik, 2024). These planning frameworks create a predictable environment that allows domestic firms to align investment and production strategies with state objectives.

In procurement, government policy has consistently prioritized indigenous systems while using foreign acquisitions selectively to facilitate technology transfer and

industrial cooperation. Domestic sourcing dominates in areas such as small arms and armored vehicles, whereas foreign procurements are typically accompanied by localization or offset requirements aimed at strengthening domestic industrial capabilities (Paik, 2024; FOI, 2026).

To expand the defence industry as an export-oriented sector, South Korea has adopted a whole-of-government support architecture. Since the early 2020s, export coordination mechanisms led at the political level have integrated defence policy with diplomacy, industrial policy, and trade promotion. Large defence contracts are frequently pursued through government-to-government (G2G) frameworks to reduce political and commercial risk for foreign buyers, while defence cooperation has increasingly been embedded in high-level diplomatic engagements (Paik, 2024). Together, these measures illustrate how the Korean state actively shapes both the domestic structure and international positioning of its defence industry.

4.1.5.2. Sweden

The Swedish government increasingly frames the defence industry as a strategic pillar of the total defence (totalförsvaret) system, providing policy support primarily through procurement policy, industrial strategy, and regulatory frameworks rather than direct ownership (Lundmark, 2022). Since the late 1990s, the Swedish defence sector has operated without government ownership, yet close state–industry interaction continues through institutions such as the Swedish Defence Materiel Administration (FMV), which defines capability requirements and sustains national technological competencies through long-term procurement planning.

A central element of Swedish defence-industrial policy has been the identification of Essential Security Interests (ESI)—renamed in 2024 as “strategic competence areas” (strategiska kompetensområden). These concepts define critical technological domains in which Sweden seeks to maintain sovereign capability, guiding investment priorities, procurement decisions, and industrial cooperation strategies (Lundmark, 2022). Sweden’s first official defence-industrial strategy in 2025 further institutionalizes this approach by emphasizing innovation, production capacity, exports, and international cooperation while reinforcing domestic competencies in selected strategic areas.

Although Sweden has traditionally maintained a strict export control regime, recent security developments and NATO accession have encouraged more flexible

interpretations, particularly toward cooperation with value-aligned partners, reflecting an evolving balance between regulatory caution and strategic industrial policy (Andersson and Britz, 2025).

4.1.6. Chance Factors

In Porter's Diamond Model, chance refers to exogenous events beyond the control of firms or governments—such as wars, geopolitical crises, or abrupt shifts in international demand—that disrupt existing competitive positions and reshape market opportunities (Porter, 1990). Rather than generating advantage independently, such shocks alter the environment in which structural factors operate.

The war in Ukraine has functioned as a decisive chance factor for both South Korea and Sweden. For South Korea, disruptions to European production capacity and ammunition stocks created urgent demand for rapidly deliverable systems, enabling Korean firms to leverage existing industrial scale and export-oriented production capabilities (Paik, 2024). As Eastern European states sought alternative suppliers, South Korea expanded its presence in the European defence market, while also facing heightened geopolitical sensitivities linked to relations with Russia (Petersson Ivre, 2025). The conflict therefore generated both commercial opportunities and strategic risks. For Sweden, the war accelerated a historic transformation in security policy, culminating in NATO accession and a shift toward deeper integration with allied defence-industrial structures. This external shock reinforced the government's emphasis on strategic competence areas and increased demand for interoperability, joint procurement, and multinational research cooperation, thereby reshaping the industrial environment without fundamentally altering Sweden's niche-oriented technological strategy (Lundmark, 2022; Andersson and Britz, 2025).

Beyond security dynamics, broader economic uncertainty also represents a potential chance factor. Fluctuations in global defence spending and macroeconomic conditions may influence the sustainability of rearmament programmes, affecting both the pace of South Korea's export expansion and Sweden's long-term procurement ambitions.

Table 4 summarizes the results of the Porter Diamond analysis for the defence industries of South Korea and Sweden discussed above.

Table 4. Comparative Summary of Defence Industrial Competitiveness in South Korea and Sweden

	South Korea	Sweden
Factor Conditions	• Large-scale industrial base and skilled workforce • Strong manufacturing capacity transferred from civilian industries • Sustained defence R&D investment • Indigenous development of major platforms (K2, K9, KF-21) • Partial dependence on foreign core technologies (engines, satellites)	• Highly advanced, specialized technological base • Strengths in aerospace, sensors, EW, and system integration • Long-standing technological competence with fluctuating defence R&T investment over time • Limited mass-production capacity due to small domestic market
Demand Conditions	• Large, sophisticated domestic demand driven by acute security threats • Rapidly expanding export demand, especially from Europe after Ukraine war • Strong government-backed export packages (financing, training, G2G)	• Historically domestic-driven until the late 1990s, followed by increased export reliance • Renewed domestic demand following NATO accession and rearmament • Increasing participation in NATO joint procurement
Related & Supporting Industries	• Extensive civilian manufacturing ecosystem (automotive, ICT) • Large SME supplier base with defence conversion capability • Dependence on foreign suppliers for some high-end components	• World-class precision engineering, materials, and communications sectors • Strong links between defence firms, research institutes, and startups • Partial constraints stemming from integration into European industrial structures and regulatory frameworks
Firm Strategy, Structure & Rivalry	• *Chaebol* (Conglomerate) - based prime contractors (Hanwha, Hyundai) • Limited domestic rivalry; near-monopoly in key segments • Strategy focused on price competitiveness, mass production, and package exports	• Niche-oriented, technology-driven firms led by Saab • Minimal domestic rivalry but intense global competition • Strategy focused on high-end customization, partnerships, and co-development
Role of Government	• Strong state involvement across planning, procurement, and exports • Whole-of-government export support architecture • Emphasis on localization and export expansion	• Active state role through FMV and defence industry strategy • Focus on innovation, production capacity, and strategic autonomy • Traditionally strict export controls, with growing flexibility post-Ukraine
Chance Factors	• Ukraine war opened European market opportunities • Risk of geopolitical backlash from Russia and China • Export growth sensitive to global economic conditions	• Ukraine war and NATO accession as structural turning points • Access to NATO market and joint R&D • Defence spending dependent on economic sustainability

