Aalto University
School of Business

FINNISH DEFENCE INDUSTRY AND THE U.S. DEFENCE MARKET

Study of Finnish defence industry companies' business opportunities within the U.S. defence market

Master's Thesis
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Abstract

This thesis aims to analyse how the sales and export process of defence industry products to the U.S. is seen from the perspective of Finnish small and medium-sized enterprises operating outside of industrial participation agreements. The objective of this qualitative study is to determine the perceived external challenges against a successful market entry and to provide insight into what kind of internal capabilities and external collaborations are required from the companies to overcome them.

The literature review of this study first justifies the selection of the existing frameworks and models of international business and industrial organisation. Then, it suggests how they align with the selected foreign market entry planning model. After further discussion of these models and frameworks with elaborative examples from the context of this study, a literature-based briefing of the Western defence industry is given. As a result, the reader should be equipped with an understanding of the theoretical framework used to examine the discussed topics.

In this study, the methodology chapter describes how the interview study favouring a cultural perspective was conducted and how the philosophy of critical realism is additionally utilised during the discussions concerning this thesis' topics. The dataset used in this study consisted of primary and secondary data, and both included interviews held with defence industry experts and representatives of private companies, and the secondary data additionally included interviews from the representatives of government organisations. Due to the sensitivity of the chosen topic, research limitations and ethical considerations are discussed in detail. Due to its role in national defence, the defence industry is tightly linked with politics, and the political aspect of defence product sales is often discussed during the findings section of this study.

The defence industry being product-centric, this study's empirical findings presented in the discussions chapter confirm that the U.S. defence market consists of structures that are responsible for the high entry barriers to overcome. Hence, understanding the external environment's characteristics, the company's internal capabilities and its external collaborations, and the procurer's needs and associated politics are vital for planning a foreign market entry strategy in the context of defence product sales. With the freedom of cultural studies perspective, the theoretical contribution of this study is centred on the suggestion of a connection between the chosen existing frameworks. In the managerial implications, the process of formulating a foreign market entry strategy is discussed. Further, policy implications and ideas for further research of offsets are made.

Keywords defence industry, international business, eclectic paradigm, resource-based view, dynamic capabilities, core competencies, market-entry, strategy

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Tämän pro gradu -tutkielman tavoitteena on analysoida, miten puolustusteollisuuden tuotteiden myynti- ja vientiprosessi Yhdysvaltoihin nähdään teollisen yhteistyön sopimusten ulkopuolella toimivien pienten ja keskisuurten suomalaisten yritysten näkökulmasta. Laadullisen tutkimuksen tarkoituksena on selvittää havaitut ulkoiset haasteet menestyksekästä markkinoille menoa vastaan ja antaa tietoa siitä, millaisia sisäisiä kyvykkyyksiä ja ulkoisia yhteistyösuhteita yrityksiltä vaaditaan niiden ylitsepääsemiseksi.

Tutkimuksen kirjallisuuskatsaus perustelee ensin olemassa olevien kansainvälisen liiketoiminnan ja teollisen organisaation viitekehysten ja mallien valintaa. Sitten ehdottaen, miten ne sopivat valittuun ulkomaisille markkinoille menon suunnittelumalliin. Sen jälkeen, kun mallit ja viitekehykset ovat tarkemmin kuvailtu tämän tutkimuksen kontekstista annetuilla yksityiskohtaisilla esimerkeillä, annetaan kirjallisuuteen perustuva katsaus läntisestä puolustusteollisuudesta. Tästä seurauksena lukijalla tulisi olla ymmärrys teoreettisesta viitekehyksestä, jota käytetään tutkielmassa käsiteltyjen aiheiden tarkasteluun.

Tämän tutkimuksen metodologialuvussa kuvataan, kuinka tämä kulttuurista näkökulmaa suosiva haastattelututkimus toteutettiin, ja miten kriittisen realismin filosofiaa hyödynnetään tutkielman aiheita koskevissa keskusteluissa. Tässä tutkimuksessa käytetty aineisto koostuu primaari- ja sekundääriaineistosta, joista molemmat sisältävät puolustusteollisuuden asiantuntijoiden sekä yksityisten yritysten edustajien haastatteluja, lisäksi sekundääriaineisto sisältää valtion viranomaisten edustajien haastatteluja. Valitun aiheen arkaluonteisuuden vuoksi tutkimukseen liittyviä rajoituksia ja eettisiä näkökohtia käsitellään yksityiskohtaisesti. Maanpuolustusroolinsa vuoksi puolustusteollisuus on tiiviisti kytköksissä politiikkaan ja puolustustarvikemyynnin poliittista puolta käsitellään usein tämän tutkimuksen tuloksia koskevassa osiossa.

Puolustusteollisuuden ollessa tuotekeskeinen, tämän tutkimuksen keskusteluluvussa esitetyt empiiriset havainnot vahvistavat, että Yhdysvaltojen puolustusmarkkinat koostuvat rakenteista, jotka ovat vastuussa ylitettäväksi vaadituista korkeista markkinoille pääsyn esteistä. Näin ollen ulkoisen ympäristön ominaispiirteiden, yrityksen sisäisten kyvykkyyksien ja ulkoisten yhteistyösuhteiden sekä hankkijan tarpeiden ja niihin liittyvän politiikan ymmärtäminen on keskeistä suunniteltaessa ulkomaisille markkinoille menoa koskevaa strategiaa puolustustuotteiden myynnin yhteydessä. Johtuen kulturaalisen tutkimuksen näkökulman sallimista vapauksista, tämän tutkimuksen teoreettinen kontribuutio keskittyy ehdotukseen aikaisempien viitekehyksien välisistä yhteyksistä. Implikaatioissa johtamiseen liittyen keskustellaan ulkomaisille markkinoille menostrategian laatimisprosessista. Lisäksi tutkielmassa tehdään ehdotuksia politiikkaan liittyen ja tarjotaan ideoita jatkotutkimuksille puolustushankinoissa hyödynnettyjä kompensaatioita koskien.

Avainsanat puolustusteollisuus, kansainvälinen liiketoiminta, eklektinen paradigma, resurssipohjainen näkemys, dynaamiset kyvykkyydet, ydinosaaminen, markkinoille pääsy, strategia

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Abbreviations

BAA	–	Buy American Act
CFIUS	–	Committee on Foreign Investment in the United States
DARS	–	Defense Acquisition Regulations System
DFARS	–	Defense Federal Acquisition Regulation Supplement
DoD	–	Department of Defense
EDF	–	European Defence Fund
FAR	–	Federal Acquisition Regulation
FCT	–	Foreign Comparative Testing (see Appendix 4)
FIRRMA	–	Foreign Investment Risk Review Modernization Act of 2018 (see Appendix 3)
FMS	–	Foreign Military Sales
IPR	–	Intellectual Property Rights
ITAR	–	International Traffic in Arms Regulations
NIH	–	Not Invented Here
NISP	–	National Industrial Security Program
TRL	–	Technology Readiness Level

1. Introduction

A business case?

"World military expenditure passes $2 trillion for the first time".

(Headline by SIPRI on 25 April 2022)

The defence industry is often considered to be a unique industry due to its close relationship with politics and its role in national defence. In Finland, the domestic defence industry plays a crucial role in Finnish national defence, and for the industry to be viable, it needs exporting. The United States has the largest defence budget in the world but is also the world's largest exporter of defence products. When the size of Finland's defence budget is considered, Finnish defence spending seems minuscule when compared to the United States. Finland buys large amounts of defence industry products from the United States but exports little to the U.S. in comparison, and of the earlier exports, most have been tied to countertrade agreements relating to procurements such as Finland's previous acquisition of fighter jets, the McDonnell Douglas F/A-18 Hornets, in 1992. Relating to these procurements, the export performance of Finnish defence industry products has been considered to have fallen beyond expectations within the countertrade (Brauer and Dunne, 2004) and to take place on a small scale outside of it – raising the question of *how come?*

Currently, the driver behind Finnish defence products exports to the U.S. is the recent F-35 programme (priorly known as the HX Fighter Programme), which is built around a procurement consisting of 64 multi-role jet fighters manufactured by Lockheed Martin. The procurement has been budgeted for 9,4 billion EUR by the Finnish government, and deliveries have been scheduled to take place between the years 2025 and 2030. The financial value of industrial cooperation associated with the procurement is estimated to be around 3 billion EUR, with the offsets included.

Besides the driving force of procurements and the often-associated offsets, globally, the defence industry is claimed to operate in cycles. Yet, whether the defence sector actually operates in a cyclical manner or not is a matter of debate as some analysts consider the industry to operate in cycles, while others claim that there is no perceivable pattern of cyclical operation when some other metric than constant dollars is being used in the examination. Despite the discourse around the cycles in the defence industry's operation, as observed by all analysts, military spending spikes when conflict(s) arise, be it due to the collapse of the Soviet Union in the early 90s or 9/11 in the 2000s. These spikes in military spending are an argument against the predictability of the claimed cycles. (Thompson, 2011)

Cyclical or not, defence products are currently sold and produced at volumes much higher than average. The latest event driving up military spending in the Western world is Russia's invasion of Ukraine, which began in 2014 and escalated to war between the two countries on 24 February 2022. Previously, the environment characterised by VUCA (U.S. military origin acronym for *volatility*, *uncertainty*, *complexity*, and *ambiguity*) was a problem that concerned only poorer nations (Tett, 2023), but with the help of the Covid-19 pandemic, the Ukraine war introduced VUCA environment globally especially when externalities of the war started to hit the entire Western world.

Two disruptions that the Ukraine war helped to fuel were the intensification of the race for critical materials, equipment, and commodities and another was the rising defence spending among nations (White et al., 2022). The intensification of the race for critical materials has already been felt by some of the defence industry giants as their access to commodities, such as titanium, and materials, such as semiconductor chips, has been limited by the disruptions in supply chains due to geopolitical tensions. After the Ukraine war broke out, not only did demand for defence products surge in Europe, but military spending in the U.S. also rose to new heights. The increase in U.S. military spending is expectedly at least partially due to the reason that the United States has been the largest supporter of the Ukrainian military by providing various types of arms – for both defence and counter-offence – to their disposal. In an environment of rising defence expenditure, sometimes meaning during wartime, it appears to hold true that nearly anything available will get bought at least by one or another party of the war. Not only is wartime reflected in demand for defence products, but it is also noticeable in discourses held around subjects of national defence and the defence industry's role in it. With the changes in the discourses, changes in principles concerning defence material exports have taken place.

In the context of defence products, exporting requires a nation often to import, as defence products trade typically involves the use of offsets to some extent. Expectedly, the level of offsets – be they due to industrial participation or countertrade – involved varies between nations and is tied to the procuring nations' decisions made concerning national defence and the domestic defence industry's role in it. When the largest of Finnish defence product acquisitions that have involved considerable offset agreements are being examined, oddly, where the acquisition decision of Finnish Air Force's McDonell Douglas F/A-18 Hornet was ultimately made during a deep economic recession, the acquisition of replacing fighter jet variant F-35 by Lockheed Martin seems to take place in a similar setting.

Considering the future of the F-35 program, there has been news circling in Finnish media that the budget of the procurement is expected to be exceeded by a significant margin due to inflation and changes in the EUR to USD conversion rate (Kukkonen, 2022; Pulliainen, 2022; Vilmusenaho, 2022). Yet, a procurement's rising costs are not straightforwardly a problem if the amount of industrial participation – or the amount of indirectly related sales outside of the participation agreements – changes in correspondence when measured in financial terms. Though, the question to answer is, are more sales to the U.S. a realistic option for Finnish defence industry companies?

Indeed, the topics of national defence, defence procurements, and the defence industry's sales and exports are prone to provoke conflicting arguments on the basis of their very nature and raise various questions concerning many of these topics' aspects. Understandably, parties involved in the discourse can have both vested and conflicting interests, and eventually, everyone involved – starting from an individual taxpayer – is entitled to their own opinions concerning these matters. Nevertheless, the ultimate question behind any nation's defence is whether we can put a price on peace – or war, for that matter. Repeating the opening chapter's second sentence: In Finland, the domestic defence industry plays a crucial role in Finnish national defence and for the industry to be viable, it needs exporting.

1.1. Background and Relevance of the Study

This thesis examines how Finnish companies operating -, that have operated -, or are planning to operate in the U.S. defence market see the United States defence market and the business opportunities within it. Additionally, the examination also focuses on how organisations of this distinctive industry perform sales to a foreign market(s) and describes how these organisations have differing approaches for overcoming the same high barriers of entry for the foreign market in question. This thesis builds on an earlier student project performed for a foreign defence contractor concerning a similar topic and provides reasoning for various perceived challenges in the market entry process from the basis of earlier academic research on the chosen industry and characteristics of the selected market. In this thesis, earlier research and corresponding literature are reflected against interviews performed for this study to form a descriptive overview of the chosen topic and, ultimately, to provide theoretical, managerial, and policy implications for the reader. As the U.S. defence market is a business environment unlike any other, much of the study is focused on the examination of the U.S. defence market itself. Additionally, as defence product sales are closely linked to both foreign and domestic policies, some discussion of the political aspects concerning this thesis' points of interest has been included.

The real-world problems related to the chosen topic are eventually tied to arrangements concerning national defence, and the efficient use of taxpayers' money as defence product procurements are ultimately made with public funding. In the United States, the United States Armed Forces – funded with taxpayers' money – expect to have the best technologies at their disposal. Similarly, the same applies in Finland, yet recognising the limitations, the Finnish Defence Forces hope to have the best technologies available. Where in the U.S., means to produce most of the required military materiel domestically are present, Finland can cover only small segments of its national defence's needs with domestic production. Hence, Finland typically turns to foreign manufacturers and imports, whereas the U.S. does not have a similar need for importing. When measured in absolute dollar value, most of the Finnish military material is procured from the United States. The imbalance of trade between the two nations is not a reason for concern alone, but from the times of Barack Obama's administration in the U.S., consolidation of large defence industry contractors and followed market concentration has been noted as a potential concern for the government (DoD, 2022). As the origin of Finnish defence imports is often the United States, potential problems in the U.S. defence industrial base can transfer into Finland and even have a negative effect towards Finnish national security. Expectedly, one of the biggest problems is that these large U.S.-based contractors can operate inefficiently from the end-customers viewpoint and efficiently from the shareholder's viewpoint, and as noted by Paul Holden (2017), there are various ways that arms trade can be burdensome for the taxpayers. In these cases, the burdening effect can hold true for the taxpayers in a selling country due to government subsidies and for the taxpayers in a buying country potentially due to government officials' inefficient spending. Yet, the Department of Defense's (DoD) use of private contractors has its benefits as it helps in providing supplemental expertise in specialised fields concerning national defence and provides a surge capability to various support functions required by the Armed Forces, and if effectively managed and overseen, the use of private contractors can also bring cost benefits over internalised alternatives (Peters, 2023). To tackle the potential size-related issues of U.S. defence industrial base consolidation, one of the multiple approaches chosen by the DoD has been a set priority of increasing the number of smaller companies of their prime contractors. Similar actions to broaden the defence industrial base have been taken in the European Union, and one of these actions has been a decision to increase funding channelled through the European Defence Fund (EDF) for development activities of the European defence industry small and medium-sized enterprises (SMEs).

Where the problems of the U.S.' consolidating defence industrial base and the potential inefficient spending are connected to the export of Finnish defence industry products to the U.S. and can be eventually found in the exploitation of offsets agreements. As earlier described, Finnish exports to the U.S. have been tightly tied to procurements made for the Finnish Defence Forces. In the current setting, if Finnish defence industry companies wish to sell and export to the U.S., it practically means that – especially when concerning Finnish Defence Force's annual budget – a relatively large procurement must take place beforehand. While this setting can be explained with the United States' current third offset strategy, it does not remove the risk of inefficient spending within the borders of the U.S. moving to Finland through the procurements made. Yet, recognised, the Finnish army needs to both upkeep and update its equipment – especially now that Finland is a ratified member of NATO – and currently, many of the leading weapon systems are produced by U.S. companies. In specific products, procuring from U.S. contractors is often the only option as these systems are simply too complicated – and thus too expensive – to be developed and manufactured domestically or technologically advanced that cannot be procured from elsewhere. For example, when purely technology-based capabilities of the F-35 fighter jets (sometimes seen as the embodiments of modern combat aircraft) are considered, there were no credible rivals during Finland's procurement process. Indeed, besides the foreign politics associated, there exists a performance-based justification for why throughout history, the largest of Finnish defence procurements have been (and likely will be) made from the United States. To ensure the security of supply, access to crucial parts of these technologies is paid for in the context of procurement-related (direct) industrial participation to ensure that Finland possesses the capabilities required to upkeep the items purchased. While this practice can be considered crucial from the viewpoint of national security, it is also where the option of inefficient spending is introduced.

In summary, exploring the opportunities and challenges related to national defence and the defence industry's role within it is important as 1) nation-states need a credible national defence that is based on their militaries' technological competence, strength, and tactics – all of which are ultimately based on defence procurements, 2) defence industries need to be (and remain) viable by maintain their capabilities for a sufficient level of research and development (R&D) and supply security, and to remain viable both Finnish and U.S. defence industries need exports, and 3) the industries need to operate efficiently in order for the governments to avoid inefficient spending of taxpayer money.

1.2. Research Objectives and Questions

The objective of this study is to explore the nature of defence procurements, the structure of the U.S. defence market and the related market entry process. By focusing on the examination of the U.S. defence market characteristics and how they affect foreign companies' perceived opportunities within it, the theoretical contribution of this study is to extend the body of knowledge concerning the distinctive field of industrial organisation (IO) from the theory of the firm. Additionally, according to the author's understanding, some sensemaking of discourse held around these subjects could be beneficial for creating novel approaches for Finnish companies to enter the largest defence market in the world.

Ultimately, this thesis is to answer the following primary research question:

1) **How do Finnish defence industry companies operating outside of industrial participation agreements see the business opportunities within the U.S. defence market?**

Additionally, through two supportive questions, this study is to determine the following:

2) **What is the role of organisations' core competencies and dynamic capabilities in the context of selling defence products to the United States?**

3) **What are some of the sales and distribution strategies that Finnish companies have utilised in successful entries to the U.S. defence market, and which are the implications of these strategies for deriving best practices?**

1.3. Describing Key Concepts

This thesis discusses Finnish defence industry exports to the United States. Hence, it is worthwhile to describe the concepts of the Finnish defence industry, the defence market of the United States, and defence procurements in general in more detail. Before the description of national industries and markets, key statistics of Finland, the United States, and the chosen Nordic and European countries are presented to provide a better image of Finland's positioning in the Western defence market.