4.2. Synthesis of SWOT Analysis Results

Based on the results of the Diamond analysis presented above, the SWOT factors relevant to defence industrial cooperation between South Korea and Sweden can be reconstructed as follows.

4.2.1. Strengths

The primary strength of South Korea–Sweden defence industrial cooperation lies in the complementarity of their industrial capabilities. South Korea contributes large-scale production capacity, cost efficiency, and rapid delivery based on a mature manufacturing ecosystem, while Sweden provides highly specialized technologies in areas such as sensors, electronic warfare, naval systems, and advanced system integration (Paik, 2024; Lundmark, 2019; FOI, 2025b; FOI, 2026). This complementarity supports cooperation models based on functional division of labour, enabling the integration of Swedish high-end subsystems into Korean platforms and production structures.

A second strength derives from the similarity of defence-industrial policy orientations. Both countries emphasize the protection of critical defence technologies while allowing selective cooperation in non-core areas. Sweden's focus on strategic competence areas and South Korea's emphasis on localization and defence industrial autonomy reflect a shared policy logic that facilitates structured and sustainable joint development (Lundmark, 2022; Government Offices of Sweden, 2025b; Paik, 2024; MND, 2022).

A third strength lies in the institutional and political framework supporting cooperation. Recent bilateral arrangements (Shim, 2025) and Sweden's deeper integration into NATO structures create additional channels for defence-industrial collaboration and multilateral coordination (Andersson and Britz, 2025; Petersson Ivre, 2025). At the same time, Sweden maintains numerous defence-industrial partnerships, which means that formal agreements alone do not guarantee prioritisation. The effectiveness of this institutional strength therefore depends on how both governments align cooperation with clearly defined strategic competence areas and long-term industrial planning.

Taken together, these strengths indicate that South Korea–Sweden defence industrial cooperation is well suited to targeted, role-specialised collaboration combining industrial scale with advanced niche technologies.

4.2.2. Weaknesses

On the South Korean side, key weaknesses relate to partial dependence on foreign suppliers for critical subsystems and materials as well as a conglomerate-centred industrial structure that can constrain flexibility in collaborative projects (Paik, 2024; FOI, 2026). Vulnerabilities remain in areas such as propulsion systems and advanced sensors, which may limit technology transfer in joint development, particularly when third-party export controls are involved. In addition, the dominance of large conglomerates may reduce the participation of smaller innovative firms in multinational cooperation frameworks.

For Sweden, structural constraints stem primarily from limited production scale and a niche-oriented industrial model rather than uniformly high system prices. While Swedish platforms often prioritise technological sophistication and lifecycle efficiency, smaller production volumes can create supply bottlenecks during periods of rapid demand expansion (Lundmark, 2022; Hellberg and Lundmark, 2025). Integration into wider European industrial structures and multinational partnerships may also complicate decision-making processes and timelines in cooperative projects.

Beyond industrial factors, practical coordination challenges should also be considered. Geographical distance increases logistical and personnel mobility costs, and although English commonly serves as a working language in defence cooperation, differences in organisational culture and writing systems between Korean and Swedish contexts may still affect communication efficiency and project coordination.

4.2.3. Opportunities

One of the most significant opportunities for South Korea–Sweden defence-industrial cooperation arises from the expansion of European defence spending following the war in Ukraine. Increased procurement at both EU and NATO levels creates potential demand for rapidly deliverable systems, an area where South Korean industrial scale could complement Sweden's advanced subsystem capabilities (Paik, 2024; SIPRI, 2025a; FOI, 2025a). However, Sweden's deepening integration into a European defence-industrial framework suggests that cooperation within EU structures may remain a primary priority, shaping the scope and direction of extra-European partnerships (Andersson and Britz, 2025).

A second opportunity relates to South Korea's expanding defence exports in Northern

and Eastern Europe, including the spread of K9 artillery systems. This trend may open space for complementary cooperation models in areas such as upgrades, subsystems, or lifecycle support, where Swedish firms possess specialised technological strengths (Paik, 2024; FOI, 2025a). Rather than large-scale joint platform development, more realistic pathways may involve targeted industrial collaboration aligned with existing procurement networks.

Institutional cooperation through NATO frameworks also presents a potential opportunity, although its practical impact remains uncertain. While South Korea's partnership arrangements with NATO highlight ambitions for closer cooperation in emerging technologies and logistics, the extent to which NATO structures will facilitate concrete defence-industrial projects is still evolving. Consequently, NATO-related cooperation should be understood primarily as an enabling framework rather than a guaranteed driver of industrial integration.

Finally, emerging technological domains—including space, cyber, artificial intelligence, and unmanned systems—offer flexible entry points for cooperation, as capability hierarchies in these fields are not yet fully established. Joint exploration in such areas could allow both countries to leverage complementary strengths without requiring deep integration into legacy industrial programmes (Government Offices of Sweden, 2025b; FOI, 2025b; MND, 2022).

4.2.4. Threats

Key threats to South Korea–Sweden defence-industrial cooperation stem from structural competition in the global arms market and evolving European procurement priorities. Competition among major exporters has long been intense rather than newly intensifying, particularly from established suppliers such as the United States and major European producers. At the same time, ongoing efforts to strengthen a more integrated European defence-industrial base may prioritise intra-European cooperation, potentially limiting opportunities for extra-regional partners (Andersson and Britz, 2025; FOI, 2025a).

Macroeconomic uncertainty also represents a structural risk. Inflationary pressures, fiscal constraints, and fluctuating defence budgets across Europe may affect procurement timelines and reduce predictability for cooperative projects, particularly if rearmament momentum slows over time.

Finally, regulatory and political risks related to export controls, sanctions environments, and differing national approval processes may complicate multinational defence projects. Such constraints reflect the highly politicised nature of defence-industrial cooperation and can influence both market access and project continuity (Lundmark, 2022; Government Offices of Sweden, 2025b).

The SWOT results are summarized in **Table 5**, and the following chapter develops these findings into concrete strategies using the TOWS matrix.

Table 5. SWOT Analysis of South Korea–Sweden Defence-Industrial Cooperation

Cooperation Factors	Implications for Bilateral Defence-Industrial Cooperation
Strengths (S)	• Complementary industrial capabilities: South Korea's mass-production capacity and Sweden's specialised high-end technologies • Similar defence-industrial policy logic emphasizing protection of strategic competence areas alongside selective cooperation • Institutional and political framework supporting cooperation, including NATO channels and bilateral arrangements
Weaknesses (W)	• South Korea's dependence on foreign core technologies and conglomerate-centred industrial structure • Sweden's limited production scale and niche-oriented industrial model, which may create supply constraints during demand surges • Practical coordination challenges stemming from geographical distance, organisational culture, and communication differences
Opportunities (O)	• Expansion of European defence spending and procurement following the Ukraine war • Growing presence of South Korean systems in Northern and Eastern Europe enabling complementary subsystem and lifecycle cooperation • Emerging technology domains (AI, space, cyber, unmanned systems) offering flexible entry points for collaboration • NATO partnership framework as potential enablers of cooperation
Threats (T)	• Structurally intense global arms competition and prioritisation of intra-European defence cooperation • Macroeconomic uncertainty and fluctuating defence budgets influencing procurement timelines • Regulatory and export-control constraints in multinational defence projects

Chapter 5. South Korea–Sweden Defence Industrial Cooperation Strategies and a Policy Roadmap

This chapter develops a TOWS matrix based on the SWOT analysis presented in the previous chapter and identifies eight strategic options for South Korea–Sweden defence industrial cooperation. Each strategy corresponds to a specific TOWS combination (SO, ST, WO, WT) and is assessed in terms of its short-, medium-, and long-term implementation pathways, as well as the respective roles of government, industry, and the military. Rather than presenting these strategies as a comprehensive blueprint, the chapter also evaluates their relative feasibility within existing NATO, EU, and industrial frameworks and identifies a limited number of realistic near-term cooperation pathways. In doing so, the chapter translates the preceding analytical findings into a structured yet pragmatic cooperation roadmap.

5.1. SO Strategies (Leveraging Strengths to Exploit Opportunities: Maxi–Maxi)

5.1.1. Strategy 1: Joint Development in Selected Emerging Domains

This strategy explores the possibility of launching selective joint R&D initiatives in emerging technological domains by leveraging the complementary strengths identified in the Diamond and SWOT analyses—namely South Korea's industrial scale and production efficiency and Sweden's advanced niche technologies and system-integration expertise (Paik, 2024; Lundmark, 2019; FOI, 2025b). Rather than pursuing full-spectrum platform co-development, cooperation would be more realistic in modular or subsystem-oriented areas where technological convergence and risk-sharing are feasible.

Emerging domains such as space-based surveillance, cyber defence, artificial intelligence, and unmanned systems present potential entry points for collaboration, as technological hierarchies in these fields remain fluid and institutional barriers are comparatively limited (Government Offices of Sweden, 2025b; MND, 2022). For example, a low-Earth-orbit surveillance architecture could combine South Korean launch and ground-control capabilities with Swedish sensor or small-satellite technologies, potentially enabling distributed monitoring of maritime approaches in Northern Europe and enhanced situational awareness on the Korean Peninsula. Similarly, joint exploration of electronic warfare subsystems integrated into existing air and missile

defence architectures may represent a realistic pathway, allowing Swedish expertise in sensors and electronic countermeasures to enhance survivability while South Korea provides scalable platform integration and production capacity. However, given the differing operational environments and threat perceptions of the two countries, fully unified system solutions may be unrealistic; instead, cooperation is more likely to focus on adaptable subsystems or interoperable components aligned with NATO standards.