The defence markets of the selected countries are the following:

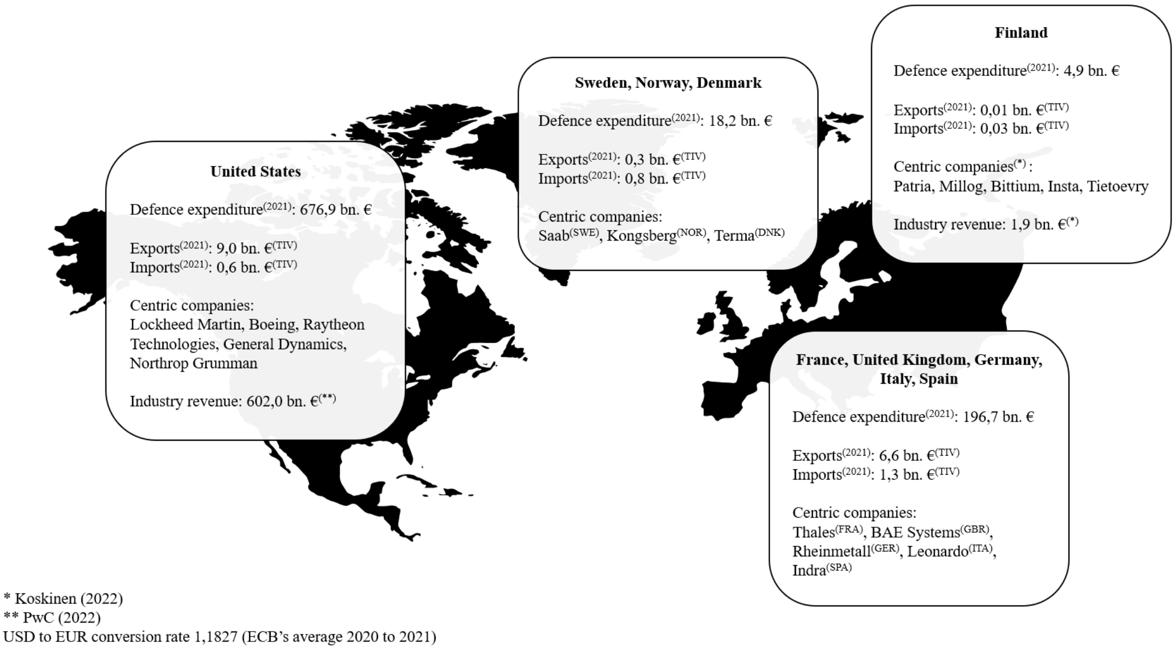

Figure 1: Details of the Western defence market (own illustration)

When compared to its European peers, the entire Finnish defence industry's export volume is overshadowed by some of the largest European defence companies. Of the Nordic nations, Sweden is in a class of its own with its 2,0 billion EUR (20,1 billion SEK) worth of defence product exports (Riksdagsförvaltningen, 2022). Sweden's large export volume is explained mainly by SAABs foreign sales, and when the volume of exports is considered, Norway holds second place with its defence product exports of 0,6 billion EUR (6,3 billion NOK) in 2021 (Utenriksdepartementet, 2022). Finland, while sharing similarities in the structure of the defence industry with Norway, is more on par with Denmark; the granted export licenses of Finland were 0,3 billion EUR in 2021 and Denmark's 0,2 billion EUR (1,2 billion DKK – for a full list of exchange rates, see Appendix 1) during the same year (Politi, 2023). Yet, concerning Finnish defence product sales and exports, while these are the reported numbers by the Ministry of Defence based on export permits, as mentioned by one of the industry experts, they are mostly to give an indication of the financial value of the export licences applied and even with the Finnish utilised export permits totalling for 73,4 million EUR the situation concerning Finland's defence products exports is not, from the industry's perspective, as grim as the numbers would perhaps suggest.

1.3.1. Finnish Defence Industry

The Finnish defence industry needs exports for the industry to be viable (AFDA, 2022), and a viable defence industry is crucial for Finnish national security as it is likely to provide the best guarantee of supply security for the Finnish armed forces. On a global scale, Finland is a small operator in the defence market, and Finnish exports contribute little towards the revenue size of the global defence market. In numbers, the total Finnish defence expenditure in 2021 was 4,9 billion EUR (5,8 billion USD), 2,1% of Finnish gross domestic product (GDP), and of which 574 million EUR (679 million USD) was due to material procurements – excluding the HX Fighter and Squadron 2020 programmes (Ministry of Defence, 2021). To put things in perspective, the U.S. defence expenditure during the same year was 677 billion EUR (801 billion USD) (Wezeman, Kuimova and Wezeman, 2022). Without the few exceptions of larger companies, the Finnish defence, aerospace, and security industry mostly consist of privately owned SMEs and the companies within it often operate in other industrial sectors in addition to the defence products manufacturing and/or defence services providing (AFDA, 2022). In 2021, the estimated turnover of the Finnish companies operating within the industry was 1,9 billion EUR (2,2 billion USD), of which 48% was due to exports. During earlier years, the share of exports varied between 40 and 60%. (ibid) Finnish support organisations that are committed to accelerating Finnish defence product sales to foreign nations are the Confederation of Finnish Industries (EK), the Association of Finnish Defence and Aerospace Industries (AFDA), and Business Finland. Of the three, only AFDA has strictly limited its services to the defence -, aerospace -, and security industries. Products manufactured by Finnish defence industry companies consist of armoured wheeled vehicles, turreted mortar systems, logistical solutions, corvette class naval vessels, ammunition, and C4ISR systems (C4ISR is an abbreviation of the words Command, Control, Communications, Computers (C4), and Intelligence, Surveillance and Reconnaissance (ISR)).

The majority of Finnish defence industry (or defence industry-related) companies are members of AFDA, and the breakdown of the AFDA member companies' reported operating industries according to Standard Industrial Classification TOL 2008 and enterprise size are following:

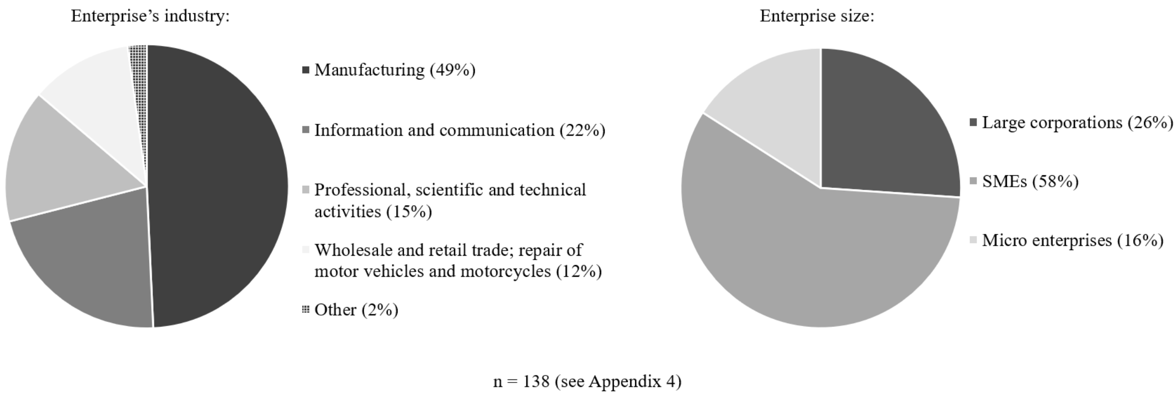

Figure 2: Structure of the Finnish defence industrial base from the basis of the AFDA member organisations (own illustration of the information from AFDA, 2022)

Where information and communication companies represent roughly a quarter of the AFDA members, nearly half of the Finnish defence industry companies operate in the manufacturing of tangible products. Yet, the TOL 2008-based analysis of the industry structure is based on the reported information by the companies of their primary operating industry, suggesting more indicational than factual value. As mentioned by AFDA (2022), many of their member organisations operate in multiple industries, and for many of their largest members, when enterprise size is considered, the defence industry is not their primary source of income or primary field for operations. The informational value of enterprise size is another factor worth evaluating, as many of the largest companies operating within the Finnish defence industry are foreign MNEs' subsidiaries (see Appendix 2). Yet, from the basis of the information available to the public, the structure of the Finnish defence industrial base is as described.

While the Finnish defence industry is often considered to be a key for the Finnish national defence strategy that relies on self-reliance, Finland is a small nation on a global scale, which makes Finland a subject of limitations concerning military spending. In the case of many bigger nations, their local armed forces are the largest customer for their national defence industries and their companies, yet depending on the company in question, the same holds true only for some of the Finnish companies. Amongst the rest of the Finnish defence industry companies, the local customer is often perceived to be too small to support meaningful (and more complex) R&D activities alone, and partially therefore, foreign sales are needed. When defence product sales and exports are made, as Finland is a member of the European Union, Finnish companies operating in the defence industry must follow EU laws and regulations in addition to the national ones. In Finland, the administration of the EU export control system is handled by the Ministry of Foreign Affairs of Finland, which is also responsible for export permits of dual-use items. The export permits of defence materiel are handled by the Ministry of Defence. (Ministry of Foreign Affairs, n.d.)

1.3.2. Defence Market of the United States

The United States defence market is the world's largest in terms of government arms expenditure, and during 2021 the country's military spending amounted to 677 billion EUR (801 billion USD), which was 3,5% of the U.S. GDP (Wezeman, Kuimova and Wezeman, 2022). Undoubtedly, this large amount of military spending should make the U.S. defence market an attractive option in the eyes of foreign defence industry companies, and indeed, the U.S. defence market is sometimes said to be one of the most competed markets in the world. Product categories that are especially competed are aircraft, naval vessels, ammunition, both conventional weapons and modern weapons, and C4ISR systems, and the U.S. has basically all its defence branches covered by domestic production. When the U.S. balance of defence products trade is examined, where the United States was responsible for

39% of the global arms export transfers between the years 2017 and 2021, the nation's arms import transfers accounted for 2,4% of the total global import transfers during the same period (Wezeman, Kuimova and Wezeman, 2022). In addition, the U.S. is very self-reliant in its defence procurements; when measured in trend-indicator value (TIV), during the five-year period between 2017 and 2021, the total U.S. defence product imports accounted for 6% of its exports. For comparison, in Finland, during the same examination period, Finnish import transfers accounted for 266% of the export transfers. While TIV does not provide exact measurements of the financial value of a nation's defence products trade, it does provide an indication of the volume, trends, and directions in global arms transfers (SIPRI, no date). The balance of trade is not a coincidence, as the U.S. market poses high entry barriers, especially for foreign companies, and acts like the Buy American Act (BAA) put local companies in a highly advantaged position against their foreign peers when competition concerning Department of Defense's procurements is considered.

Concerning sales barriers, the U.S. market is not entirely an exception; In general, a defence market is highly protected in any developed nation. Yet, the U.S. defence market is one of the most preserved ones in the world (Parviala, 2021). Besides the requirements proposed by BAA, companies often need to comply with International Traffic in Arms Regulations (ITAR), the Foreign Investment Risk Review Modernization Act (FIRRMA), and the National Industrial Security Program (NISP), and in addition to the overall strict regulation concerning defence procurements, factors that contribute towards the high entry barriers are complex government procurement processes, often high capital requirements, requirements concerning security clearances, challenges relating to differing interpretations of intellectual property rights (IPR) between some nations, and political influence over defence procurements. Furthermore, the U.S. defence market is dominated by large domestic contractors who can leverage their economies of scale and who have established tight connections to Congress and DoD – a setting sometimes referred to as the military-industrial complex or Pentagon system (Weber, 2023). Yet, ultimately, it is the combination of these factors that contribute towards the perception that the defence market of the United States is tough to penetrate. Yet, some of these high barriers of entry for both local and foreign companies have been noticed by the Department of Defence, and lately, lowering the entry barriers for smaller defence industry operators has become part of the DoD's agenda (Department of Defense, 2022).

Expectedly, where the U.S. defence market is highly barriered, and national acts like the BAA are affecting the outcomes of the U.S. government's procurements, there is help available to foreign companies to overcome these barriers. In the United States, Foreign Comparative Testing (FCT) is a program under the DoD, and when simplified and from the viewpoint of the export process, the role of FCT can be seen as a promotor or a sales agent between the seller and the buyer. Yet, despite the help provided, for example, by the FCT, not all companies are curious towards the U.S. market. In the case of some companies, the governmental power of the United States makes the U.S. market one of the first, but also one of the last of markets that they wish to enter. While the U.S. market has rarely been a target of Finnish military materiel exports, Finnish companies have been successful in penetrating the U.S. market by selling defence products directly to the Department of Defence (DoD) and through U.S. contractors.

1.3.3. Determining Characteristics of Defence Procurements

Defence procurement is the process that in which authorities in the field of defence acquire various types of products – such as military equipment, parts, components, and/or sub-assemblies – or services that they need for performing their duties and missions towards national security and defence (OECD, 2011). Defence procurements often require complex contracts that include special rules and procedures for ensuring the fairness of competition, transparency, and efficiency. Yet, simultaneously, these procurements can involve sensitive aspects of national security, and thus, they can require protection of classified information and/or operational secrecy – which both can limit opportunities for the prior three. Often, defence procurements are large due to the procurements typically consisting of entire weapon systems that provide performance-based advantages to their users, and the largest purchases have the capability of affecting the average price of defence products globally. The average price matters as it creates an incentive for companies to either enter or exit the market, and an earlier study by Benny Mantin and Asher Tishler (2004) has suggested that defence products are purchased more – even if measured in both currency and quantity – when the average price of the products is comparatively low. Yet, during wartime, the relevance of average price in trade volumes is unclear, and as defence industry analyst Bill Hartung has mentioned (Burgess, 2023), due to recent events (in Ukraine), the U.S. military-industrial complex has been successful in removing many of the safeguards against industrial inefficiencies and potential price gouging.

Nevertheless, end-use defines the characteristics of defence procurement, and the key factor concerning the end-use is that defence procurements should have an impact on national defence capabilities. The replenishment schedules of any defence products are set by their shelf life – and in more complex and technologically advanced products, sometimes their product lifespan. Often, the negotiation power of a procurer plays an important role in the defence procurements as all customers are not met with the same price – besides the purchasers' perceived value, the differences in prices are sometimes explained by the procurement-associated offset agreements.

In developed nations, new products replace old ones, and the old ones are to be eventually expelled from inventories by either dismantling the products, using them in military practices, or exporting them to developing nations or sometimes directly into conflict zones. The economic rationale puts emphasis on the last two of the four options, where export regulations within developed nations aim to address this issue by shutting out possibilities for exporting the old arms from the inventories to developing nations that are likely to use them for offensive purposes – or sending them to nations that are participating in an ongoing war. Yet, as earlier described, the current export destination of older military materiel that are to be replaced with newer ones are the battlefields of Ukraine. Considering the current state of defence products demand, according to an estimation of an industry expert interviewed, some of the advanced weapon systems are sold out for the next five years and negotiations concerning new sales are ongoing.

Indeed, the current demand for modern arms systems appears to exceed the production capabilities of various defence industry operators, and the ones with the production capabilities to best meet the demands of the end-users seem to conquer market share. When examined against earlier research, demand affects the level of competition amongst the companies operating within the defence industry, and the level of competition appears to be connected to the incentives for the companies to, for example, circumvent export regulation, though the motivations for companies' illegal activities are not well understood (Nielsen, 2005). While it is also unclear what are the performance effects of defence industry operators' such activities, as stated by Nielsen (2005), circumventing export regulation can, in some cases, mean that defence products are exported to destination countries that are expected to put them in offensive use, thus creating a need for various otherwise peace promoting nations to potentially increase their military expenditure related to defence product procurements (Pamp, Dendorfer and Thurner, 2018). A situation where one country's military expenditure has a boosting effect on another's is often called an arms race, and four simultaneous conditions are seen as a requirement for an arms race: 1) Two or more parties are involved, 2) The parties involved structure their armed forces according to needs proposed by a scenario of defeating the other party (or parties), 3) The parties involved must compete in quantity and/or quality of their armed forces, and 4) There must be a rapid recognisable increase in the quantity and/or quality of their armed forces (Gray, 1971).

Whether a global arms race has begun due to the Ukraine war is yet to be seen, as proving the second condition is expectedly challenging, but as earlier mentioned, defence products are purchased more than average on a global scale. In practice, an arms race can have both positive and negative effects on the welfare of a nation's citizens – whether it is which of the two is expectedly tied to the view taken; on the one hand, investing in defence products research and development boost innovation and technologies transfer from the defence industry to various other industries. As described by Feinstein (2011) and Holden (2017), the discourse around whether this is the most efficient usage of taxpayer money or not is ongoing, and the commonly shared opinion often shifts towards the latter, especially during peacetime. Hence, on the other hand, investing in defence products in itself is mostly inefficient spending if the products are not ever used for what they are ultimately intended for. Yet, as the phrase apparently first written by Publius Flavius Vegetius Renatus goes: *"If you want peace, prepare for war".* Meaning that the best way to counter the threat relating to a hostile nation is to arm one's own to the best of its capabilities.

A key question always relating to defence products procurements is the end-use, which defines the characteristics of a procurement. Defence procurements are aimed to have an impact on the defence capabilities of an individual nation or a larger defence alliance. When the impact factor is considered, purchasing an individual assault rifle has no impact on the defence capabilities of a nation – in a country size of Finland, procurement of more than ten, meaning tens of, howitzer cannons start to have impact and assault rifles need to be measured in (tens of) thousands. Multiplying these numbers with ten starts to meet the scale required for impact on U.S. national defence. As earlier stated, defence procurements are typically large, and hence price plays an important part in defence acquisitions. Yet, in many defence acquisitions, price is more complicated than the mere unit price, and the buyer is often more interested in the total costs of the product and/or service. For example, the price of a weapon system does not only consist of the direct product costs, as the new operators of the new system require training, and the system requires maintenance during its lifespan. To avoid the costs of training being sunk into an individual product with no meaningful impact, the additional costs propose the requirement to keep the procurements' batch size large. Procurement sizes often reach tens (or hundreds) of millions, sometimes billions, when measured in euros, and this is due to the size of the need; the system must cover – or be compatible with – the entire branch of national defence and the specific requirements related to it. Summarising, defence acquisitions are typically large-sized and strategic by nature, and they are not made on light grounds.

Naturally, there are products that are replenished on a tighter schedule, meaning every ten years instead of, for example, thirty, but products with a longer lifespan are often connected to a phenomenon of *stickiness*. In these sticky procurements, the buyer is typically tied to the seller throughout the service period of a product acquired, and especially with products having unique capabilities, the buyer has from few to no other offerings to choose from when they want to expand the capability of their armed forces by increasing the number of some distinctive product at their disposal. Despite the stickiness, with the products having the longer service period, there are often multiple models represented in the arsenal of the armed forces, but nations typically try to avoid having multiple versions of weapon systems covering a distinctive branch of national defence – this being tightly related to the cost structure of the procurement. The number of product alternatives for individual nations' use is also tied to scale: the larger the country, the larger the armed forces. The larger the country is, the more land area to defend. Larger land areas typically involve larger variations between requirements set by the environment. An example of such variation is the differences in the environments between the north and south borders of the United States. Different environments can require differing products for the same functions of national defence. A larger army size can, in its simplest form, mean that there is demand for more products than an individual producer can deliver in a sensible time; this creates the need to place orders from different manufacturers. Also, a larger army size means larger procurements that give the procurer more negotiating power. To avoid product-based lock-in, large nations can use the option to distribute some of their defence procurements by using multiple manufacturers – the availability of this option being tied to product type. For example, countries with the largest armed forces, like the United States, constantly have multiple models of fighter jets in service, whereas the aerial defence of Finland is structured around a single type of fighter aircraft, and the period where F-35 and F/A-18 are overlapping in service is only temporary – the F-35 is to replace the older model entirely by 2030. Typically, the entire system gets updated like in the case of Finnish fighter jets, but due to, for example, reasons described earlier, this is not always an option when securing national defence.