Implementation would likely proceed incrementally. In the short term, cooperation could begin with joint concept studies and technical working groups. Medium-term progress may involve limited prototyping or technology demonstrations supported by shared research facilities or coordinated funding schemes. Only in later phases—if technological and political alignment is achieved—might operational adoption or joint export initiatives be considered. Throughout this process, early agreements on intellectual property management and revenue-sharing frameworks would be essential to mitigate industrial risk and reflect existing alliance obligations and export-control regimes.

If pursued cautiously, such collaboration could strengthen both countries' positions in future-oriented defence innovation while remaining compatible with Sweden's prioritisation of EU and NATO industrial frameworks and South Korea's export-oriented industrial strategy. Rather than representing a fully integrated development model, this strategy should therefore be understood as a modular and risk-managed pathway toward deeper technological cooperation among middle-power defence industries.

5.1.2. Strategy 2: Cooperative Package Exports ("Team Korea–Sweden")

This strategy explores selective cooperation in third-country markets by combining South Korea's experience in package-based exports and scalable production with Sweden's niche technological strengths in sensors, aerospace, and maritime systems. Rather than fully integrated joint marketing structures, cooperation would likely take the form of coordinated or complementary offerings aligned with existing alliance commitments and industrial partnerships.

A realistic application could involve Northern and Eastern European "fires packages", in which South Korean artillery (K9) or rocket (Chunmoo) systems are complemented by Swedish radar, surveillance, or early-warning capabilities. In such arrangements, each country would retain primary responsibility for its own platforms while ensuring

interoperability and lifecycle support in line with NATO standards. This approach reflects current procurement trends in Northern and Eastern Europe, where rapid delivery and integrated sensor–shooter architectures are increasingly prioritised.

Another potential pathway concerns selective cooperation in air-force modernization, although this area remains politically sensitive. Combining platforms such as the FA-50 and Gripen may offer operational flexibility for certain customers, but any cooperation would need to account for geopolitical considerations, alliance priorities, and third-party export controls, including U.S. International Traffic in Arms Regulations (ITAR) restrictions when American subsystems are involved. Consequently, collaboration in this domain would likely focus on complementary roles or support functions rather than fully integrated packages.

In the short term, cooperation could begin with informal coordination on market assessments and interoperability concepts rather than establishing formal joint marketing bodies. In the medium term, coordinated demonstrations or parallel proposals could be explored where interests align. Over the longer term, sustainment and upgrade cooperation—such as shared logistics solutions or technology integration—may provide more feasible entry points than fully unified export structures.

From an industrial perspective, such cooperation should be understood not as replacing existing geopolitical or industrial dependencies but as a means of creating niche complementarities within them. If successful, coordinated export initiatives could strengthen trust between partners and gradually expand opportunities for deeper collaboration, while acknowledging the institutional and political constraints shaping defence markets.

5.2. ST Strategies (Using Strengths to Mitigate Threats: Maxi–Mini)

5.2.1. Strategy 3: Institutionalisation and Multilateral Anchoring

This strategy aims to mitigate political, regulatory, and market risks by embedding South Korea–Sweden defence-industrial cooperation within established multilateral frameworks, particularly NATO and relevant EU contexts. Rather than positioning bilateral initiatives as alternatives to European defence integration, cooperation should be framed as complementary to existing European capability priorities and supply-chain needs. Given the strong institutional inertia and protection-oriented tendencies within

parts of the European defence market, alignment with recognised capability gaps—such as ammunition production, artillery sustainment, interoperability upgrades, or enabling technologies—may increase political acceptability and reduce resistance.

A practical step could involve establishing a Korea–Sweden defence-industrial coordination forum that maintains structured dialogue with Nordic, EU, and NATO stakeholders. Such a mechanism would allow both partners to communicate cooperation objectives transparently while ensuring that proposed projects do not conflict with ongoing European programmes. For instance, joint initiatives related to K9 artillery sustainment, sensor integration, or lifecycle support services could be presented as reinforcing Nordic and NATO readiness rather than displacing European industry. Sweden's institutional position within EU and Nordic cooperation structures may therefore function as a bridging mechanism, enabling South Korean participation to be perceived as contributing to broader alliance resilience.

At the operational level, multilateral anchoring could include participation in NATO-related exercises, technical standardisation processes, or exploratory projects linked to EU capability-development initiatives where external partners are accepted. While such institutionalisation may introduce procedural complexity and extend timelines, it can enhance long-term political sustainability by aligning bilateral cooperation with existing geopolitical bonds and industrial priorities. In this sense, multilateral alignment should be understood not as a constraint but as a stabilising framework that gradually legitimises deeper cooperation over time.

5.2.2. Strategy 4: Targeted Interoperability Alignment and Technical Integration

This strategy does not aim at jointly shaping NATO or EU standards at a systemic level—an objective that would be politically unrealistic given Sweden's primary commitments to NATO and EU industrial frameworks. Instead, it focuses on targeted interoperability alignment within specific joint or complementary projects where Swedish industrial interests are directly involved.

When Swedish subsystems—such as sensors, radar, electronic warfare components, or command-and-control modules—are integrated into South Korean platforms, technical alignment with NATO requirements becomes a functional necessity rather than a geopolitical ambition. In such cases, Sweden has a clear industrial incentive to ensure compatibility, certification pathways, and operational integration, since the

competitiveness of its own technologies depends on seamless interoperability.

For example, if Swedish radar or electronic warfare modules are incorporated into upgraded K9 or other artillery systems deployed in Northern or Eastern Europe, joint testing and technical documentation aligned with NATO procedures would naturally follow. Similarly, cooperation in communications architecture or data-link integration could enhance interoperability without requiring either country to challenge existing NATO or EU standard-setting hierarchies.