Understandably, not all products procured are of the latest technologies available, and naturally, there are procurements that are related to the upkeep of a nation's armed forces, such as ammunition and similar products with very stable demand and pricing. These are often products that have remained relatively unchanged through decades. In these product categories, it is up to the procuring nation to decide whether they purchase the demanded products in large quantities, make repeated smaller purchases from the market(s), or enter into a supplier agreement with the manufacturer for a predetermined period. In other words, for example, purchasing standard ammunition is much about the decision made on inventory management.

When governmental organisations do 'shopping around', meaning that they procure new systems as parts of their arsenal of defence products, the ultimate unit costs between countries are not the same, and the end price of the acquisition is often kept hidden. In the context of arms sales from the U.S., while the U.S. law states that pricing of Foreign Military Sales (FMS) should be the same, besides the variance of use value perceived by the buyer, the variation in price comes from the act of industrial participation and the offsets agreement associated – the financial value of industrial participation varies across procurements – and other non-financial advantages, such as the nurturing of the long-term relationships with the U.S. military (Defense Security Cooperation Agency, no date). Though, it is worth considering that offset agreements have been recognised as a potential source of corruption due to their limited transparency (Transparency International, 2010).

1.4. Thesis Structure

This thesis consists of five individual chapters. The introductory chapter provides background information on the study and reasons for the selection of the research questions. Additionally, the introduction explains the research objectives and reveals the research questions that are to point the direction of this thesis.

The second chapter of this thesis includes the literature review, and the goal of chapter two is to discuss the nature of the defence industry and defence procurements and examine the earlier and current discourse held around the chosen international business and industrial organisation-related models and frameworks.

Chapter three is dedicated to describing the methodology of the thesis. It consists of describing the research context, how the data collection was performed and what kind of analysis was performed on the data. The last section of chapter three issues the limitations and ethical considerations of the study.

The purpose of chapter four is to reveal the findings of the qualitative study within the suggested order and by providing some direct quotes from the interviews approved by the interviewees. Besides the quotes, additional literature is introduced during the chapter to supply the reader with relevant information concerning the topics discussed. The last section of chapter four performs a summary of the findings.

Chapter five is to provide a reflective discussion on the thesis topic with theoretical, managerial and policy implications and suggests topics for future research. Finalising the thesis, the conclusions of the research are provided at the end of chapter five.

2. Literature Review

This literature review provides insight into the existing literature and earlier research concerning the topic of this thesis. The selected models and frameworks for examination of the chosen area of defence industry sales and exports are PESTLE, Porter's Five Forces, OLI, RBV (including core competencies and dynamic capabilities), and Trinity of Defense Industry. After the descriptive justifications by covering both the buyer's and the seller's viewpoints for the selections made and a brief illustration of how these models align in the context of defence industry sales and exports, the models and frameworks will be described in more detail in the earlier mentioned order. In the case of PESTLE, attention has been paid to describing the framework's factors in the context of defence exports. At the end of the literature review, an overview of the target market's environment, meaning the U.S. defence market and the industrial base associated, is formed from the basis of the chosen literature.

Empirical evidence and prior research have shown that politics are a crucial part of defence product sales and procurements. Yet, none of the existing models in international business research fully account for the distinctive features of the defence product sales and procurements where the end-customer is either a government agency, such as the U.S. Department of Defense, or under the strict control of one. While models and frameworks such as PESTLE and Porter's Five Forces do account for the roles of government policies, they are used to examine the business environment and industry competition and, thus, do not connect politics to an individual organisation's decision-making. Yet, the cruciality of both foreign and national politics towards any defence product(s) procurement should not be ignored, and the same applies to defence product sales: Government is a centric party in defence products sales, and to further underline the importance of government's role in (and over) the defence industry, businesses – private or state-owned – are under government control as defence products exports are controlled by their local governments through export permits. This setting places traditional industrial organisation frameworks, such as the eclectic paradigm (known as OLI framework) (Dunning, 1981; 2002) and resource-based view (RBV) (Barney, 1991), under scrutiny as they place government(s) in the outskirts of business activities. Implying, from the viewpoint of the companies, focusing too much on the exploitation of these models alone will likely produce distorted suggestions for the course of action as RBV is focused on internal analysis, and OLI can downplay the importance of foreign politics between nations. While an attempt to connect RBV with politics has been made by Nicos Antoniades (2022), his work has not so far gained much recognition amongst academics when evaluated based on citations. Yet, the role of (foreign) politics in defence sales and exports is unquestionable, as not only are procurement decisions made with supply security in a centric role from the buyer's side, and a change in foreign politics can affect it drastically, but in the context of defence products and national security, a single policy-based governmental decision can override even the best and most comprehensive of offerings – or in the worst-case undo entire businesses. Indeed, the heightened role of foreign politics and the power of governmental organisations within (or over) the industry can sometimes mean unfavourable things for the seller.

When examining a buyer's perspective through models like OLI or RBV, putting a governmental organisation in the place of the decisionmaker can disregard an assumption of the government's role as one of the parties ultimately responsible for national security. Yet, from the basis of the commonly shared expectation and a notion which is typically included in the constitutional law of a developed nation, the role of the government is to provide a right of security for its citizens, and hence, the assumption can be made that both export permit and defence products procurement decisions are made with national security in the centre. This suggests that in the OLI framework, the responsibility for national security would steer governments towards ownership (by arranging domestic production) and ignore relocation of production in case of exports (by producing at home and exporting if necessary), whereas, in a free-market environment, the interests of a nation's local defence industry's operators would be found from internationalisation by practising licensing and/or other forms of contractual arrangements – instead of internalisation. Supported by empiric evidence, in larger nations (such as the U.S.), a long-term binding strategic decision to support local defence products manufacturing has been (and still is) cemented by their governments, and internationalisation has been a perceived trend within the companies operating within these nations' domestic industries, for example, due to the increasing complexity of their products. Suggesting, due to requirements proposed by the need for national security, companies operating in the defence industry can have conflicting interests with the national governments that they operate under, and prior research has shown that this can sometimes be the case (Rendon and Rendon, 2016). Though, to both defend and challenge these OLI-based assumptions, it must be mentioned that the performed internationalisation has often been followed by internalisation as the defence industry's largest operators have acquired smaller companies from the global markets at a rapid pace since the early 1990s (Department of Defense, 2022; Mantin and Tishler, 2004) – the centric question being that who leads who; government the industry's companies – or vice versa?

From the perspective of businesses, some of the effects of the political environment are included in the examination when OLI and/or RBV are combined with the PEST (or PESTLE) framework. Yet, when covering the buyer's perspective and thus examining individual nation's – such as the United States of America's – government as the purchaser and hence examining its operating environment, the PEST framework may start to suffer from inaccuracy as the environment analysis eventually is bound to cover the globe. Hence, an additional model ought to be combined with the frameworks as it can aid in understanding the complexity of the procurement decisions made by governmental agencies – such as DoD in the United States – while keeping the scope of examination manageable by adding strict boundary conditions around the procurement decision-making. While Porter's Five Forces (2008) is often used for industry competition analysis, and the five forces categorise any industry's competitive forces and additionally can help recognise the factors that act as drivers behind the five forces, the model does not provide a clear answer(s) to why, for example, a certain product gets procured over another by the buyer. A recent model of the Trinity of Defense Industry (Taksás, 2019) aims to address the requirements for defence industry products in the context of (national) defence procurements. The requirements suggested by the model hold for both the purchaser and seller of defence products, and a combination of the elements proposed within the model are found behind every defence product acquisition decision. Yet, the model ignores the role of politics and legitimacies behind these decisions and pays little attention to what aids the companies in fulfilling Trinity's requirements. Hence, the Trinity of Defense Industry alone will not necessarily give enough room for interpretation of the role of politics in defence procurements. While politics could be included under the factors affecting supply security, this does not entirely recognise the role of both foreign and domestic politics as the suggested outcome would be that if the foreign politics between the selling nation and the buying nation would be on stable grounds, a procurement agreement should be underwritten if the other conditions of the trinity would hold. This naturally is not always the case as, for example, competing views concerning the internal politics of a nation can easily end the competition in a domestic producer's favour, and this phenomenon is not strictly limited to the U.S. defence market. Recognised, the role of local foreign politics and target market domestic politics can be seen as random factors for Finnish SMEs working on their exports towards the U.S. market, but the nature and presence of these factors must be understood and internalised by these companies for refined risk assessment concerning their business decisions. As an assumption, the tighter the ties the companies have with the people responsible for politics both domestically and abroad, the better the predictability of the behaviour of these random factors the companies have.

To further reason the selection of the earlier discussed models, a statement can be made that from a process perspective when a decision to start foreign market sales is made by a company, it needs to create an entry strategy for the foreign market(s). Franklin Root (1994) has priorly described the elements found in an international market entry, and they are the following:

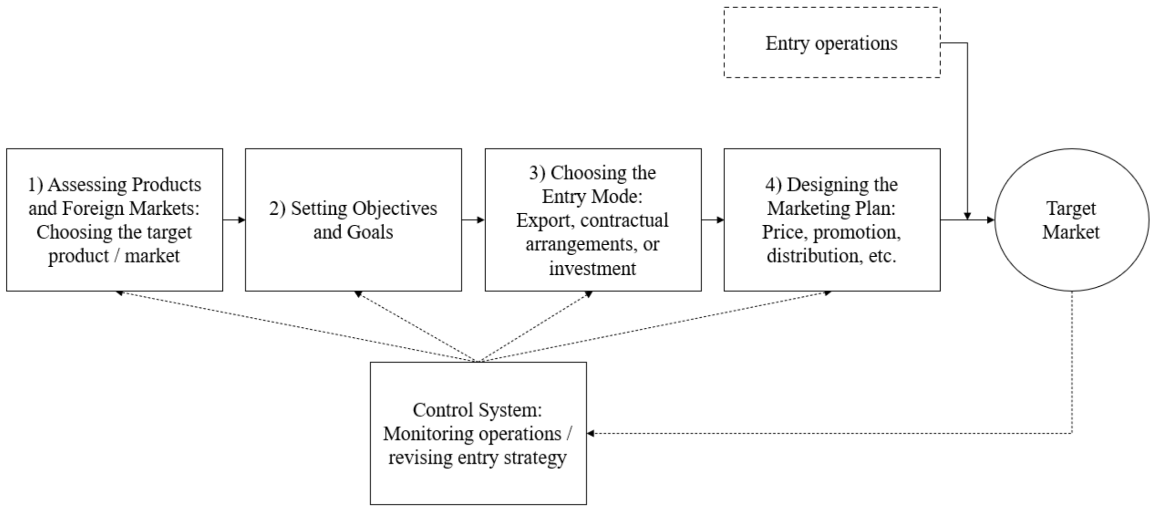

Figure 3: Root's (1994) model of the elements of an international market entry strategy

Additionally, Root (1994) mentions that a company's market entry strategy is often discussed as if it would be a single plan, but a market entry strategy is rather a composition of individual plans. These individual plans are assessed in the illustrated order, yet, the assessing and design processes are not linear but rather "iterative with many feedback loops". For example, when formulating a marketing plan, a company can discover a need to question its chosen entry mode. As the entry operations begin and the operations performed are being monitored, changes are typically required in some (or all) of the elements of a market entry strategy. Hence, planning a new market entry is a continuous and open-ended process. (ibid)

An illustrative picture of the connections between foreign market entry strategy planning and the chosen theoretical models and frameworks for examining the subject:

(Image on next page)

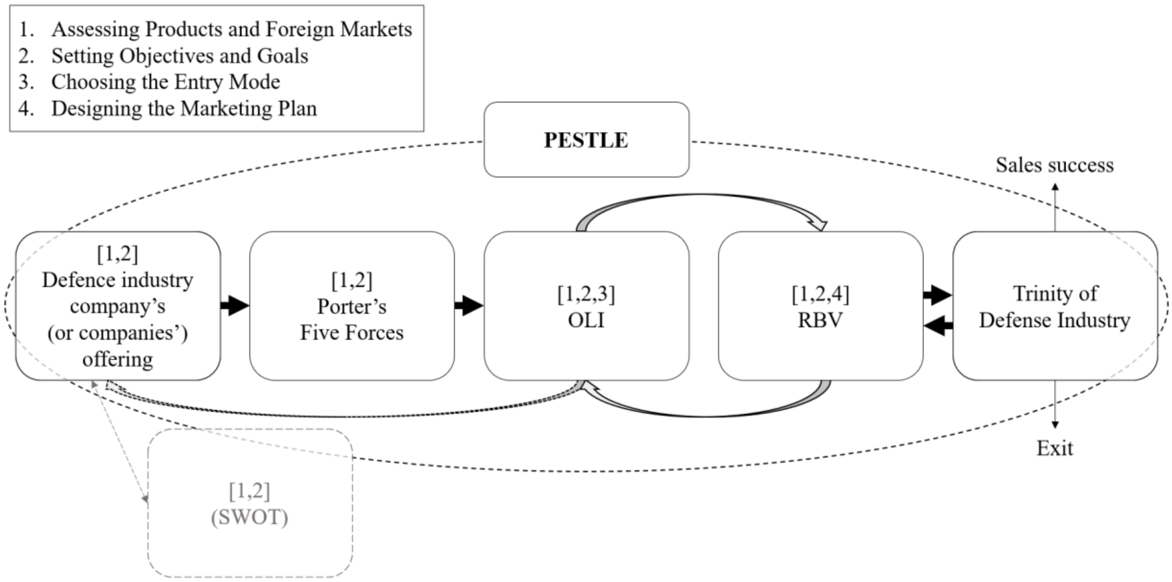

Figure 4: Connecting Root's (1994) foreign market entry planning and the models (own illustration)

To describe the suggested connection between foreign market entry planning and the selected models and frameworks in more detail, a logic placed in the decision to build this thesis' theoretical framework is that first, a defence products (or services) company planning on entering a foreign market has selected a target market – examination of the target and the market's competitive environment is done with Porter's Five Forces model. Second, the company selects the desired market entry model based on the OLI framework. The attainability of the selected market entry model is evaluated from the basis of the company's internal capabilities – or alternatively from the basis of the companies' combined capabilities – that can be analysed with the means provided by the VRIO framework from RBV. From the basis of the analysis, a company can reflect its offering against the model of the Trinity of Defense Industry. The Trinity of Defense Industry represents a buyer's decision-making criteria. Both the defence products company and the buyer operate under the conditions described by PESTLE. Like Root's (1994) described process of formulating an international market entry strategy, the process of formulating a foreign market entry strategy by using the models presented in this study is iterative; If a company, for example, weighs on the decision to enter a new market by performing an FDI, from the basis of a company's resources and capabilities, the feasibility and advantageousness of the FDI can be estimated. If the company plans to proceed with the FDI, the likelihood of attaining procurement contracts from the U.S. with the chosen (new) market entry model can be estimated from the basis of Taksás' (2019) Trinity. Especially when the company's offering is compared to estimations from competitor's offerings, if the company sees its offering to be unable to provide similar benefits in, for example, supply security as the competing U.S. (domestic) offerings, the company should, for example, replan its (new) market entry strategy by changing its market entry model and/or – especially in case of multi-product companies – consider choosing a different a product to build its suggested offering from (or to).

In strategic planning, as it is often seen as a continuum to PESTLE and sometimes seen as a predecessor to Porter's Five Forces as suggested by Michael Dobbs (2014), one can question whether the SWOT (acronym from words *strengths*, *weaknesses*, *opportunities*, and *threats*) analysis framework should be included in examining a foreign market entry process in the context of this thesis. While this could be done by the companies planning on a foreign market entry and perhaps should have been done when performing a case study for some distinctive company and around some particular product, in the context of a predetermined decision of examining the potential market entry to the U.S. defence market and by performing defence product sales that are not limited to a specific product, the use of SWOT was intentionally avoided in this thesis.

When considering the opportunities of a SWOT analysis, an analysis framework originating from the SOFT approach by R.F. Stewart, O.J. Benepe and A. Mitchell in the 1960s (Puyt, Lie and Wilderom, 2023), a SWOT could be conducted on the entire U.S. defence market and the Finnish defence industry, but due to the complexity of the market and to avoid setting unrealistic expectations towards Finnish companies offerings, for a meaningful analysis, the scope of analysis should be narrowed to a smaller area, such as an individual state as in the case of Maryland (Irani et al., 2017), or to a specific branch of defence, product, or product category, such as aerostats (Çetin, 2013), or function(s), such as military logistics and the use of additive manufacturing (Valtonen, Rautio and Salmi, 2022). Yet, narrowing the scope of SWOT would direct the examination away from the topic of this thesis. SWOT could – and likely should – be used by the companies when examining the opportunities provided by their product(s) on the global defence market and in the suggested combination of the frameworks and models and Root's (1994) foreign market entry planning process, this product-based SWOT would be linked to "Defence industry company's offering" and to Root's (1994) processes of "Assessing Products and Foreign Markets" and "Setting Objectives and Goals". In this sense – and in the context of this thesis where the decision concerning the selection of a target market has been made – the findings from the basis of the SWOT analysis would be somewhat irrelevant from the viewpoint of Finnish defence industry sales and exports but crucial for the company responsible for the product that the analysis is based on. Additional reasons for ignoring SWOT were that, firstly, there ultimately is only one buyer in the U.S. market – the Department of Defense – and while sales elsewhere can be made by U.S.-based contractors, a company planning on selling to a contractor has the option of performing foreign sales elsewhere on its own. Secondly, as the defence product sales are eventually made between B2G and the procurements are large, companies are typically able to sell to the target market only in fixed quantities. This limits the seller's opportunities of, for example, entering the U.S. market gradually by increasing sales of an individual product – suggesting that testing the market's reaction with a "soft launch" is not an option in the context of defence product sales to a foreign market. Thirdly, and expectedly, as SWOT or similar analysis is done by the counterparty concerning their (national) defence needs, and procurements are made accordingly, upselling to the government organisation is highly unlikely – especially for smaller defence companies. The occasions where upselling could be possible would be tied to a company having a unique offering, and hence, focusing on the product and performing a SWOT analysis based on its qualities would be most beneficial for the company. Eventually, as the U.S. defence market can be seen as the pinnacle of international defence markets and the defence industry is product-centric, an evident conclusion is that a company's product needs to have associated strengths and opportunities that apply in the global defence market for the company to have a credible business case for entering the U.S. defence market. Additionally, to avoid unnecessary overlaps between areas that the frameworks cover, the SWOT analysis is not utilised with (or after) the use of OLI and RBV; according to the author's opinion, the two models in combination with the Trinity of Defense Industry (Taksás, 2019) provide clear enough recommendations concerning potential courses of action for the companies planning on entering the U.S. defence market, and arguably, where SWOT is sometimes used by companies for generating ideas at what *could* be done, the suggested combination of OLI, RBV and Trinity is to address companies of what *can* be done.

Alternatively, to the priorly suggested combination of the selected models and Root's process of foreign market entry planning (1994), the models can be divided into categories according to a company's perspective. The following categorisation will be utilised in the context of managerial implications that are suggested during the discussion chapter:

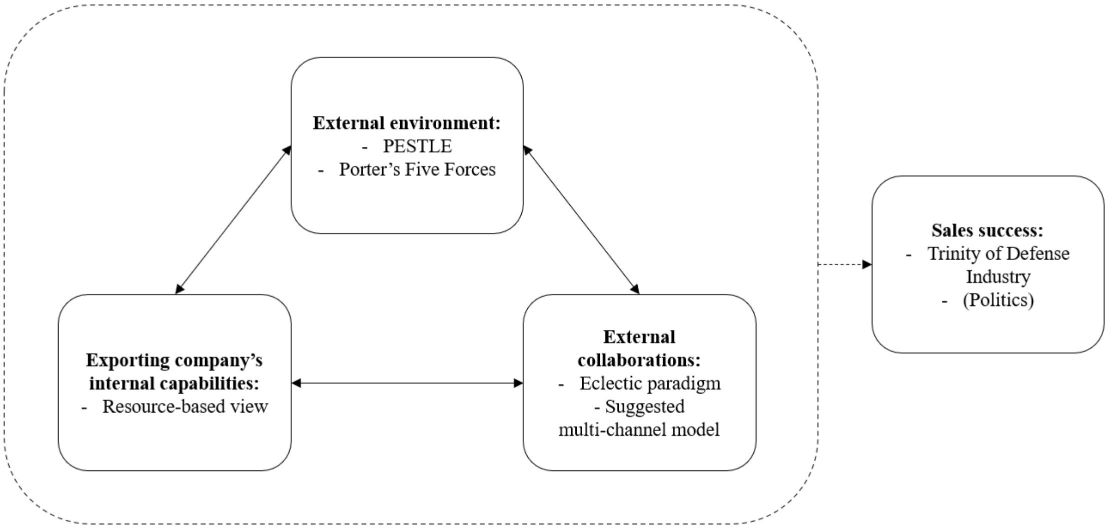

Figure 5: Categorization concerning models chosen for the thesis (own illustration, in the style of Castellacci and Fevolden, 2014)

Overall, a reasoned logic followed throughout the study, and especially on which the managerial implications are formed, is that, eventually, how a company (or companies) manages its internal capabilities, arranges its external collaborations from the basis of these capabilities, and succeeds in meeting the external environments requirements and overcomes its challenges based on the combination of its internal capabilities and external collaborations, determines whether the company is successful in its sales or not. To understand the value of its internal resources and capabilities, a company needs to understand its external environment, and hence in addition to the order suggested by Root's (1994) model of foreign market entry planning, the literature review-based introduction of the chosen models starts from PESTLE.

2.1. PESTLE; Political, Economic, Social, Technological, Legal, and Environmental Factors of the U.S. Defence Market

*"Today, **political**, **economic**, **social**, and **technological** changes are creating challenges and opportunities for maintaining the Army's land power dominance".*

(Opening sentence of The Third Offset Strategy (Hillner, 2019))

Sometimes used for external risk identifying, PESTLE is a strategic planning tool that is used for examining (P) political -, (E) economic -, (S) social -, (T) technological -, (L) legal -, and (E) environmental factors, and understanding their impacts on business performance. The exact origin of PESTLE is hard to pinpoint, but the first mentions of the partial framework 'ETPS' can be traced to Francis J. Aguilar and dates to 1967. The PESTLE framework is merely a tool for analysis, and it consists of a vast range of variations from ETPS to PESTLIED – each letter accounting for some distinctive factor of interest (Rastogi and Trivedi, 2022).

In the context of this thesis, PESTLE is used in illustrating the factors that the defence industry companies can consider and, in the case of some companies successful with their exports, have considered when entering foreign markets. The aim of introducing PESTLE to the models exploited in this study is to give a foundation on which to place some of the companies' actions; by understanding the factors affecting the companies' decision-making, more informed conclusions can be drawn from the basis of the interviewees' answers provided. As an example, due to complicated target market legislation, many of the interviewed company representatives have suggested that their peers seek legal counselling from abroad – this being due to sometimes multiple bodies of legislation and/or regulation concerning U.S. sales and exports.

Political

As discussed earlier, the role of politics is centric in defence industry procurements and exports as the end-users operate under the control of national governments. Where the political factors can be seen as governments' actions that typically concern taxes or duties, which can alter an industry's revenue-generating structure and, thus, alter the organisations and their business models within the industry (Rastogi and Trivedi, 2022) and in the context of the defence industry, the political factors of PESTLE can cover a wider range of actions, and they can have a stronger effect on the organisations operating within the defence industry, especially if the company exporting defence industry products. This is due to the crucial role of export permits and associated national principles; the target country of export can, for example, alter its approach practised in foreign politics and thus become an unwanted export destination for the origin nation of the export. While this is unlikely ever the case for the exports (or imports) between Finland and the United States, the re-exports of the products can propose difficulties, as the re-export permits are granted on a case-by-case basis.

Examples of political factors that should be considered: Stability of government and government policies, controlling party, trends and frameworks in regulation, upcoming elections with their outcomes, trade controls and tax policies, level of corruption, and the likelihood of terrorism or war.

Economic

The economic forecast of the target market is considered one of the decision-making factors for the companies in any industry, but in the context of the defence industry, not only are the companies to consider the long-term effects of a determinant such as rising inflation, but to place special interest towards the consequences that economic aspects have towards a country's foreign politics. Indeed, the defence industry is no different from the viewpoint of the PESTLE framework, but the nature of the industry sets it apart from the others – the dependencies between a PESTLE analysis' factors should be viewed through the political factors as this the political factors are suggested to be the strongest factors when defence procurements are examined. When legal arms trade is considered, one could reason that selling defence products to (or from) a country which is politically stable but that is economically unrest is less risky than to a country which is unrest politically but that is economically stable. Yet, as suggested by Feinstein (2011), in the illegal arms trade, the latter is typically preferred – this is partially explained by the differences in the length of the sales processes and final delivery times.

Examples of economic factors that should be considered are the current stage of the business cycle, economic growth and its outlook, the job market and its predictions, interest rates and inflation (monetary policy), income distribution, global trends and the effects of globalisation, expected changes in the economic environment.

Social

The social factor of PESTLE scrutinises the social environment of the market. Sociological factor consists of events that have an effect on the market and the community that it is based upon. A company planning on exports must consider the advantages (and disadvantages) to the citizens of the nation that it plans to export. (Rastogi and Trivedi, 2022) Social aspects play a crucial role in defence industry exports, as national and regional culture(s) can form the basis for legislation- and/or principle-based obstacle(s) to the exports of defence products. Indeed, any defence product that is planned to be marketed into a foreign destination country must be socially acceptable – the product's qualities must be aligned with ethics that are held in value in its targeted environment. If the ethical side of the product is questionable, it can be very challenging to find support for a firm's product, and as later discovered during the interviews, this appears to hold especially for the political support from the target market's side. For example, in the current environment, finding a Finnish politician that would favour procurement of Russian-origin defence arms and hence be likely to commit a political suicide could be a stretch beyond any individual company's means, yet, having such a person from the Finnish parliament would be crucial for the Russian company responsible for the exports of such.

While some of the social factors may seem distant from the companies' perspective, it is crucial to understand that especially the largest of defence procurements must be justified amongst a democratic nation's citizens. Eventually, in indirect democracies, it is the people with voting rights who hold the most power over their politicians' expressed opinions in both internal and foreign politics. For example, it can be considerably harder to sell a foreign option in a democratic country with a stable government with little to no corruption, bad economic outlook, poor social mobility, and generally shared negative opinion towards foreign alternatives amongst the nation's citizens and combined with widely shared strong national culture. An example of a hopeless effort could be a case where a foreign company would try to reach out for the citizens' support in such a nation through its unfavourably biased national media.

Examples of social factors that should be considered: Demographics and their expected changes, availability of education and healthcare system, population's social mobility, shared attitudes amongst the population, national and/or regional culture(s), potential biases of media, sociocultural changes – both observed and expected.

Technological

Technological factors are based on the examination of innovations in technology and their outcomes towards the industry and the market in which a company operates. These innovations can have both positive and negative impacts on either. (Rastogi and Trivedi, 2022) A general example of such innovation considering industries could be the automation of production, and when considering the latest innovations in technologies concerning defence products, 5G would be a suitable recent example. From the viewpoint of various Finnish companies, 5G, and its capabilities for providing 'infospheres' and hence removing the 'fog of war' from autonomous weapons systems of future battlefields, is said to potentially transform the direction of modern warfare and the defence industry associated (Shafeeq, 2022). Also, as suggested by Rastogi and Trivedi (2022), a technological factor could consider all market entry barriers in certain markets.

The technological readiness of the target market is a factor that affects the decision to proceed with a foreign market entry. Having a technological advantage over the alternatives that are offered in a targeted market is not a necessity as procurement decisions are not solely made on the basis of technological competitiveness – as suggested by the model of the trinity of defence industry (Taksás, 2019) – and the supply security and principles of economics can be equally important factors behind a procurement decision. As often mentioned in the context of introductory economics, no decision is made in a vacuum, meaning that there can be close to a limitless number of factors that contribute towards any decision and its outcomes. Nevertheless, having a product that is technologically superior helps in market penetration, as this is, for example, one of the centric requirements for a product to be eligible for FCT in the United States.

Examples of technological factors that should be considered: New technologies and their impacts, inventions and innovations, licensing and patents, and R&D funding.

Legal

Legal factors consider all the legal aspects relating to exports, imports, quotas, taxation, and resources, amongst others. Legal factors have both external and internal aspects, meaning that there are policies that companies can maintain themselves and laws that have an effect on the entire business environment of these companies. (Rastogi and Trivedi, 2022)

Overall, the legal systems of the United States, based on common law, are highly sophisticated, and while there is federal law when, for example, defence imports are concerned, there are considerable differences between the individual states' laws. While this does not differ drastically from the setting within the EU, where there is the union law and national laws in its member countries, during the interviews, it was brought up multiple times as a reminder that the U.S. is not only a country but also a collection of states. Hence, when planning on establishing operations in the U.S. market, a company should consider getting familiar – often through legal help – with the state laws in addition to the national laws. When international laws are considered, some are nearly universally underwritten, yet there are exceptions to the rule, and when considering international agreements, some agreements are easier to underwrite for some countries than others. For example, in the past, the United Kingdom has been active in campaigning for the global ban on using landmines in national defence while simultaneously being unwilling to take corresponding action against the use of sea mines. With the United States, a similar thing worth considering for the Finnish companies is that while both nations have signed the Arms Trade Treaty (ATT) – a multilateral treaty that aims to regulate the international trade of conventional arms – the United States belongs to the list of 28 countries that have not yet ratified their membership (United Nations, 2023).

Examples of legal factors that should be considered: Legislation – both home and international, bodies of regulation and especially industry-specific regulation, and new laws and regulations with their impacts.

Environmental

Environmental factors consist of factors that are determined or influenced by the surrounding environment of a market. Comprising of, for example, a targeted region's climate, weather, and geographical location – the latest being especially important in the context of defence industry sales – the environmental factors set the natural boundary conditions for a business's operations in its targeted market. (Rastogi and Trivedi, 2022)

Especially from the end user's viewpoint, environmental factors are one of the key determinants when defence product sales and procurements are considered, and of the environmental factors, a nation's geographics are a crucial factor affecting the outcome(s) of foreign military sales. While geographics can play a smaller role than, for example, the capabilities of a nation to pay for its procurements, they are important for the pricing of the products due to the geopolitical dimensions involved. This holds true, especially for many of the seller countries which have strong foreign politic goals associated with their defence industries' sales. Considering the ongoing situation, sometimes still referred to as the cold war (Catherine Belton, 2020), between the United States and Russia, the incentives to have U.S. manufactured defence products close to the Russian border partially steered the final price put on the Finnish F-35 contract while respecting the legal framework of Foreign Military Sales (FMS) of the United States – a topic that was brought up during one of the interviews and later covered in this thesis.

Of the other environmental factors, when opportunities for Finnish defence product sales to the U.S. are considered, an important factor in evaluating the environmental similarities and differences between the two countries. The United States is a large country with varying environmental conditions ranging from Texas' hot deserts to Alaska's icy tundra, having, for example, Oregon's temperate rainforests in between. Hence, when planning on state-level sales, a company must consider the specific demands set by the surrounding environment and the advantages provided by the qualities of their product(s) – putting emphasis on a product's arctic capabilities when pitching to a Texan audience is not advised.

Globally, considering the current trend towards environmental sustainability, defence products are a complicated topic. Especially now that many of the largest financial institutions have started to increasingly account for environmental, social, and corporate governance (ESG) factors when choosing companies to invest in through their funds, many of the defence industry companies have been left out due to the defence industry being classified as a controversial industry. Indeed, due to the nature of some of the aerospace and defence industries' products – meaning weapons that are ultimately made to destroy the environment rather than to preserve it – this can be seen as justified, but recently in the EU, the defence industry has been actively lobbying itself to be included in the green industries of European Green Deal. The case of being classified as a green industry has had nothing to do with compensating for the environmental effects of the industry's outputs but towards its contribution to social sustainability within the region. Understandably, the industry's push has gained additional support after the Ukraine war broke out. (Pladson, 2022) The environmental impact of the defence industry companies is, as earlier stated, complicated as the companies within the industries can, for example, achieve targets set for green companies within the Green Deal but never change the ultimate nature of their products. Yet, as suggested by the industry representatives, defence products currently give the best guarantee against authoritarian regimes and, thus, indeed, promote social sustainability. To further complicate matters, during peacetime, the ultimate nature is rarely realised, and the products can be safely dismantled if required. The ultimate question concerning the industry being green or not seems to be whether the aerospace and defence industry companies should be rewarded or punished for what-if scenarios.

As in the case of the European Green Deal, environmental factors are often seen to affect the market through politics and, eventually, through regulations and legislation. Partially hence, and excluding geographics, due to the nature of the defence industry and its products, discussions concerning the industry's role in, for example, environmental sustainability were not held during the interviews. Nevertheless, one thing to consider is that, unlike the European Community, the U.S. dropped out of Kyoto Protocol in 2001 (Hovi, Sprinz and Bang, 2010), which means that especially concerning the future, the two regions can have different targets concerning, for example, the fight against the climate change, and hence, defence companies operating within these regions can face different regulatory challenges concerning their business activities. Expectedly, these are matters that are considered when procurement contracts are made and can be seen to affect the supply security aspect of a product.

Examples of environmental factors that should be considered are geographics, environmental characteristics, environmental issues, and local, national, and global regulation(s) concerning the environment.

2.2. Porter's Five Forces in the Context of the U.S. Defence Market

Often discussed as Porter's Five Forces, the Five Forces is a model created by Michael E. Porter in 1979 for identifying and explaining five generic competitive forces that exist within any given industry – or a segment of an economy – and hence, define its structure. An idea in Porter's model is that while a throng of factors – such as the current Ukraine war – can affect an industry's profitability in the shorter run, the industry's structure will define the industry's profitability in the longer term. The configuration of the five forces is different across industries, and an industry's structure is an outcome of various economic and technical characteristics that define which of the forces is the strongest. The strongest competitive force(s) determine an industry's profitability. Hence, the strongest of the forces is considered the most important when a company is formulating their strategy. Yet, recognising the strongest of the forces can be challenging in any given industry, and rivalry amongst existing competitors is eventually the result of one or more of the other forces. (Porter, 2008)

The five forces model is often combined with Porter's Generic Competitive Strategies, which build on the idea that there are two types of basic competitive advantage that firms can possess: differentiation or low cost. These two advantages are built on the scope of activities that firms can attain competitive advantage with, and thus, they lead to the three generic competitive strategies that are differentiation, cost leadership, and focus. (Porter, 1985; Stonehouse and Snowdon, 2007) Later, the focus strategy was divided into differentiation focus and cost focus. (Stonehouse and Snowdon, 2007) Yet, in the context of this thesis, a detailed examination of the Generic Competitive Strategies as potential market entry strategies is ignored partially due to procurement-related requirements proposed by Taksás (2019) model of the Trinity of Defense Industry.

While some of Porter's generic strategies can be recognised from firms operating in the defence industry, and overall, they are key concepts in understanding business, these strategies are not discussed in detail in this study for the following reasons: Firstly, defence procurements are typically made from the viewpoint of national security and involve strong domestic and foreign politic aspects. Hence, they are not strictly made on the basis of a product's qualities or principles of economics. Additionally, BAA limits foreign firms' chances of cost-based competition in the context of DoD's procurements. This especially steers the strategic focus of the industry's SMEs towards either differentiation or differentiation focus strategy. Yet, in the context of Finnish defence industry SMEs, differentiation on a grand scale is often not an option due to resource constraints and – in the context of the U.S. defence market – the scale of the target market. When combined, these things direct Finnish firms towards differentiation focus – this suggestion is supported by empirical evidence of the Finnish companies that have been capable of penetrating the U.S. defence market.