This approach recognizes that standardization processes are politically sensitive and often dominated by larger alliance actors. Therefore, rather than seeking to lead formal standard-setting initiatives, South Korea and Sweden could pursue project-based technical alignment, ensuring that jointly integrated systems are "NATO-compatible by design." Over time, such alignment may indirectly lower market-entry barriers without provoking institutional resistance.

In this sense, interoperability is treated not as a grand strategic leadership ambition, but as a pragmatic industrial enabler embedded within specific cooperative projects.

5.3. WO Strategies(Addressing Weaknesses to Exploit Opportunities: Mini–Maxi)

5.3.1. Strategy 5: Institutional Learning and Industrial Network Building

This strategy seeks to mitigate structural weaknesses—such as geographical distance, limited institutional familiarity, and differences in procurement culture—through small-scale, targeted professional exchanges and industrial networking rather than large personnel programmes. The objective is to reduce transaction costs and uncertainty in future cooperation without creating unrealistic personnel demands.

First, short-term rotational placements between South Korea's DAPA and Sweden's FMV could enhance mutual understanding of acquisition procedures and export control regimes. Instead of large secondment schemes, a limited number of specialists participating in focused project-based exchanges would be more realistic and sustainable.

Second, recurring industry–government workshops centered on specific capability areas could allow firms to evaluate cooperation opportunities without requiring extensive personnel commitments. These meetings would function primarily as coordination mechanisms rather than permanent institutional structures.

Third, military exchanges should remain selective and niche-oriented—for example,

limited observation roles in Arctic training or urban operations—ensuring knowledge transfer while respecting personnel constraints within both armed forces.

While exchange programs do not immediately produce tangible industrial output, they create informal communication channels that can prevent delays, misunderstandings, and regulatory friction in later phases. Over time, these networks function as enabling infrastructure for more complex joint projects, especially in politically sensitive domains.

5.3.2. Strategy 6: Multilateral Pathways to Reduce Structural Constraints

This strategy aims to address structural limitations—South Korea's position as an extra-regional partner and Sweden's limited industrial scale—by situating cooperation within existing Nordic and NATO-oriented frameworks rather than creating entirely new institutional structures. Instead of large formal alliances, the emphasis should be on practical project-based cooperation that aligns with ongoing procurement trends in Northern Europe.

A realistic pathway involves cooperation linked to current Nordic artillery and land-systems programmes. As countries such as Norway, Finland, and Estonia expand their use of South Korean systems, future upgrades or next-generation variants could integrate selected Swedish subsystems, testing concepts, or lifecycle-support arrangements. Leveraging existing industrial nodes—such as regional maintenance facilities or European production lines—would reduce political friction while supporting local industrial participation.

Another avenue is minilateral cooperation built around specific capability gaps rather than broad strategic alignment. For example, ammunition stockpiling, maintenance infrastructure, or logistics digitalisation could be explored within NATO-compatible frameworks, where South Korea contributes production capacity and Sweden provides system-integration expertise. Such arrangements would complement Nordic defence planning without challenging EU or NATO industrial priorities.

Rather than presenting bilateral cooperation as an alternative to European defence integration, this approach frames South Korea–Sweden collaboration as a supplementary contribution to regional resilience. By embedding cooperation within existing institutional ecosystems, both sides can lower political risks while gradually expanding practical industrial collaboration.

5.4. WT Strategies (Minimizing Weaknesses and Threats: Mini–Mini)

5.4.1. Strategy 7: Gradual Deepening through Non-Military and Dual-Use Cooperation

This strategy proposes a gradual approach to cooperation by prioritising politically less sensitive domains—such as dual-use technologies, cyber security, logistics, and resilience—before expanding into more advanced defence-industrial collaboration. Beginning with low-risk projects allows both countries to build practical experience, develop working relationships, and reduce friction associated with export controls or strategic competition.

A realistic entry point could involve joint development of dual-use unmanned systems and sensor technologies applicable to disaster response, infrastructure monitoring, or maritime surveillance. South Korea's strengths in robotics and manufacturing could complement Sweden's expertise in sensors, autonomy, and cold-weather operational design, enabling cooperation that delivers both civilian and military benefits. Similarly, cooperation in depot-level maintenance digitalisation or smart ammunition logistics — combining Korean automation experience with Swedish IoT technologies—could provide practical outputs without triggering major geopolitical sensitivities.

Cyber defence and AI-enabled training environments also offer feasible pathways. Information-sharing arrangements, joint cyber exercises, or collaborative development of simulation-based training tools could strengthen interoperability while remaining aligned with existing NATO-oriented cyber cooperation practices. By focusing initially on areas where strategic risk is lower, this approach allows trust to accumulate incrementally and creates a foundation for more ambitious cooperation over time.

Rather than delaying cooperation, a gradual model reduces early-stage barriers and signals that the partnership contributes to broader societal resilience as well as defence capability development.

5.4.2. Strategy 8: Codification of Cooperation Principles and Risk Governance

This strategy seeks to minimise long-term friction by establishing clear cooperation principles in advance, particularly regarding export controls, technology protection, and third-party transfers. Defence-industrial cooperation is inherently sensitive and politically regulated; without prior alignment on such issues, even technically successful projects may encounter disruption at later stages.