In Michael Porter's (2008) visual illustration of the five forces of competition, rivalry amongst existing competitors is placed in the middle as it is eventually determined by the other four forces:

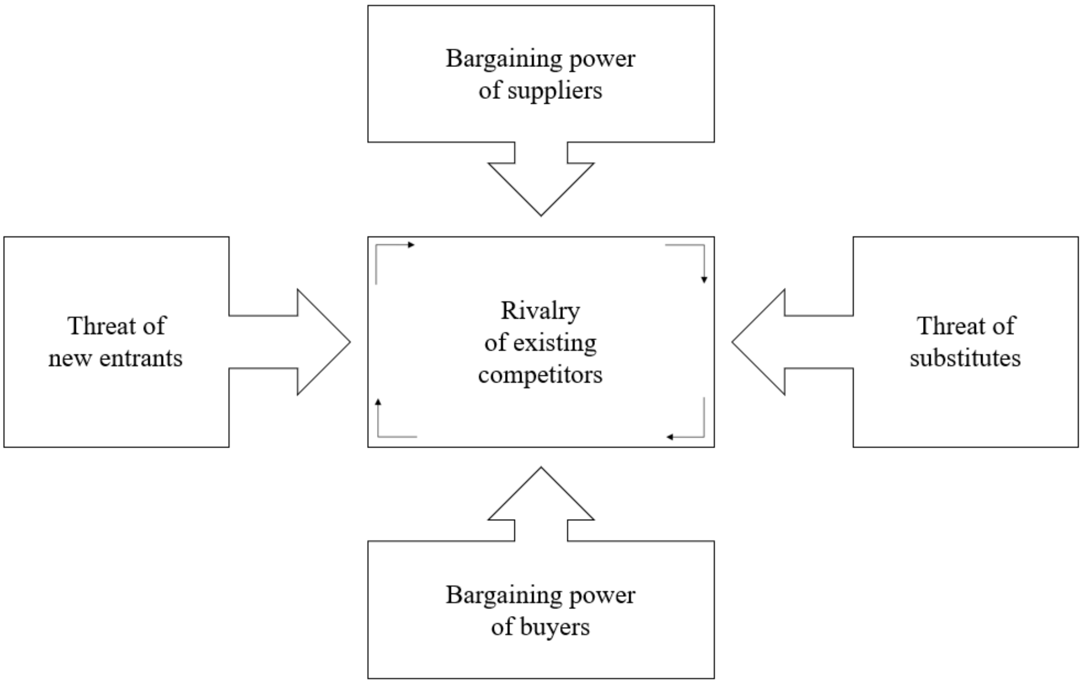

Figure 6: The Five Forces illustrated (Porter, 2008)

In this study's context, the five forces model is used to determine the nature of the United States defence market from the viewpoint of competition. The competition environment analysis lays the foundation for the eclectic paradigm and resource-based view to build upon.

Rivalry of Existing Competitors

The rivalry of existing competitors can be observed from phenomena such as price discounting, introductions of new products, increased advertising and service improvements, and a high level of competition amongst the competitors limits an industry's profitability. How much the high rivalry affects an industry's profitability depends on the *intensity* and the *basis* of the competition. Competition's intensity is great when there are many competitors, and they are of equal size, growth of the industry is slow, barriers of exit are high, and/or commitment to the business is high amongst the rivals, and the companies have goals beyond economic performance in a particular industry. When the basis of competition is examined, price competition often occurs when products (or services) are rivals' products are similar, and buyer's switching costs are low, a product's marginal costs are low, and the industry's fixed costs are high, capacity is required to be expanded in large increasements, and/or the products sold are perishable. Yet, as mentioned by Porter (2008), dimensions of competition that are not in direct relation to price are less likely to erode an industry's profitability. Yet, if an industry's rivalry takes place mainly in the same dimension, for example, product features, the result is zero-sum competition, which again drives down profitability. If an industry's competition is, for example, aimed at different customer segments, rivalry can sometimes increase an industry's profitability. (Porter, 2008)

The defence industry has become a defining feature of the United States (Thompson, 2023), and of the world's five largest defence contractors, all are from the U.S. (Béraud-Sudreau et al., 2022). Alone, these companies' product ranges cover the major branches of national defence needs. Hence, even when limiting U.S. market competition strictly to the largest of U.S. origin operators, the level of competition within the U.S. market is high. When combined with the offered foreign alternatives, the level of competition gets higher. Yet, as explained by DoD (2022), the level of competition varies between types of products being procured: In products (and/or services) that require less expertise or involve complicated development and/or manufacturing processes, the level of competition is typically higher, where in products that are more complex to produce, or simply have fewer producers such as spares on weapons systems – the level of competition is considered lower. Additionally, a low level of competition is present in procurements that require the underwriting of sole-source contracts. (ibid)

Bargaining Power of Suppliers

The power of suppliers allows the companies operating in a particular market to charge higher prices, limit product and/or service quality, or shift costs to an industry's participants. Suppliers' power is a result of various factors. Reasons behind these factors can, for example, be that the suppliers are more concentrated than the buyers, the suppliers' revenues are not tied to the specific buyers in question, and suppliers offer differentiated products or products without substitutes. (Porter, 2008)

In the context of DoD's defence procurements, local suppliers' bargaining power are a sum of the scale of the suppliers, regulation concerning government procurements, and foreign and domestic policy objectives. While the U.S. defence market is dominated by fewer larger U.S. contractors – and their power over the market is sometimes said to be ensured by structures such as the U.S. military-industrial complex (Weber, 2023) – when excluding political aspects (and tensions) relating to defence products sales, every defence industry company is trying to get their product sold at the U.S. defence market, and even with the BAA's limiting effect on foreign competition, especially the smaller of the domestic suppliers are typically subject of constant rivalry. While contract periods of defence procurement contracts tend to be long, deliveries are often made over multiple years after agreeing on contact, and varying level of vendor lock-in and/or stickiness is considered normal, especially with weapons systems, the defence industry companies operating in the U.S. defence market have no option of being dormant between the contracts as ensuring industry rivalry within the U.S. defence industrial base is part of DoD's agenda – as mentioned by the Department of Defense (2023).

Bargaining Power of Buyers

The buyer's power is the opposite of the suppliers' power. Powerful buyers can negotiate better prices, demand better quality and/or additional service without additional cost, and/or set industry participants in a competition against each other, and thus, lower the industry's profitability for the suppliers. Factors that can provide buyers with bargaining power are such as few buyers in a particular market, procurement of standardised or undifferentiated products, low switching costs when changing a vendor, opportunity of backward integration, or buyers' procurements representing a significant portion of their budgets. (Porter, 2008)

While economic superpowers China and India have ramped up their defence imports, most of their procurements were made from Russia. Even with Saudi Arabia being a key buyer of U.S.-origin defence products, there is no individual customer that compares to the government of the United States. That said, as a nearly-monopsonist, the U.S. government is considered to have significant bargaining power over its suppliers (Lofgren, 2019; Nielsen, 2005). Yet, as earlier described, DoD has addressed the consolidation process within U.S. defence industrial base to be a potential threat (DoD, 2022), and while involving a long tradition to them, the use increased use of cost-plus contracts by the DoD in its procurements can suggest of the suppliers increased power its key buyer.

Threat of New Entrants

According to Porter (2008), new entrants desire a share of a market and introduce new capacities. Hence, the entrance of new competitors puts pressure on prices, costs, and additional investments for a firm to remain viable in the market. From the viewpoint of the entrants, entering a new market can offer a chance to leverage their companies' existing resources. The threat of new entrants is dependent on the entry barriers of a particular market: When the barriers of entry are high, the likelihood of new entrants is low, and vice versa. Often the mere threat of new entrants is enough to hold an industry's profitability low. Barriers to entry consist of supply-side economies of scale, demand-side benefits of scale, customer switching costs, capital requirements, incumbency advantages that are independent of size, unequal access to distribution channels, and restrictive government policy. (ibid)

In recognition, the U.S. market is equally barriered for all foreign entrants, and new entrants are typically introduced through FMS-related offsets. Outside of the offset agreements, new companies may enter the U.S. defence market with differentiated products that need to have superior price-to-performance over domestically manufactured products. Additionally, some of the U.S. defence market entry barriers can be overcome by entering a business partnership with one (or more) of the local companies, yet, even forming a partnership can have its own challenges that are tied to the regulation around the U.S. defence market, especially if the partnership involves foreign investments to the United States. The U.S. does not wish to have foreign disturbance(s) in its domestic defence market, as mentioned by an interviewee.

Threat of Substitute Products or Services

A substitute is a product or service that provides the same or similar function as the seller's offering. Substitutes are always present and easily overlooked as they may differ considerably from the products that they can replace; substitutes are not necessarily close substitutes. A high threat of substitutes lowers the industry's potential profitability by placing a ceiling on prices. The threat of substitution is considered especially high in cases where a substitute product can offer a better price for performance and switching costs are low for the buyer. (Porter, 2008)

Without the ultimate unique product – and sometimes even in the case of it – there are substitutes available, or alternatively, the product has been considered irrelevant from the U.S. market's perspective. Meaning, for example, that if a product's uniqueness is based on its arctic capabilities, the product can be considered irrelevant by the market when it is being estimated from the basis of its overall (or other) qualities.

2.3. Ownership, Location, Internalisation (OLI) Framework for Assessing Foreign Direct Investment(s)

The eclectic paradigm by Dunning (1981; 2001), usually called by the acronym 'OLI model' or '- framework', is a method that is used for analysing the attractiveness of foreign direct investment (FDI), and the framework is a continuum for internationalisation theory. The acronym OLI is derived from the words *ownership*, *location* and *internalisation* advantages, and companies aim to make their internationalisation decisions on the basis of these advantages (Dunning, 1981).

The OLI model's logic is following:

(Image on next page)

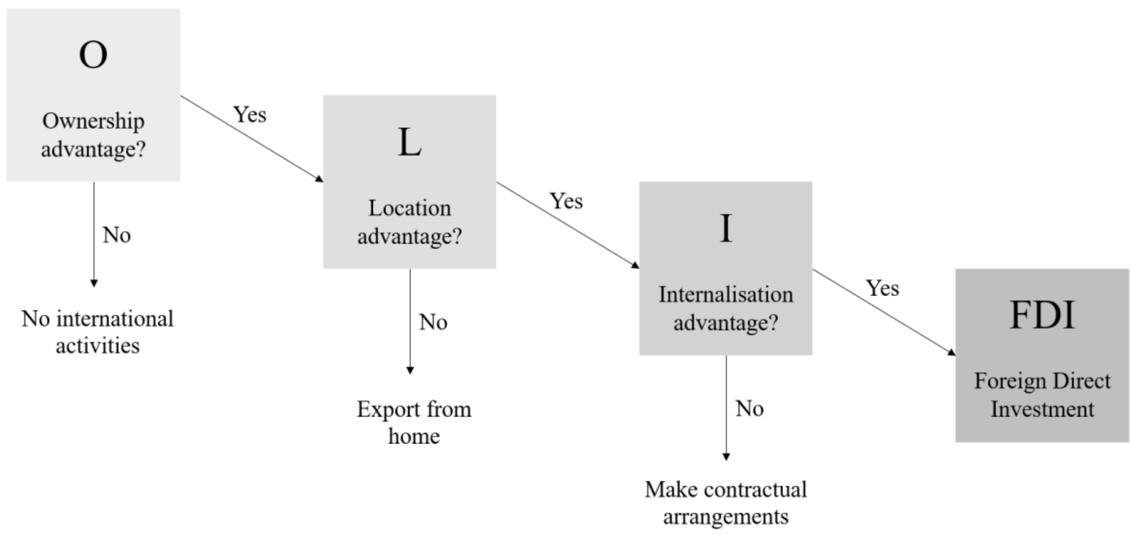

Figure 7: Outcomes of Ownership, Location, and Internalization advantages explained (in the style of Grünig and Morschett, 2016)

In the context of this study, the framework is used to demonstrate both the governmental organisation's procurement decision factors and businesses' decision factors of arranging international production to best meet all the requirements eventually proposed by the model of trinity within the defence industry by Taksás (2019). Like a business planning on maximising its profits, a government aims to maximise its national security – to achieve their goals, both face decisions involving trade-offs. For companies, especially when various forms of partnerships are divided into contractual arrangements and foreign direct investments depending on the type and amount of investments they require, the eclectic paradigm can give a good indication of which of the foreign market entry models the companies should choose. To fully utilise the paradigm, a company should be aware of its capabilities concerning the desired and/or potential entry model. Hence, an examination of the company's resources and capabilities is suggested.

2.4. Resource-Based View (RBV) for Evaluating Companies' Capabilities

The resource-based view is devoted to illustrating the sources of an individual company's sustained competitive advantage (SCA), and RBV is often combined with the industrial organisation view (Kraaijenbrink, Spender and Groen, 2010). The key proposition of the model is that to achieve SCA, a firm must first possess resources and capabilities that are *valuable*, *rare*, *inimitable*, and *non-substitutable* (VRIN). Besides possessing the resources and capabilities, the organisation should be in a position that allows it to absorb and utilise them. (Barney, 1991) The position that allows the organisation to absorb and utilize resources can be further described with the VRIO framework, which is an evolved version of Jay Barney's VRIN framework. In VRIO, the non-substitutable element of N has been switched to O, which stands for *organisation*. The organisation consists of components that are relevant in the context of organising tasks but that are enabling by nature and are to be considered complementary resources. Organization-related resources cannot, therefore, produce SCA alone but in combination with resources that are valuable, rare, and inimitable. (Barney, 1995)

The idea in the VRIO model is following:

V Valuable	**R** Rare	**I** Inimitable	**O** Organization	
No	-	-	-	Competitive disadvantage
Yes	No	-	-	Competitive parity
Yes	Yes	No	-	Temporary competitive advantage
Yes	Yes	Yes	No	Unused competitive advantage
Yes	Yes	Yes	Yes	Sustainable competitive advantage

Figure 8: The logic of the VRIO framework illustrated (in the style of Glistau, Schenk and Machado, 2015)

In the context of this study, the RBV model will be used to describe what combination(s) of resources and capabilities are required from the companies to achieve some level of SCA over their peers in each of the trinity's categories. Yet, while sustainable competitive advantage can be seen as key for the firms operating in the defence industry and is something that the Department of Defence has spent trillions to achieve and further trillions to upkeep (Martin, McBride and Tiron, 2023), a suggested approach towards by the RBV towards SCA for the companies is focusing on recognising their distinctive competencies in the context of their operating environments and adapting their resources accordingly (Barney, 1995). In short, as was discussed during some of the interviews, attaining sustainable competitive advantage in domestic defence market(s) is challenging, and replicating that advantage in a foreign defence market introduces is even more so; the U.S. defence market typically introduces new requirements towards the *organisation* (O) within a firm possessing some sort of SCA; the missing O turns SCA into an unused competitive advantage in the foreign market.

2.4.1. The Role of Core Competencies

Discussion related to RBV is often connected with core competencies (Kraaijenbrink, Spender and Groen, 2010). According to Prahalad and Hamel (1990), a firm's core competencies are a combination of specific abilities or qualities that set them apart from its competitors and provide the company with a unique advantage over its peers.

In the context of defence industry companies, the range of core competencies is suggested to be related to the firm size (Castellacci and Fevolden, 2014). Additionally, Castellacci and Fevolden (2014) describe how SMEs operating in the defence industry internationalise by specialising in a narrow segment of the industry where they have core competencies, which refers to these firms possessing a narrow knowledge base. In turn, the large defence industry integrators have broad sets of competencies in multiple related areas of knowledge, which indicates that these firms manage a more complex and broader knowledge base. As described by the Association of Finnish Defence and Aerospace Industries (AFDA) (2022), the majority of Finnish defence industry companies belong to the category of privately owned SMEs. This suggests that the further internationalisation of these companies is reliant on focusing on narrow segments of the defence industry. Problematically, a mentioned issue by one of the interviewed company representatives was that many of the Finnish companies offer their solutions to too narrow segments when the needs and requirements of, for example, the U.S. defence industry's integrators are considered. Nevertheless, for a company of any size company, technological innovation is a crucial factor in the defence industry.

The industry is characterised by active public support for innovation due to the procurement of defence materials that require additional R&D and a high level of private R&D investments. (Mowery, 2010) According to AFDA (2022), most Finnish companies in the defence industry invest heavily, more than 15% of their turnover, in research and development. Investments in innovation and R&D have a positive effect on organisations' export performance as they a) may lead to new high-quality products entering the market and thus increase the innovator's chances of capturing shares in foreign markets and b) may assist in discovering new processes that boost production process efficiency and help lower sales prices. Both a) and b) provide stronger dynamics toward international competitiveness. (Castellacci and Fevolden, 2014) Yet, in both cases, a notion must be made based on a series of interviews that – with the exceptions of the ultimate unique products – innovations rarely enter the markets without marketing, and companies with their core competencies in, for example, R&D functions can face challenges in their sales and marketing activities, especially in the foreign markets. The U.S. market is perceived as tough to penetrate for foreign companies, and the defence market overall is characterised by shifting demands when the technologically more advanced products or products from the bleeding edge of technology are concerned, a suggestion can be made that the Finnish defence industry companies ought to possess dynamic capabilities in addition to their core competencies for successful market entries in the foreign markets.

2.4.2. Dynamic Capabilities of Organizations

Dynamic capabilities (DC) refer to a distinctive part of organisational theory and describe the capability of an organisation to adapt its resources base according to shifting needs proposed by the external environment of the organisation (Teece, Pisano and Shuen, 1997; Teece, 2010). Authors such as Cardeal and Antiónio (2012) mention that capabilities can be considered as a company's processes and routines and argue that DCs refer to the "O" in VRIO. Hence, DCs are required for transforming bundled resources into a firm's competitive advantage (ibid). The goal of dynamic capabilities is to allow a company to generate abnormal returns, and the capabilities are typically rooted in entrepreneurial and creative managerial acts. In the context of dynamic capabilities, attributes of firms that allow them to evolve and coevolve with their business environments are called sensing, seizing, and transforming. Dynamic capabilities are also used to assess whether, when and how a firm should form an alliance with another firm or firms. (Teece, 2010)

When the role of dynamic capabilities is examined, due to the constantly shifting defence market – as, for example, peacetime and wartime demand have so far been constantly present somewhere in the world and politics associated with the two are simultaneously setting conditions for operating environments of the firms – firms in the industry have a need for being agile when aligning their resources according to the markets' changing requirements. Thus, especially when the entire defence market is considered, firms in the defence industry that are working with foreign sales and exports are often required to navigate between the macro- and mezzo-level, and this expectedly holds true especially when these companies are trying to predict the future demand of their products. Yet, while these levels are present when the U.S. market is being discussed during the findings chapter of this thesis, a ruling can be made that as the focus of this study is set on Finnish defence industry sales and exports to the United States, and the two nations have had a stable relationship for a considerable extent of time, the context suggests that the examination of micro-level factors would be more suitable when describing the marketing-related sales process of Finnish defence products, and arguably, the examination of micro-level factors is required for forming a credible basis from which to derive managerial implications. To connect micro-level activities to macro and mezzo-level factors for meaningful discussion relating to dynamic capabilities, a model for clarifying multi-channel marketing strategy was made. As later described during the findings of this study, these marketing channels have their own needs that set them apart from each other, and each channel should be approached with a tailored marketing plan. For promoting sales in each of these channels either separately or simultaneously, dynamic capabilities are suggested to be beneficial or even mandatory; as later discussed during the findings chapter, when marketing defence products, a company aiming to sell defence products to a foreign market must be able to simultaneously navigate at least between a foreign country's government and the end-user. The marketing of defence products often involves a third party, such as a foreign contractor, which can replace the end customer, meaning that a company collaborating with a foreign contractor does not necessarily have knowledge of their product's end-user(s).