A first element involves agreed rules on third-country re-export and resale. Jointly

developed systems should include explicit provisions requiring mutual consent before transfer to additional markets. This reduces risks of unintended proliferation and protects both parties from diplomatic backlash.

A second element concerns alignment on recipient restrictions and alliance sensitivities. Both countries operate within distinct geopolitical environments—South Korea in relation to the Korean Peninsula and U.S. export control regimes, and Sweden within EU and NATO frameworks. Clarifying in advance which categories of recipient states may pose political or strategic concerns can prevent later disputes and protect alliance commitments.

A third component addresses intellectual property and technology protection. Joint patent arrangements, predefined ownership structures, and mandatory non-disclosure agreements for shared data can reduce uncertainty for firms. Clear allocation of revenue streams and upgrade rights is particularly important in long-lifecycle defence systems.

While codifying principles may slow initial negotiations, it enhances predictability and reduces the probability of conflict escalation. In highly politicised defence markets, formalised guardrails function not as constraints but as stabilisers of long-term cooperation.

The eight cooperation strategies discussed above are consolidated in **Table 6**, which summarizes their core objectives and key instruments within a TOWS-based framework. Rather than functioning as standalone initiatives, these strategies should be understood as mutually reinforcing elements of a sequenced and realistic roadmap. In particular, SO-type initiatives often depend on parallel ST-type measures to ensure political and institutional feasibility, while WO- and WT-type strategies provide the enabling foundations necessary for sustainable cooperation under existing EU constraints.

Accordingly, implementation should follow a phased approach rather than a simultaneous rollout. In the short term (1–3 years), priority is likely to focus on trust-building measures, cooperation principles, and low-sensitivity collaboration. In the medium term (4–7 years), selected SO- and ST-type initiatives—such as targeted joint development, modular package exports, and carefully framed multilateral linkages—may generate more visible outcomes. Over the longer term (8–15 years), cooperation could gradually evolve toward a more advanced partnership, contingent on political alignment, alliance commitments, and industrial feasibility.

Table 6. TOWS-Based Cooperation Strategies and Policy Roadmap for South Korea–Sweden Defence Industrial Cooperation

Type	No.	Title	Core Objective	Key Instruments
SO	1	Joint Development in Selected Emerging Domains	Exploit complementary strengths to enter emerging technology domains	Joint R&D, shared IP, joint prototyping, first-user adoption
	2	Cooperative Package Exports ("Team Korea–Sweden")	Selectively pursue third-country opportunities through complementary offerings where geopolitical alignment permits	Package deals, G2G agreements, joint financing, lifecycle support
ST	3	Institutionalization and Multilateral Anchoring	Legitimize cooperation and mitigate regulatory risks through alignment with existing frameworks	Bilateral council, NATO/EU linkage, transparency mechanisms
	4	Targeted Interoperability Alignment and Technical Integration	Reduce exclusion risks by aligning with NATO/EU interoperability requirements	NATO certification support, technical interoperability alignment
WO	5	Institutional Learning and Industrial Network Building	Address institutional unfamiliarity and coordination gaps through focused human-network development	Targeted secondments, thematic workshops, limited-scale training observation, defence industry forums
	6	Multilateral Pathways to Reduce Structural Constraints	Offset scale and institutional limitations through Nordic- and NATO-linked cooperation formats	Nordic–Korea cooperation, joint procurement consortia
WT	7	Gradual Deepening via Dual-Use and Non-Military Cooperation	Build cooperation capacity while minimizing risk	Dual-use R&D, logistics cooperation, cyber collaboration
	8	Codification of Cooperation Principles and Risk Governance	Prevent disputes and reputational risks through early agreement on sensitive issues	Export controls, IP rules, human-rights safeguards

5.5. Strategic Feasibility and Most Feasible Near-Term Scenarios

Based on the strategic options outlined in the previous sections, not all proposed initiatives carry equal feasibility in the near term. Although the preceding TOWS framework identifies a wide range of potential cooperation pathways, the practical trajectory of South Korea–Sweden defence industrial collaboration is shaped by structural constraints, including Sweden's strong prioritisation of EU- and NATO-embedded cooperation, existing alliance commitments, and protectionist tendencies within the European defence market (Andersson and Britz, 2025; Government Offices of Sweden, 2025b). Swedish policy debates and industrial analyses consistently emphasise that international cooperation should reinforce European capability development and alliance interoperability rather than replace them, suggesting that cooperation with extra-regional partners such as South Korea is likely to advance incrementally and within clearly defined technological niches rather than through large-scale joint platform development from the outset (Lundmark, 2022; FOI, 2025b).

Recent developments in Northern and Eastern Europe further indicate that realistic cooperation is more likely to emerge through pragmatic subsystem integration, lifecycle upgrades, and targeted technological collaboration aligned with NATO operational requirements. Sweden's defence industry—characterised by niche technological specialisation and strong institutional alignment with European frameworks—tends to favour partnership models that preserve national control over strategic competence areas while enabling selective cooperation in complementary domains (Government Offices of Sweden, 2025b; Andersson and Britz, 2025). At the same time, South Korea's expanding defence exports in Europe, particularly the operational deployment of K9 artillery systems and related capabilities, provide a concrete industrial foundation upon which incremental cooperation with Sweden could evolve (Paik, 2024; FOI, 2026).

Against this background, rather than assuming rapid transformation toward a fully integrated bilateral defence partnership, it is more realistic to identify specific cooperation pathways that align with existing procurement trends, alliance priorities, and industrial incentives on both sides. Two near-term scenarios therefore appear particularly feasible.

- Scenario 1: Nordic/Baltic Fires Upgrade Pathway (K9/K239 + Swedish System)

A high-feasibility entry point is to build cooperation around Northern and Eastern European fires capabilities, where South Korean systems are already being procured and where operational demand prioritises rapid delivery, resilience, and integrated sensor-to-shooter architectures. Recent developments reinforce this pathway: Norway signed a major contract for K239 Chunmoo launchers, explicitly linked to building supporting national infrastructure such as training and maintenance capacity—suggesting a sustained, lifecycle-oriented demand rather than a one-off purchase (Reuters, 2026). Estonia also concluded a contract to procure Chunmoo systems with training and operational support, including platform adaptations for national conditions—again pointing to an upgrade-and-integration logic rather than simple acquisition (Estonian Centre for Defence Investments, 2025). In parallel, Nordic users such as Norway and Finland have accumulated operational experience with the K9 system (Ruitenberg, 2025), creating a regional user base that increasingly emphasises interoperability, sustainment efficiency, and incremental capability enhancement rather than entirely new platform development.

Within this setting, South Korea–Sweden cooperation can be framed realistically as a next-version capability enhancement rather than a new platform programme: Sweden contributes selected high-value subsystems and integration know-how (e.g., surveillance, command-and-control interfacing, EW-adjacent functionalities, or Nordic-environment adaptation concepts), while South Korea provides the existing production base, delivery capacity, and upgrade pathways for platforms already in European service. The presence of European production and industrialisation initiatives linked to Korean rocket artillery supply chains further strengthens the near-term practicality of this model. For example, Hanwha and a Polish partner agreed to establish missile production in Poland for munitions used by the K239 system, indicating a growing European industrial footprint that can reduce political friction and improve sustainment credibility for regional users (Reuters, 2025). Rather than assuming deep integration at the system level, such cooperation would likely emerge through modular upgrades, software-level interoperability solutions, or sensor-layer enhancements that align with NATO operational concepts while preserving national control over core technologies.

- Scenario 2: Dual-Use and Drones, AI, Space Collaboration Pathway

A second near-term scenario with relatively high feasibility involves dual-use technological collaboration, particularly in areas such as modular electronic-warfare-adjacent systems, autonomous platforms, AI-enabled sensing, and cyber-related capabilities. Compared to large-scale joint weapon development, dual-use projects offer a lower political threshold and align more closely with Sweden's industrial logic of preserving strategic competence areas while enabling targeted international cooperation. Such collaboration also reflects broader European trends favouring flexible technology partnerships and incremental integration rather than immediate platform-level co-development.

Recent industry developments suggest that Swedish stakeholders themselves view cooperation with Korean firms as a pragmatic pathway to strengthen competitiveness and market access. During the Seoul International Aerospace and Defense Exhibition (ADEX) 2025, representatives of Saab highlighted ongoing efforts to expand partnerships with Korean companies and emphasised technology collaboration, supply-chain cooperation, and co-development opportunities rather than purely transactional exports. The CEO of Saab Korea noted that cooperation could simultaneously enhance Saab's competitiveness and provide Korean partners with improved access to European markets, signalling industry-level incentives for selective technological collaboration (Park, 2025).

In this context, dual-use cooperation could realistically focus on modular subsystems or enabling technologies rather than full-scale weapon platforms. Examples include AI-assisted sensing algorithms, electronic-warfare-adjacent sensor packages, autonomous logistics drones, or cyber-defence training environments. Such projects align with Saab's demonstrated interest in integrating modular electronic-warfare sensors and software-driven solutions across multiple platforms, which can be adapted for both military and civilian security applications (Park, 2025).

From an industrial perspective, this pathway reduces political friction because dual-use projects are less constrained by export sensitivities and alliance politics than advanced strike systems or major platforms. It also reflects the incremental cooperation logic observed in existing Korea–Sweden interactions, where technology transfer, joint integration studies, and subsystem cooperation have historically preceded deeper industrial alignment. Rather than attempting to create a fully integrated joint platform

from the outset, a dual-use innovation pathway allows both sides to test cooperation mechanisms, build interoperability at the technological level, and gradually expand toward more complex projects if mutual trust and industrial incentives converge.

Moreover, dual-use collaboration can complement ongoing European industrial priorities rather than compete directly with them. By focusing on enabling technologies—such as AI-assisted data fusion or unmanned systems designed for logistics, surveillance, or disaster response—the partnership can be framed as contributing to NATO interoperability and European resilience while maintaining flexibility for Indo-Pacific applications. This approach therefore represents a realistic bridging model between alliance-embedded cooperation and extra-regional technological partnership.

Taken together, the TOWS-based strategies presented in this chapter should be understood as a structured spectrum of cooperation options rather than a linear blueprint for rapid integration. While complementary industrial capabilities create meaningful opportunities, the pace and scope of South Korea–Sweden defence industrial cooperation will remain shaped by alliance priorities, institutional inertia, and existing European frameworks. Consequently, realistic progress is more likely to emerge through selective and incremental initiatives aligned with ongoing procurement dynamics and technological niches. The near-term scenarios outlined in Section 5.5 therefore do not replace the broader strategic vision but refine it—highlighting pathways where strategic ambition and practical feasibility intersect.