As a continuum to RBV, dynamic capabilities aim to explain differences between companies' success in meeting and exceeding their business environment's requirements. In the context of defence product exports, the dynamic capabilities of a firm can explain how some companies are more successful in delivering their products to foreign markets than others by using the suggested marketing channels to their best extent at each available opportunity. A firm must have dynamic capabilities to align (or realign) and integrate (or reintegrate) resources and/or competencies to their business environments' needs (Teece, 2010). From this perspective, dynamic capabilities are also beneficial for companies when formulating their foreign market entry strategies as they can – when recognised correctly and utilised accordingly – aid in determining, for example, the benefits, requirements, and feasibility of a desired market entry model, such as a strategic alliance.

Yet, despite a company's capabilities towards, for example, marketing, it is up to a procurer to make the ultimate decisions concerning a purchase. While marketing can help in advancing the procurer's knowledge about, for example, the qualities of a marketed product, the decision-making by the procurer is said to be made from three viewpoints: level of technology, principles of economics, and supply security – and these are all categories that the companies are required to have competencies in.

2.5. Trinity of Defense Industry

The ultimate function of a firm operating in the defence industry is to provide the buyers, meaning end-users such as the United States Armed Forces, products or services that fulfil their needs and requirements. When examining the requirements for any individual firm's products or services, there are three mandatory elements that a firm needs to fulfil: First, the firm's product or service needs to meet the technological requirements of the buyer. Second, the product or service needs to be offered at a competitive price and thus meet the principles of economics. Third, the firm is required to be able to manufacture the product or the service during both peace and wartime. These three elements form the trinity of the defence industry as the elements are of equal value. (Taksás, 2019)

Dependencies discussed in the context of the model of the Trinity of Defense Industry (ibid) can be described with the following illustration:

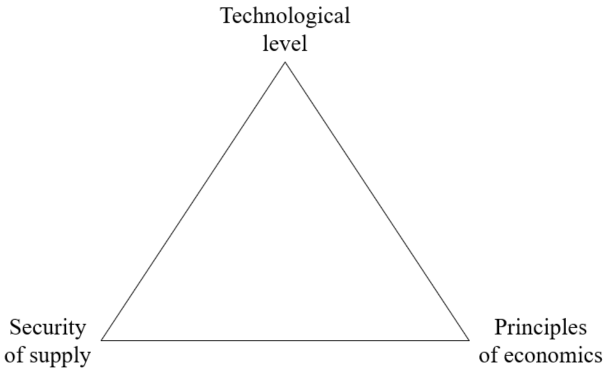

Figure 9: The Trinity of Defense Industry (Taksás, 2019)

As discussed earlier and later in this thesis, from a technological standpoint, Finnish companies have worthwhile offerings to the foreign markets, but when considering the attractiveness of Finland and Finnish products from the viewpoint of foreign buyers and supply security, according to Taksás (2019), supply security is compromised whenever production procedures are being placed abroad. In turn, when production is kept domestic, it typically becomes more expensive compared to the alternatives. In the case of the United States, the nation is extremely self-reliant when the manufacturing of defence products is considered. This means that there are very few defence products that the nation is required to procure abroad, and indeed, this view is supported by the balance of trade concerning the defence products of the United States. Still, as suggested by Taksás (2019), the elements of the trinity are of equal value and, to a certain extent, for example, principles of economics (price) can compensate for supply security. Keeping in mind that while most of the nation-states aim to maximise their security, contractors responsible for fulfilling these nations' procurements typically aim to maximise their profits – profit maximisation naturally being limited by frameworks of national laws and regulations.

In the context of this thesis, the Trinity of Defense Industry is being applied to suggest conditions for decisions made by both the companies responsible for the sales and exports and the nations and/or companies responsible for the procurements. While the model does not directly contribute towards the theories of international business or industrial organisation, its role as a clarifying model for the decision-making factors behind defence procurements was determined to be better suited in the thesis' context than, for example, the traditionally used 4 Ps of marketing by Jerome McCarthy (1964) or its extensions and later iterations.

2.6. Of the Western Defence Industry

Various scholars have accumulated knowledge of the nature of the defence industry (Devore, 2014; Golde and Tishler, 2004; Mantin and Tishler, 2004; Taksás, 2019), and when considering the defence industry in general, it is often characterised by distinctive features that set it apart from other industries. Of these features, the importance of politics behind innovation financing and procurement decisions cannot be overlooked, especially in the context of the United States (Lavallee, 2003). The role of politics behind the defence industry's operating complicates things, and as suggested by Christine Nielsen (2005), the traditional frameworks often exploited in international business, such as resource-based view models and industrial organisation frameworks, are not sufficient for modelling the defence industry's specific nature partially due to these frameworks tendency to place governments in the outskirts of business activities. Nevertheless, conditions suggested by the various authors (Dunning, 1981; 2001; Castellacci and Fevolden, 2014; Nielsen, 2005; Taksás, 2019) for operators in the industry hold, but empiric examples suggest that even when the conditions are met, the end customer may reject the most comprehensive product, or offer, simply in the name of national sovereignty – as described by two of the interviewees.

Defence product procurements are made to ensure that national defence is up for the task, and the procurements can be made from domestic and/or foreign suppliers, and there are many options for how to arrange a nation's defence and support the often-associated domestic industry which structure is connected to the desired level of defence industry autarky (Kurc and Neumann, 2017). Yet, existing literature has recognised and suggested two major – yet differing – development paths in and for the Western world's defence industry. One is the distribution of the European defence industry to a broader base of companies, which consists of various sizes of companies and provides less concentrated export markets for European companies (Blom, Castellacci and Fevolden, 2014; Béraud-Sudreau, 2020). The other is the consolidation of the Western European and U.S. defence industries towards a narrow base of companies dominated by a few large multinationals

(Mantin and Tishler, 2004; Béraud-Sudreau, 2020). Yet, both in the EU and U.S., the future operating environment for defence industry companies is suggested to be surrounded by laissez-faire reforms that have been performed by the states due to the industry's transformation, which have been expected to open the defence market to smaller companies operating in the industry (Devore, 2014). Currently, the European Defence Agency (EDA) is trying to increase collaboration between EU's member states concerning the regime's defence, and European Defence Fund (EDF) is supporting the companies operating in the European defence industry by, for example, distributing funding with the intention of increasing collaboration between the member states' defence industries' smaller companies to broaden the industrial base and support innovation within the regime (European Defence Agency, no date). Similarly, the will to further open the defence market for smaller companies has been expressed by the DoD (Department of Defense, 2022), yet prior empirical evidence has pointed out that the successfulness of the prior efforts has been negotiable, and the future expectedly looks unclear.

From the basis of historical evidence, when examined through the changes in the U.S. defence industrial base, the movement in the U.S. has been perceived to be contrary: the defence market of the United States is highly concentrated due to three decades of consolidation as the large multinational defence contractors have performed fusions and acquired many of the smaller U.S. companies. The result of these fusions has led to the increased market concentration of the U.S. defence market. The result of the increased market concentration has been less competitive procurement processes, and despite the explicit efforts of the authorities to limit the risk of inefficient spending, these less competitive processes have involved a shift from the use of fixed-price contracts towards the exploitation of cost-plus contracts. However, the nature of defence product procurements under the current U.S. laws and the U.S. government's negotiation power – as it is often the only buyer – have kept the acquisition costs in line with the prior regardless of the consolidation process within the U.S. defence industrial base. Hence, the argument stands that the large defence firms have not gained additional market power through the fusions. (Carril and Duggan, 2020) Yet, DoD has recognised that competition in the defence industrial base is required to ensure national and economic security. To spur the increment in the competition, the department has suggested that merger oversight should be strengthened, the number of new entrants to the marketplace should be increased, and opportunities for small businesses should be enhanced. Simultaneously, supply chain resilience should be strengthened to ensure the security of supply for critical products and materials. (DoD, 2022)

3. Methodology

During this chapter, the methodological approaches used in the study will be introduced and given justifications. Providing an answer to the broadly defined primary research question of *"How do Finnish defence industry companies operating outside of industrial participation agreements see the business opportunities within the U.S. defence market?"* could provide a contribution to various theories of business, but ultimately, the purpose of this study is to contribute to industrial organisation theory, which is about how a market structure influences the strategy and decision-making of an organisation. While models that focus on firms' internal factors are included in the examination of the chosen topic, as the U.S. defence market is a highly protected market and proposes various requirements for the companies operating within it, the IO theory was chosen as the theory rather focuses on the market that a firm operates in than it focuses on the firm itself (Ramsay, 2001). In more detail, this thesis is to determine the most likely options for Finnish companies to enter the U.S. defence market without the aid of industrial participation or offset agreements. To do so, and as written by von Krogh, Rossi-Lamastra and Haefliger (2012), a methodology approach is required to focus on examining a specific event in an explicated context. The qualitative and quantitative research methods are the two main methods used in business research for understanding and explaining why and how specific events occur (Cooper and Schindler, 2014). The selection of an appropriate methodology approach between these two research methods in the context of this study is explained in the research approach subchapter. After the introduction of the research approach taken, the research context is defined. Finally, preluded by a description of data collection and data analysis methods, the limitations and ethical considerations concerning this thesis will be concluded.

3.1. Research Approach

This study takes the qualitative approach towards the topic as this allows the discourse to remain descriptive rather than creating a narrative which aims to provide exhaustive answers to the chosen research questions. The quantitative approach was not found suitable for this study as it is focused on finding ways to measure and testing of the created hypotheses (Cooper and Schindler, 2014). Where the creation of hypotheses would have been possible, gathering the required dataset from the Finnish defence industrial base and/or from the foreign companies already operating in the U.S. market was considered too demanding, and from the earlier experiences, acquiring a large enough sample size from the Finnish defence industry companies for a credible quantitative analysis would require participation rate of over 50% of AFDA member companies and only a handful of Finnish companies have been successful in sales to the U.S. outside of countertrade or industrial participation-related offset agreements. Hence, the quantitative method will not produce a sufficient understanding of the phenomenon examined in this thesis. As the phenomenon examined is – according to current understanding – unstructured in nature, qualitative research is applicable and allows flexible research (Eriksson and Kovalainen, 2008).

When performing qualitative research, objectivity is not as centric in quantitative research as the researcher often is closely related to the subject matter (Bell, Bryman and Harley, 2019), but the importance of objectivity has been recognised by the author. In this study, in addition to sometimes reoccurring interviews with the subject experts, the researcher has been exposed to the newsfeed concerning the Ukraine war, observed the war's effects on the defence market, and has developed a subjective view on the favoured outcome of the former and the importance of the latter. Where these might be considered potential sources of bias in the context of quantitative research, qualitative research rather aims to create a theory than test it (Cooper and Schindler, 2014), yet this does not mean that potential effects of subjectivity should be ignored while performing qualitative research. To further justify the use of the qualitative method, the research questions are explanatory by nature, and the purpose of the study is to understand the issues concerning the research topic, which supports the choice of the qualitative method, according to Bell, Bryman and Harley (2019).

In qualitative research, the researcher must reflect on the epistemological and ontological positioning to acknowledge one's perspective towards the phenomenon examined (Eriksson and Kovalainen, 2008). The method of inquiry chosen for this research is an interview study favouring a cultural perspective towards the research topic. An interview study typically combines interview(s) with thematic analysis, and the thematic analysis is used to find corresponding themes within the interview(s) performed and the body of knowledge available. Due to the large number of topics covered during the interviews, the approach towards the thematic analysis was kept mostly superficial during this research. According to Alasuutari (1996), in cultural perspective studies, theories are not sets of communised statements concerning some universal social mechanisms that are to serve as hypotheses in explaining a distinctive phenomenon. Thus, in cultural studies, theories are seen as different frameworks; theories do not suggest how a phenomenon should be explained – they provide viewpoints to interpreting social reality and thus allow taking a reflexive perspective to the "natural attitude" (ibid). Additionally, as this thesis is to examine structures that appear in nature, the chosen research topic will be examined from a philosophic point of critical realism, where the theories are apart from reality, but the connection between the theories and practice is distinguishable (Archer et al., 1998).

Critical realism, a movement in philosophy, is often associated with the work of Roy Bhaskar (ibid), and critical realists claim that "unobservable structures cause observable events" (University of Warwick, no date), continuing this with the notion that our social world can only be understood if a person – meaning the researcher in this context – understands the often-complex structures that are responsible for generating these events (Fletcher, 2017; University of Warwick, no date; Archer et al., 1998). In critical realism, a principal feature is that reality is seen as a layered construct, and the layering of reality is expressed as *stratification*. A hierarchy of overlapping layers is present in a stratified reality, and lower (invisible) levels cause effects at higher (better visible) levels. Hence, stratification provides distinction to what we can perceive happening at some given moment (highest layer), events preceding the happening, and various forces that may – or may not – affect the happening at some given moment. The layers' structured interaction is responsible for producing a particular outcome which cannot be reduced to its integral components, but that can be perceived at the higher levels of stratification. (O'Gorman and MacIntosh, 2015) By using the viewpoint of critical realism, this thesis aims to conclude how induvial factors concerning the U.S. defence market create a high entry barrier for Finnish companies that try to enter the U.S. defence market without external aid, such as industrial participation-related offsets or business partnerships – indicating that the third U.S. offset strategy in its all cleverness works as intended. To achieve the best understanding of the phenomenon examined, both theoretical and empirical research is applied in this thesis.

When the topic of Finnish defence industry sales and exports to the U.S. is concerned, the logic of this qualitative research is inductive and aims for contextualisation – inductive being one of the two categories for analysis approaches discussed by Ketokivi and Mantere (2010). By nature, inductive reasoning aims to draw theoretical conclusions from empirical data (ibid). The inductive approach was found suitable for this research as the study involves an intention to use the interviews as a data source for distinguishing organisational attitudes, actions, and patterns that can be interpreted through the frameworks used in the examination of international business and industrial organisations, such as PESTLE, Five Forces, RBV and OLI framework, and additionally, the model of Trinity of Defense Industry. To further justify the inductive approach, this research is inductive by nature, as the potential theories and definitions are formed from the basis of the observations made during the research process (Bell, Bryman and Harley, 2019).

As described in the introduction, this thesis has separate sections for managerial, theoretical and policy implications. Besides extending the body of knowledge concerning the defence industry and its sales and exports, the theoretical implications of this study aim to add to existing theories of international business and industrial organisation by negotiating the implications by using the three-step model suggested by Fei-Wen Cheng (2020) for the novice scholars from the field of management studies: First, the theoretical implications should be stated, then the theoretical background should be showcased, and finally, the theoretical value should be justified. The managerial implications are to provide further insight into the U.S. defence market for the companies that operate within the Finnish defence industry and are planning on U.S. market expansion. The policy implications are to address challenges concerning the current legislation built around the Finnish defence industry exports and national support for the companies operating within the Finnish defence industry.

3.2. Research Context

The research context of this study is the Finnish companies operating in the defence industry. To further narrow the context, the attention of the research is directed towards the Finnish companies that have either successfully exported to the U.S. or are working on their U.S. market entry. Additionally, the focus of this study is the companies operating outside of industrial participation agreements as 1) the detailed information of these agreements is not available to the public, and 2) the exact decision factors behind which companies are included in the agreements (and how) are not covered by the models of prior international business research. As described in the introduction chapter, the current driver behind the Finnish defence industry sales and exports to the U.S is the acquisition of 64 F-35 fighter jets, which has been considered to open the U.S. defence market for Finnish companies – even outside of the industrial participation agreements valued for estimated 3 billion EUR in the procurement contract (Suutarinen, Drake and Järvisalo, 2022). Due to the procurement, Finnish companies have gained increased visibility amongst the U.S. counterparties, and the timeframe to exploit this advantage is estimated to be before 2024 or 2026 at the latest (ibid). Therefore, exploring the subject of this thesis is both timely and beneficial, as the Finnish Defence Ministry has estimated the fighter jet procurement and the increased national defence cooperation between Finland and the United States to have a direct employing effect of 4,500 work years and indirect employing effect of 1,500 work years (ibid).

The choice to examine the U.S. market and the Finnish defence industry companies' opportunities within it was made by the author, and this qualitative study can be seen as a self-driven continuum to the earlier student project performed for a multinational defence industry operator by some of the Aalto University masters students. During the project, one of the centric tasks for the project team was to perform qualitative research on the level of ambition and capabilities of the Finnish defence industry's SMEs towards pursuing the U.S. market. Overall, the topic's choice was influenced by the author's own research interests, and as Eriksson and Kovalainen (2008) suggest, a research topic should be close to the researcher's own research interests and/or disciplinary field that he/she is interested in.

3.3. Data Collection

This section describes how the data collection for this qualitative research was performed. Due to this thesis being an interview study with a cultural studies perspective towards its topic, the focus was to collect data for forming a descriptive explanation of the phenomenon connected to Finnish companies' opportunities concerning the U.S. defence market. This required a literature review of the U.S. defence market and a set of interviews that covered the topics of the Finnish defence industry and its role in national defence and discussion concerning the characteristics and requirements of the U.S. defence market.

The data collected for this research consists of primary and secondary data. The primary data collection method was interviewing, and the primary data of this research consisted of interviews conducted after June 2022. In the first interview contributing towards the primary dataset, the interviewee was a natural person working in a Finnish technology company which produces software and RF-electronics, and the interviewee is in a position equivalent to a Chief Officer. The two-staged and three-hour-long interview was held online using Microsoft Teams, and the interview questions were semi-structured and open by nature. As an approach, the semi-structured interview allows the interviewer to have a list of premade questions to present to the interviewee(s), yet also allows the option to add additional questions during the interview situation (Eriksson and Kovalainen, 2008), and in the context of this research, the benefit of asking follow-up questions was a richer set of data. Later, the primary dataset was enhanced with two additional interviews, and the first one of them was held with a person working for a multinational defence products company. The close to four-hour-long interview was held life in November 2022, and the conversation was similarly steered by performing a semi-structured interview with open-ended questions. The other one of the two additional interviews was had with a person working in a Finnish company that has extensive experience in the U.S. government market. The closer to two-hour interview was held live in March 2023. Due to the cultural approach towards the study, the conceptual framework did not set limitations to the research questions in any of the three interviews.

By definition, secondary data is empirical data existing as published textual data (Eriksson and Kovalainen, 2008), and it has been collected by someone other than the researcher himself/herself. This study's secondary data consists of 8 interviews held prior to June 2022 in the context of project work performed for Aalto University and a multinational defence industry operator. The interviews of the secondary dataset were also semi-structured, and the questions were open but varied across the interviews as the interviews were held with representatives from the Finnish defence industry companies and the Finnish governmental organisations – each having their own angles on the subject. The aim of the earlier research was to discover the level of ambition and capabilities of Finnish defence industry companies towards pursuing the U.S. market. The companies included in the interviews had either previously sold or were currently selling defence products to the United States. The researcher – earlier a member of the mentioned project team and active participant in all of the secondary dataset's interviews – was granted permission to use all prior interview material in this new context.

In a country size of Finland, the circle of people that are actively participating in the discourse concerning the defence industry is small, and during most of the interviews – meaning during the acquiring of both datasets – the discussion was often steered towards groups of companies or alternatively described the perceived trends within the Finnish defence industry. Recognising the same themes surfacing from discussions held with different interviewees helped in drawing conclusions concerning the topic of this thesis.

The primary dataset includes interviews from:

Company	**Role**	**Date**
F	Chief Officer	July 1, 2022
F	Chief Officer	July 4, 2022
G	Dev Lead	November 3, 2022
H	Chief Officer	March 23, 2023

The secondary dataset consists of the following interviews:

Company	**Role**	**Date**
A	Expert/Consultant	March 25, 2022
B	Sales Director	March 30, 2022
C	Private Account	March 31, 2022
EK	Director	April 1, 2022
AFDA	Administrator	April 4, 2022
Business Finland	Program Director	April 5, 2022
D	Senior Vice President	April 28, 2022
E	Chief Officer	April 28, 2022

3.4. Data Analysis

During the data analysis, the contents of the interviews for both primary and secondary data were thematised for surface-level thematic analysis. In the surface-level thematic analysis, due to privacy concerns relating to the use of software-based literation and the quantity of the interview material, the interview recordings were not transcribed from word to word. Instead, the interviews were listened through, and topics covered during the primary dataset's interviews were first recognised, labelled, and written down according to the order presented and – in case of topics of interest – timestamped. Then, the contents of the interviews were thematised into broad categories of *national defence*, *defence industry*, and *business (environment)* and narrowed into categories according to regions of *universal*, *U.S.*, *Europe*, *Nordics*, and *Finland*, and then, in the case of *business (environment),* further divided into PESTLE's categories whenever possible.

Ultimately, by following inductive logic, the purpose of the thematic analysis was to form a more comprehensive picture of the resources and competencies that the companies possess and of the perception that the companies have – or might have – about the U.S. defence market, and towards operating within it, by identifying, analysing, and interpreting themes across the material from the basis of the analysis. From the basis of the thematic analysis, conclusions were drawn concerning the U.S. defence market characteristics and what are the perceived challenges to the Finnish defence industry's operation and Finnish defence product exports in general. Additionally, some shared attitudes concerning the U.S. defence market were recognised during the thematic analysis. Considering the nature of the performed superficial data analysis, the analysis was not used to discover underlying meanings from the discussions held or to actively steer the researcher towards new topics of interest but to structure the contents to their thematic categories for them to be later combined under the headings used during chapter four of this thesis.

3.5. Limitations and Ethical Considerations

The limitations and ethical considerations of a thesis are to be discussed as they are to be addressed to aid in further evaluation of a research's reliability and validity. Additionally, they can be seen as a centric part of any qualitative research favouring a cultural studies perspective with the approach of critical realism.

Overall, the topic of this thesis can be considered sensitive, and it divides opinions. Whether a person sharing one's opinion on the topic is pro the industry or against the existence of arms and armed conflicts, the discourse is often tied to strong emotional interpretation, which can blur the facts when one forms his/her opinion on the matter. In philosophical research, while emotions and reason are often seen as conflicting by their very nature, there has been an evoked interest amongst academics towards the inclusion of emotion(s) as a component of justification rather than a component belonging to the context of discovery (Kochan, 2015). Nevertheless, in this research, the role of emotion(s) has been actively tried to be mitigated, and no strong emotional reactions were perceived during the interviews, even when the conversation was steered towards the more conflicting sides of the defence market, defence industry, and their effect on society.

The key limitation of an interview study that is to make generalisations by induction can be found in the interviews: whom to interview and how many people should be interviewed to acquire enough relevant information for understanding the phenomenon examined. Naturally, there is not a straightforward answer to these questions, as context defines the answer for both. Additionally, the more complex a subject gets, the fewer there are people that can provide relevant information concerning the subject, and in turn, the more people should be interviewed to understand multiple angles towards a complicated subject, and in short, marketing, selling, and procuring defence products on the international market(s) form a highly complicated topic. Hence, in this interview study, the decision was made to aim the interviews at persons that possessed both a deep understanding of the U.S. defence market and its characteristics and were connected to vast networks of Finnish defence industry companies. Additionally, in this research, the quality of the interviews was chosen over their quantity. By spending a longer time on individual interviews, the complex topic of Finnish defence industry exports to the U.S. was discussed in more detail than it would have been in, for example, ten shorter ones. Recognised, this approach can affect the credibility of the research due to the limited perspectives introduced.

Indeed, considering the credibility of this study, any research on the topic should consist of broad series of interviews performed with various persons working in, with, or against the defence industry for an interview study to be unbiased on the subject. Where even the possibility of such is to remain a matter of debate – especially when considering the limitations related to a thesis work – the literature chosen around the topic has been selected to include multiple alignments towards the defence industry. The chosen articles and books are not only to provide knowledge on the topics covered but especially with Andrew Feinstein's *The Shadow World: Inside the Global Arms Trade* (2011) and Paul Holden's *Indefensible: Seven Myths that Sustain the Global Arms Trade* (2017) works the aim has been to provide different viewpoints towards the topics of national defence and defence industry.

While the books of the mentioned authors have not been actively cited during the thesis, they have contributed towards the research by, for example, providing aid in generating questions and topics of discussion that have been covered during interviews held with company representatives during the collection of the primary dataset. However, it must be noted that the particular literature exploited has introduced some structures that are unobservable structures which are formed from interpretations of reality. For example, the construction of an iron triangle, often mentioned in the context of defence products sales and procurements, can be due to (groups of) peoples' intentional strive to attain and exercise power or simply due to the "natural order" of things. This would suggest that, for example, the military's power within the structure is partially accidental; retired military officials can be the best experts on defence products, and hence they are often hired into the ranks of their domestic defence industry companies. Additionally, after serving in the defence industry companies, retired military officials get to work in an environment that is tightly connected to the field of politics. Hence, after some years spent within the industry, the former officials already possessing an understanding of politics concerning their work get actively involved in politics and eventually get occupied within the government. Indeed, is the phenomenon directed by an individual's personal interests, or is it an intended acquisition of power by the military, as sometimes claimed? Despite the source of occurrence, the observable fact is that there are people working for the government, defence industry, and the armed forces who are tightly connected by their earlier history in the service of the U.S. Armed Forces. Does that affect the outcome of some of the U.S. procurement decisions is up for debate, and in the context of this study, the potential outcomes of the existence of such structures have been mostly ignored; the structure and characteristics of U.S. defence are taken at face value as Finnish defence companies have no possibilities of affecting them.

Additionally, a limitation worth considering is that while the part of the primary dataset acquired from the basis of the interviews covers a wide range of subjects concerning the research topic, and during the interviews, both the U.S. market and the Finnish defence industry were discussed from multiple viewpoints, the interviews have been conducted on representatives of individual companies that are required to produce shareholder wealth by selling defence products to both local and foreign customers. This setting expectedly affects some of the perceptions towards both the defence industry and the defence market, and the interviewees' views on some of the more controversial matters may be self-hindered for personal protection. As the old saying goes from The Pied Piper of Hamelin goes, *he who* *pays the piper calls the tune*. Nevertheless, the interviewees' perceptions of the defence industry and the defence market are well aligned with the earlier academic research on the subject, even when compared to the more critical articles towards the subject(s). Besides the chance of self-censoring during the interview situations, interviewees of the primary dataset have been provided with the option to review and suggest changes to this thesis before its publication – the decision to allow this was to enhance the protection of privacy of the interviewees and ensure that research ethics concerning GDPR has not been breached from the viewpoint of the interviewees.

The contents of the secondary dataset have been acquired with the aid of a multinational defence industry operator, and the company's presence as the client of the project may have affected the involved Finnish companies' motivation to both participate in the interviews and the contents and structuring of the answer given during the interviews. To limit these negative effects of external pressures towards the study, the interview material was never provided to the client of the project, the interviewees were anonymised, and the use of direct quotes was mostly avoided.

Especially due to the defence industry's role in the national defence and the associated secrecy required from the companies, ethical concerns of the research is a centric topic to discuss. As Eriksson and Kovalainen (2008) describe, ethical concerns should be considered during the entire research process. While this study has been free from external pressure in the sense that the research has not been made as a commission of some specific company – or has not involved some company's sensitive internal material that is not meant for external audiences to be read – the topics discussed, and answers provided can include details concerning defence industry or its member companies that are not planned to be openly discussed. Hence, during all the interviews, the persons interviewed were informed of their rights as an interviewee to pause the interviews and or decline to answer any question(s) that they felt uncomfortable answering. Before the beginning of the interviews, proof of consent to underwrite was provided for the interviewees. The proof of consent included a notion that all the answers provided before pausing an interview could be used as data for the study – none of the interviewees exercised their right to pause the interview or declined to provide answers to any of the proposed questions. During the early phases of the interviews, the interviewees were asked for their permission to record the interviews for later usage. Excluding one of the secondary dataset's interviews, where the chance of recording was replaced by taking a series of notes, the interviews were allowed to be recorded. To limit the risk of external exposure of the interview material, the recordings of the interviews have been kept in personal storage, and no software-based transcriptions were made of the interviews. Much of the tasks were performed to enhance the credibility of the study by, for example, limiting the risk of self-censoring by letting the interviewees know that their answers to the questions proposed would not be published as such and that the interviewees were to be anonymised, and the making of direct quotes to be avoided, had a dual purpose, as these are also ways to protect the privacy of the interviewees. Indeed, the most centric ethical concern has been the privacy of the interviewees. The answers provided in good faith by the interviewees for the purpose of research should not be used against the interviewees' personal interests, and hence, they were treated accordingly. Hence, answers provided by the interviewees were not used outside of their original or intended context, and constant evaluation of whether the usage of distinctive parts of the interview data acquired would be harmful to the interviewee or not was made. Additionally, the usage of any potentially sensitive material was considered against its contributory value towards this study. As the interviews contained discussion outside of the semi-structured questions, and many additional follow-up questions were made, the risk of some of the questions being leading or biased by nature has been involved. Yet, the author of this research has been aware of this issue and respected objectivity during the entire research process. According to the author's view, any discussion even loosely relating to national matters such as national defence is bound to be a discourse of personal utopia and objective reality, and hence, all personal views (the utopia part) on the matter hold equal weight on the matter until they are reflected against the facts (the reality part), and ultimately, some people's narratives on some particular matters align better with the facts than the others.

Any conclusions drawn from the research should be examined with these limitations considered. While the thesis was sent to the interviewees of the primary dataset for them to review, the option of affecting the contents of this thesis by changing or removing material that was felt to be unpropitiated or unfit was not exercised by any of the interviewees and followed by a mostly positive reception, one of the interviewees gave permission to publish their title and the name of the company in this thesis.

4. Findings

During the findings section, the findings of the interviews are presented and discussed by providing examples from the existing literature, and concerning some references, new literature that has not been covered during the literature review of the thesis is introduced. First and foremost, this was done for clarity, as the notion made when writing the findings chapter was that the discussions held during the interviews and concerning the research topic covered a wider range of subjects than expected, and additional literature had to be introduced for better understanding and explaining the phenomenon examined. Why this literature was not added to the literature review chapter was due to the observation made that adding all the later introduced sources to the literature review chapter would have made the chapter perhaps too lengthy and explaining why the selected literature is relevant for understanding the phenomenon without the context provided by the interviews would have lengthened the chapter even more. Alternatively, by disregarding some of the subjects covered during the interviews – and by doing so avoiding the use of additional literature – the findings chapter would not have reflected either the content of the interviews or the phenomenon examined with sufficient accuracy. Ultimately, the purpose of the empirical findings is to provide answers to the research questions when connected with the frameworks and models presented in the literature review and, by doing so, form a basis for the contents of the discussion chapter. As industrial organisation theories suggest, the success of a company in some specific market is explained by the combination of the market's requirements and the capabilities of the firms within that specific market (Kraaijenbrink, Spender and Groen, 2010).

First, during the findings chapter, the processes concerning Finnish defence industry exports are discussed. The discussion begins with a description of the characteristics of defence products' marketing and sales processes. Then, new market entry-related sales and distribution channel strategies to use are explained and elaborated with examples from the Finnish defence industry companies. The channel strategies cover indirect exports, direct exports, partnerships and joint ventures, and foreign direct investments. This is followed by the introduction of push and pull marketing strategies, which explain the two methods of how a company's products and/or services are introduced to the defence market. After the introduction of the channel and marketing strategies, an experience-based multi-channel marketing approach towards the sales of defence products is showcased from the basis of the expert interviews. With the introduction of the multi-channel marketing model and the key people associated, the roles of the Buy American Act (BAA) and Foreign Comparative Testing (FCT) are discussed from the basis of the interviews as the first is an act created to encourage the government to favour domestic production in its procurements, and the latter can allow DoD to bypass the BAA in defence product procurements. Then, eventually, the role of politics in defence industry sales and exports is discussed.

Second, the experiences and expectations from the defence market – both domestic and foreign – were discussed with the interviewees. Hence, the current state of the industries is being examined on the basis of the conversations held with industry experts and the available public information. Then, different forms and levels of government support and options for development funding are examined. Before the summary of findings, the concept of the "ultimate unique product" is discussed, which builds on the earlier discussion of the defence industry being a product-centric industry, and how part of empirical evidence justifies the R&D approach of chasing the ultimate unique product within the Finnish defence industry companies. The summary of findings is to encapsulate the earlier discussed topics and sum up the requirements of the U.S. defence market and the capabilities of Finnish companies that operate in international defence markets.

4.1. About Marketing and Selling Defence Products

Marketing is one of the centric functions of any defence company, and based on information received during the interviews, the following summary of processes related to the two was formed. For the sellers, besides understanding the marketing and sales processes, there are important procurement considerations of the buyers to be internalized.

Sales processes of defence products are usually relatively lengthy; 5 years is nothing unusual when the process is measured from initial contact to performing the sale. Additionally, prospecting and preparations have been performed before the initial contact. The process length is expectedly due to the nature of the procurements and requirements associated; both the financial value and the use value of the procurements are large, and there are many parties involved within the procurement process, which typically means that there are many people that the seller needs to convince, and the seller must convince them better than the competitors can. Understandably, as various political aspects are involved within the procurement decisions, this means that the best offering does not only consist of price-to-performance or supply security-related measures, and arguably, the best product on the market does also not always win. Nevertheless, product demonstrations play an important role in the sales process as the buyer must be convinced of the operation and capabilities of the product. The cruciality of product demonstration holds true, especially in the context of weapon systems; ultimately, a system's failure to meet the expectations of the end-user can ruin the defence capabilities of an individual nation. It is preferable in national defence that the army responsible for it has something more at their disposal than just Sun Tzu's (Sun Tzu, no date via Baker, 2011) phrase, "All warfare is based on deception". Meaning, that when risks materialise, having a weapon system that performs badly in real-world situations is likely not enough of a threat to the invading nation.

From a process perspective, selling defence products follows a conventional path, and based on the interviews held, a company with a product and/or service (or product and/or service concept) performs the following activities:

1) Marketing of the product
   ➔ Successful marketing provides an offer request for the company.
2) Drafting, creating, and submitting an offer
   ➔ Often the procurer later replies with an inquiry about a revised offer.
3) Creating and submitting the revised offer
   ➔ The sales process continues with contract negotiations, and in the case of many clients, the seller is introduced and included in the procurer's supplier system and given a supplier ID, and in the case of some organisations, final (information) security checks are performed on the supplier – these steps do not necessarily happen in the stated order.
4) The product is (manufactured and) delivered according to the agreed terms
   ➔ Especially when selling to contractors, the product is not necessarily directly delivered to the end customer.

However, there are differences to the process, and as mentioned by one of the company representatives interviewed, a detailed request for a quotation or even an actual offer may not always be carried out in a transaction. Naturally, sales are made before the invitation to tender arrives, and presumably, they have been worked on for a long time before one arrives, and according to an industry expert, this is often the case regardless of a company's marketing strategy choice.

4.2. Market Entry Strategies

Typically, before the start of active marketing and sales, a company needs to enter the (foreign) market according to a planned market entry strategy. Whether it is a complex solution such as a weapons system or a simple product such as standard ammunition, when a company proceeds to decide on its market entry model, there are six modes to choose from. A company can either export by performing indirect exports through an intermediary or direct exports by itself, underwrite contracts concerning licensing or franchising, or engage another company in a strategic alliance and/or joint venture. In addition to these, there is an option for a company to establish or acquire a wholly owned subsidiary in the form of greenfield or brownfield investment. Naturally, with solutions consisting of product and associated service, a company has the option to use two of the models simultaneously, meaning, for example, that the product can be exported directly, and the associated service can be produced through a local partnership, but due to the latter, these sorts of arrangements can be grouped into, for example, strategic alliances if a need for clarifying the options arises.

As Franklin Root (1994) has earlier illustrated, the decision of foreign market entry mode involves risk and investment but is also tied to the desired degree of ownership and control. Later extended, an entry mode's positioning on the vertical axis also reflects its capability requirements and potency for profitability:

(Image on next page)

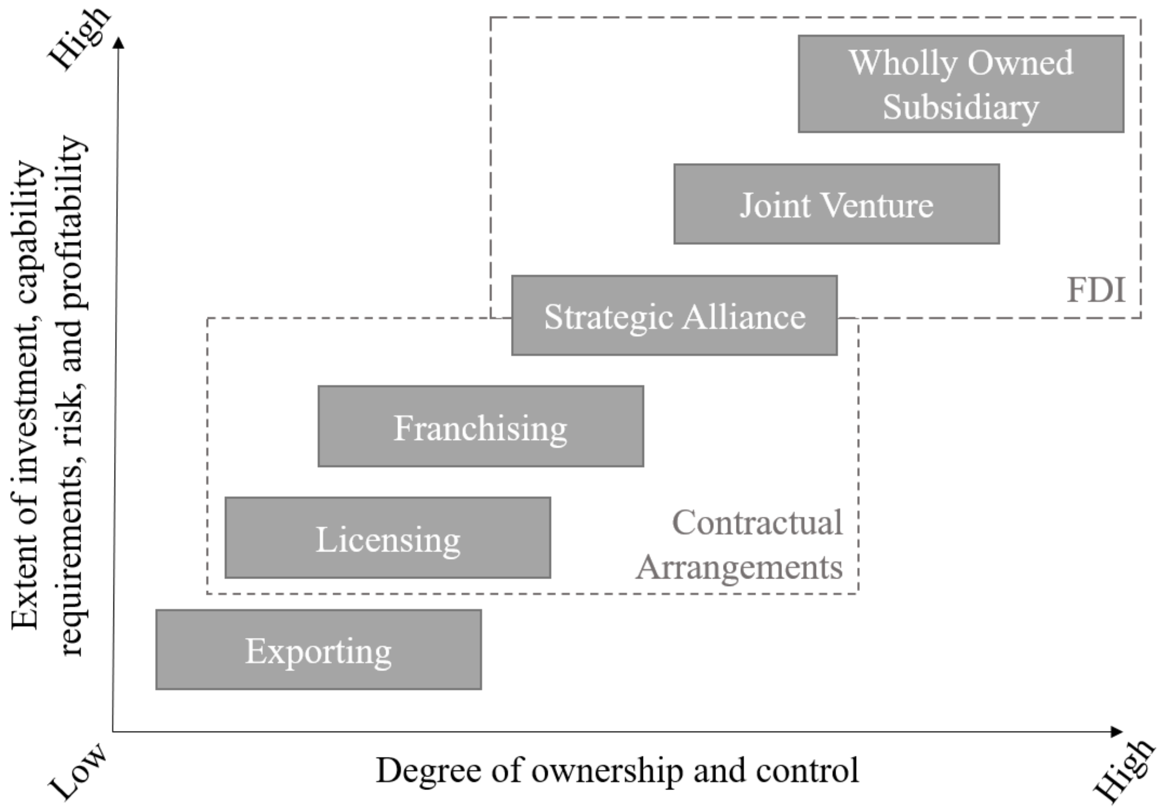

Figure 10: Entry strategies for international markets (in the style of Root, 1994)

Eventually, the strategies of foreign market entry can be divided according to the eclectic paradigm's suggested courses of action: exporting, contractual arrangements, and foreign direct investment. Strategic alliances, discussed later as partnerships, can be of either kind. Where indirect exporting could be included in contractual arrangements, the inclusion is avoided for the suggestions of the eclectic paradigm to apply.