Ultimately, the durability of South Korea–Sweden defence industrial cooperation will depend less on ambitious grand designs and more on the careful alignment of strategic vision with institutional realities, alliance priorities, and incremental trust-building.

Chapter 6. Conclusion: Significance and Future Prospects

This study reinterprets South Korea–Sweden defence industrial cooperation as a case of middle-power security cooperation and derives structural conditions and strategic implications through a staged analytical approach moving from the Porter's Diamond Model to SWOT and then to TOWS. Rather than presenting a single linear pathway, the analysis highlights how cooperation may evolve incrementally within existing alliance structures and institutional constraints. The main conclusions and implications can be summarized as follows.

First, the structural analysis indicates that South Korea and Sweden possess complementary strengths alongside distinct structural limitations in their defence industries. South Korea's advantages include large-scale production capacity, price competitiveness, a strong civilian manufacturing base, and proactive government support. Sweden's strengths lie in advanced technological capabilities, specialization in niche markets, a highly credible diplomatic profile, and a strong innovation ecosystem. At the same time, South Korea faces challenges related to incomplete indigenization of critical components and a conglomerate-centered industrial structure, while Sweden confronts structural constraints stemming from limited domestic scale, export-control considerations, and dependence on international industrial networks.

Second, the SWOT analysis systematized both internal and external conditions shaping bilateral cooperation. Identified strengths include complementary industrial capabilities, shared middle-power identities, and existing institutional channels for dialogue. Weaknesses involve technological dependencies, limited production scale, geographic distance, and coordination challenges. Opportunities emerge primarily from European rearmament dynamics, NATO/EU procurement frameworks, and evolving technological domains such as space, cyber, and AI, whereas threats stem from persistent global competition, European protectionist tendencies, geopolitical sensitivities, and uncertainties related to defence spending trajectories. Importantly, these findings suggest that cooperation is likely to advance selectively within defined niches rather than through comprehensive industrial integration.

Third, based on SWOT, this study proposed eight cooperation measures through a TOWS framework. These strategies should not be interpreted as a simultaneous policy blueprint but rather as a menu of options reflecting different levels of feasibility and risk.

In practice, the most credible pathways are those aligned with ongoing procurement patterns and alliance priorities—such as incremental subsystem cooperation, lifecycle upgrades, and dual-use technological collaboration—while more ambitious initiatives, including large-scale joint platform development, remain longer-term possibilities contingent on political alignment and industrial incentives.

In terms of policy implications, cooperation should be framed as a complementary channel rather than a replacement for existing partnerships. For South Korea, this implies moving beyond the perception of a purely cost-efficient supplier by strengthening technological self-reliance and engaging in selective high-value collaboration with European partners. For Sweden, incentives lie less in industrial survival—given the strong position of many defence firms within NATO and EU markets—and more in accessing scalable production capacity, diversified supply chains, and complementary technological capabilities in areas where European industry faces bottlenecks. Accordingly, cooperation with South Korea is more realistically understood as one of several parallel partnerships supporting broader alliance objectives rather than as an exclusive bilateral axis.

At the corporate level, firms may pursue pragmatic cooperation models focused on risk reduction and market accessibility, including modular joint development, localized production arrangements, and targeted subsystem integration. South Korean companies can enhance credibility through participation in European R&D ecosystems, while Swedish firms may selectively explore cost-sharing or co-production arrangements where industrial incentives align. In the military domain, cooperation is likely to develop through interoperability exercises, concept experimentation, and incremental operational learning rather than immediate integration of major capabilities.

From an academic perspective, this study demonstrates that the Porter Diamond model remains analytically valuable even when applied to strategic sectors such as the defence industry. By linking structural analysis with SWOT/TOWS-based strategy formulation, the research offers a framework for examining cross-regional middle-power cooperation under conditions of institutional complexity and geopolitical constraint. Rather than presenting a new universal model, the South Korea–Sweden case illustrates how geographically distant middle powers may explore limited but meaningful collaboration within existing alliance systems.

Nevertheless, this study has several limitations. Quantitative cost–benefit analysis and

detailed assessments of specific joint-development programs were beyond the scope of the research, and future cooperation outcomes will depend heavily on evolving political priorities within NATO, the EU, and regional security environments. Moreover, deeper industrial interdependence may introduce new risks, including reduced strategic flexibility or sustainment challenges if political relations were to shift.

Even so, South Korea–Sweden defence industrial cooperation remains significant as an example of how middle powers can explore pragmatic collaboration while preserving alliance commitments and institutional autonomy. Rather than signaling the emergence of a new defence-industrial bloc, the findings suggest a more modest but realistic trajectory: selective cooperation in areas of mutual advantage that complements existing partnerships. Future research should therefore expand empirical analysis through interviews with policy and industry actors, parliamentary debate studies, and comparative case analysis involving other middle-power pairings.

In summary, South Korea–Sweden defence industrial cooperation presents both opportunities and constraints shaped by structural realities and political inertia. The Porter's Diamond Model and subsequent SWOT/TOWS analysis provide a logical foundation for identifying where cooperation may realistically develop. The key challenge ahead is not to pursue all possible strategies simultaneously but to prioritize those that align with alliance frameworks, industrial incentives, and operational needs. If approached incrementally and pragmatically, such cooperation may contribute to a more diversified and resilient pattern of middle-power collaboration within the evolving international security landscape.

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