4.2.1. Exporting

Exports consist of products (or services) that are manufactured in one country and then sold in another. In such a scenario, the seller is an exporter, and the buyer country is an importer. *Exporting* is the process of sending products from the manufacturing country to another country for the purpose of trade or sale. During this chapter terms exports and exporting are sometimes used interchangeably, but in both cases, they refer to the process of transferring products (or services) from one place to another. Depending on the view taken, exporting itself does not provide an entry for a market – especially if a market entry is considered to involve the outcome of establishing a steady footing on a foreign market – but is a means for distributing products in the context of sales. Yet, during this chapter, the examination of the differences between foreign market entry and foreign sales is ignored. In general, exports are practised through two alternative models of exporting: indirect exporting and direct exporting. In indirect exports, there exists a third-party intermediary between the manufacturer and the buyer, and the intermediary can be responsible for the sales and export processes either wholly or partially. In direct exports, the manufacturer is responsible for selling and delivering the product to a buyer. Understanding the differences between the two exporting models is important as the choice of exporting model not only determines the profitability of, and the resources and capabilities required for, the exporting but can also have a critical effect on a company's foreign market entry (or sales) success.

Whether a company plans to sell to (or enter) a market through either of the export models, the comparison between the advantages and disadvantages of indirect and direct exports is following (Puusa et al., 2015; Netherlands Chamber of Commerce, 2019):

	Pros	Cons
Indirect export:	Few to no extra staff members are typically required Agent: - knows the target market - has access to the market - has access to pre-existing distribution channels Can aid in achieving more complete market coverage Has smaller financial risks	Trust in the partner(s) is required due to dependence on the commitment of the partner(s) Often means that no direct customer contact is possible Provides lower profit margins
Direct export:	Allows direct customer contact Has the benefit of independence from foreign partners Provides higher profit margins	Requires time and staff Provides limited coverage of the target market Requires vast knowledge of the target market and its culture(s) Has greater financial risks

4.2.1.1. Indirect exports

In indirect exports, the company manufacturing the product (and/or service) uses a third party (or parties) to represent their products in the target market of the export(s) (Netherlands Chamber of Commerce, 2019). By doing so, many of the requirements concerning the manufacturer in the case of direct exports are moved to the third party as the export operations can be thoroughly handled by the third party in question. With the requirements, some of the risks concerning the exports are externalised to the third party – the amount of risk typically correlates with the amount of control given over the export operations (Puusa et al., 2015). Yet, with increased risk and control, the risk taker typically demands higher compensation (ibid), and this affects the profitability of the export operations and many of the manufacturing company's actions and decisions, starting from the nature of the procurement contract negotiations and reaching to expected outcome(s) of the exports.

For example, as discussed during two of the interviews, when a company aims to make deliveries to the United States market by selling to a contractor who is operating on behalf of DoD, the required effort towards negotiating a favourable contract is often significantly higher than when directly dealing with the Department of Defense. With contractors, the starting point for contract negotiations is often a contract base that includes terms that can be described as unacceptable for the companies that are engaging the contractors in contract negotiations – the unacceptable conditions in the first contract draft terms were a recurring theme during the secondary dataset interviews. However, a contractor operating for the United States must generally act in accordance with the conditions of the Defense Acquisition Regulations System (DARS) – meaning in alignment with Federal Acquisition Regulation (FAR) and the Defense Federal Acquisition Regulation Supplement (DFARS). Thus, a Finnish seller company familiar with FARs can reflect on the boundary conditions of the negotiation possibilities of a subcontracting U.S. company, and furthermore, DARS applies to both prime contractors and subcontractors. Yet, as described during one of the interviews, it must be kept in mind that the large U.S. defence contractors have legal departments the size of a Finnish SME and larger. This means that the U.S. contractors have sizable resources to invest in the contract negotiations if a need arises. Hence, gaining the 'upper hand' in contract negotiations based on a Finnish company's legal competencies can be considered highly unlikely. Yet, for a company having these competencies, the competencies can potentially provide a competitive advantage over their domestic peers.

Nevertheless, as suggested by many of the interviewees, a company planning on U.S. sales and exports should either have a layer with competencies in both the U.S. state-level and federal-level legislation, have a legal department with the prior competencies and sufficient resources, or seek legal counselling from either the United States or from Finland.

In short, as discussed during all of the interviews held with the defence company representatives and concerning the legislation and requirements proposed by contract negotiations, the U.S. (defence) market differs drastically from Finland. While the topic of the legislation and/or regulation-based differences exist due to the U.S. being a nation that has a common law system and Finland being a nation with a legal system that follows civil law, were not discussed with the interviewees, according to Smyth and Gatto (2018) the differences between the two stem from the common law system relying on not-legislated but binding court precedents where earlier judicial determinations of upper courts have a critical role, where the civil law system is based on court precedents that utilise codified statutes. In a common law system, a judge's (or jury's) decision is always centric, whereas in a common law system, if a judge has a need to go beyond the codified statute when disposing of a dispute, his/her resolution will not necessarily become binding. Partially, because of these fundamental differences, contract laws, and especially interpretations of them, can be more flexible in common-law nations. (ibid) Presumably hence, as mentioned by all the company representatives interviewed, contracts in general and especially when concerning business arrangements are – and are needed to be – drafted and crafted with more care and detail in the United States.

Despite the often-challenging contract negotiations, as discussed during one of the interviews, procurement made by companies is a much simpler process than by the state. In practice, procurement by a governmental organisation, such as the DoD, always requires a very comprehensive justification and must be in accordance with the FARs – or DARS in the context of defence procurements – whereas within the companies, procurement contracts can sometimes be underwritten solely based on a commercial basis or from a strategic point of view relating to the future. Simply put, the procurement decisions of commercial organisations can be made on a lighter basis. As an example, according to an interviewee, procurement has been made from their Finnish company by bypassing the earlier accustomed supplier for strategic purposes. In this case, the procurer has been a foreign supplier candidate who has sought to carry out a quantitatively large delivery to Finland and made the decision to acquire the product from a Finnish company that has been able to manufacture the product/component needed in order to obtain a local partner. Indeed, in this sense, the company's decision is simpler as the state entity must be especially careful when the procurement is directed abroad and operate under strict guidelines and a comprehensive regulative framework.

With the U.S. market having high entry barriers, indirect exports can be the only option for the smaller Finnish defence industry companies. According to a company representative, their company tried for several years to directly reach the U.S. end-customers. Despite all the efforts, meaning years spent studying the U.S. market, their company achieved mostly unsatisfying results. From a business perspective, their effort required large financial investments and took a considerable amount of working hours. While it was mentioned that the sales and promotional activities were a learning experience for the company, in the case of the smallest of the Finnish defence industry companies, a process of U.S. market entry without attained procurement contracts can be financially burdening, especially when the alternative costs of the course of action are considered. Nevertheless, after the decision was made to hire a local agent with existing networks and recognised status amongst the end customers and the industry, the same company representative mentioned that their chances of reaching procurement contracts had increased substantially. Yet, in the context of defence products sales and exports, choosing the right partner for indirect exporting can be challenging, and as mentioned by one of the interviewees:

"America is a networking country. One has to have their own local consultant or employee with the networks and credibility. ... It is a big investment to choose the right consultant, and when choosing one, it is possible to pay hundreds of thousands to the wrong people".

This supports the view expressed in the later interviews that a company needs to look local in the United States and, additionally, confirms the notion made by most interviewees that finding the right people is challenging. To look local often means either having a local partner or establishing a subsidiary in the U.S. market, or alternatively, a company can spend enough time and resources to get recognised in the U.S., but getting recognised in the U.S. does not remove barriers to trade such as DoD's obligation to follow Buy American Act in its procurements, though, neither does finding and hiring a suitable third party for the indirect exporting. Therefore, to overcome these requirements, companies with sufficient capabilities should consider other means of market entry to the U.S. defence market besides indirect exporting.

4.2.1.2. Direct exports

Alternatively to indirect exports, in direct exports, the export activities are directly handled by the manufacturer of the product (Puusa et al., 2015). In the context of Finnish defence industry products, this means that the export procedure begins from Finland and is targeted outside of the customs territory of the EU (Finnish Customs, no date). Besides handling the logistics – which are not covered during this subchapter - in direct exports, the company performing the export activities is responsible for attaining the export permits. Hence, Finnish defence industry companies which are planning on performing exports need to have knowledge of the Finnish institutions associated with the export permit-acquiring process and knowledge of the structure of the process and the procedures. To fill out a permit application, companies require an end-user certificate and a contract number. Additionally, like in the case of indirect exports, Finnish companies performing direct exporting are suggested to be familiarised with the Defense Acquisition Regulations System and are required to have an extensive level of target market knowledge.

When the institutions involved are considered, depending on the contents of the exports, 20 § from the Finnish law of defence equipment exporting states that the Finnish Government decides on the export permit matter if the exported article is included in the 3 § and belongs in any of the product categories of 1-10 or 12. In other cases, it is the Ministry of Defence that decides on the issue of export and transit licences. These cases are situations other than those referred to in subsection 1 or if the military equipment is temporarily exported and its ownership is not transferred to a foreign owner. The Ministry of Defence also decides on the authorisation of the cases that are related to the transfer and brokering of military equipment. Whenever the permit matter requires, the Ministry of Defence must separately clarify from the Ministry of Foreign Affairs that there are no foreign and/or security policy-related obstacles to granting the permit, according to the Act on the Export of Defence Materiel (282/2012). Though, the case, especially when operating with the contractors, is that the list of countries in which the Finnish Government does not wish to export defence arms, - arms components, or - technologies may differ from foreign contractors' or similar operators' considered options. When defence arms are purchased in order to sell them elsewhere – this sometimes referring to the case of intermediation – 7 § is typically not applied 'as it is' as the option, and the target country of the intermediary's export is treated as the target country of Finnish manufacturer's export according to 15 § (282/2012). The export permits are granted for an indefinite time, but they can be terminated if the terms of the permit are ignored. Intermediary permits are granted for a predetermined period. (282/2012) Yet, as described by one of the interviewees, while some of the Finnish companies may complain about the law concerning export permits, the actual list of countries that exports are refused to is rather limited, and these are often countries with unstable political climates, or who clearly and continuously perform violations to human rights.

According to an interviewee familiar with the Finnish export licence process, for the export licences, about one and a half to two months has usually been the waiting period – noting that the length of the waiting period typically depends on the destination country. For the United States, it was mentioned that the waiting period often means the next Finnish Ministry of Defence meeting. Yet, obtaining an end-user certificate has typically been a lengthy process, and the end-user certificate must be attached to the export licence application. Hence, companies applying for export permits should begin working with the appliance of the end-customer certificates well in advance. Furthermore, when the requirements considering export permits were discussed with one of the interviewees, it was brought up that a procurement contract as such is not a required attachment to an export licence application. Yet, when applying for an export licence, one must refer to some kind of contract number, which means that in practice, some kind of contract related to the planned export(s) must be found, although this required contract can also be a mere letter of intent. A relevant question concerning the export premises is that do letters of intent as attachments alone explain the big difference between export licences applied for and those that have been realised, as the ratio between the licences applied and defence varies considerably – in Finland, the export permits applied in 2021 totalled for 311 million euros, where the actual exports stood at 73 million euros, and the actual exports were at their lowest in 10 years (Ministry of Defence, 2022).

In addition to acquiring experience in the Finnish export permits procedures, as there are no intermediaries between the seller and the buyer, as mentioned in the context of indirect exporting, companies intending to operate in the U.S. defence market as suppliers of DoD will eventually need to familiarise themselves with the material related to DARS – especially FAR and DFARS. The DFARS, being a supplement, alone consists of 1000+ pages (when excluding the reserved pages), partially explaining the sometimes mentioned "heaviness" of the U.S. market. Yet, as mentioned by an interviewee, for a more superficial internalisation of these materials, there is a comprehensive amount of instructive material, such as videos and PowerPoint presentations, produced by the U.S. government, among others. How well the seller needs to know the buyer's code of conduct can be seen as a matter of debate, but it can assist in various stages of the sales process when the parties involved know the limitations enforced around the procurement process in question.

As mentioned earlier, the U.S. market is sometimes seen as an exceptionally "heavy" market when it comes to matters related to the export and sales process. Though, as described by an interviewee, it can be mentioned that in Brazil, for example, the number of different forms to be filled in is higher than in the United States, which means that the amount of paperwork around a procurement process can be higher elsewhere, while the actual acquisition system built around the procurement process would seem "lighter".

"Finland is well-known for that, in the defence forces' acquisitions, the invitations for tenders and all the related authentication, producing of the proofs ... in these, Finland is probably the one requiring the most material. It has always been this way".

(A citation from an interviewee)

Eventually, it can be said that a large amount of regulation concerning operating with the DoD or in the U.S. defence market is not exactly exceptional in the international markets. Yet, as brought up during multiple interviews, having the will is perhaps even more crucial for clarifying the export process than many other things. For example, when it comes to DARS, an interviewee mentioned that if there is a will to buy in one place and a will to sell in the other, DFARS and FAR provide a clear framework for the operations required between the two parties. An example of the benefits of having a predetermined framework such as DFARS is that a single provision of the DFARS cannot be easily modified during negotiations on a single defence acquisition. If changes to the terms of the DFARS were to be made, the changes would have to be decided in Congress, and the changes made would apply to all procurements made by the DoD in the future. For example, DFARS has not been developed for import restriction purposes, but it is developed to be followed in all DoD procurements. In short, the DFARS provides a framework for ensuring the legality and (economic) efficiency of operations when defence-related purchases are made with taxpayers' money by the DoD.

"The DFARS contains requirements of law, DoD-wide policies, delegations of FAR authorities, deviations from FAR requirements, and policies/procedures that have a significant effect on the public".

(Citation from Defense Pricing and Contracting's webpage (Defense Pricing and Contracting, no date))

Yet, while the DARS is based on a comprehensive regulatory framework, it was also mentioned by an interviewee that each of the states can have differing interpretations of the federal level regulations, and overall, the U.S. market is a huge market compared to the Finnish ones. Hence, while the United States is a nation, it should also be considered as a group of states resembling individual nations due to the differing legislations between the states, which means that a company planning on U.S. exports should place its focus on examining its business case from the viewpoint of both the U.S.' state(s) and the U.S. nation.

Despite the potentially differing interpretations, it was said during one of the interviews that it is advisable for the Finnish companies to understand the contents of the FARs as the sales arguments that are often required to be offered to the government official(s) can be easily articulated onwards in the governmental organisation when they are in line with the FARs. Hence, it is beneficial for the company to tell the government official, so he/she can tell onwards in their organisation that something can be done because, for example, a certain point in the DFAR allows for this type of procedure. The efficiency of this approach is related to proceeding a cause forward by using the "copy-paste method" – a method that involves crafting premade statements and materials that ease one's workload concerning the task at hand in an organisation and that are thus beneficial for the receiver and are hence used. This raises the question of can one of the unofficial criteria for the encouragement of choosing one alternative over another during a procurement process is its ease, suggesting that there can be a chance that even governmental organisations as customers are looking for convenience from the products purchased. For clarification, convenience is considered as one of the elements of Bob Lauterborn's (1990) 'refreshed' variant of Jerome McCarthy's (1964) simplified version marketing mix model – a model which earliest mentions go back to Prof. James Cullington in 1948 (1973). For the companies that are planning on deepening their knowledge of FARS, according to an interviewee, the content actively utilised from the FARs in practice is limited to an average reading of about 150-200 pages – much of the content of the materials is written using if-then statements. For companies that are not interested in deepening their understanding of DARS and its components, there is, for example, the earlier-mentioned option of practising indirect exports or other modes of foreign market entry, such as licensing and franchising.

4.2.2. Licencing and Franchising

Licensing and franchising are two models of foreign market entry in which the production of a product (or a service) is placed in a location other than the original. In licensing, a business arrangement is made where one company (the licensor) gives permission for another company (the licensee) to manufacture its product (or provide its service) for a predetermined compensation. The licensing agreement can be either exclusive or non-exclusive, and arrangements such as royalties on products sold under the licensing agreement can be negotiated between the licensor and the licensee. Typically, licensing agreements are made for a predetermined duration, and potential concerns relating to intellectual property rights should be handled accordingly – often by using additional overseas IP protection measures, such as an IP escrow, as mentioned during one of the interviews – before inking an agreement. (Department for Business & Trade, n.d.a) Franchising is a form of licencing where the owner (the franchisor) of a brand's trademark (or trade name) and its business system provides the right for the payer (the franchisee) of an initial fee to practice business using the franchisor's brand name and business system (International Franchise Association, no date).

Where – according to the author's understanding – franchising is unheard of in the context of defence products, licencing agreements do often take place when, for example, technologies are needed to be transferred according to agreements concerning industrial participation between the seller and the buyer. Additionally, licencing is often used by companies that wish to quickly introduce new products (or services) to the international market (Department for Business & Trade, n.d.a). Yet, while licensing can seem an attractive option for a company to introduce their product to a foreign market, in the context of defence products, even licensing comes with its limitations; Finnish defence export regulation does not make exceptions concerning the product (and/or technology) licences. A recent case of Finnish export control hindering the licensee's options for exports has been the case of Polish Rosomak SA trying to export its multirole military vehicles to Ukraine. In Rosomak's case, in addition to extending the existing manufacturing license with the licensor, the licensed technology from Finnish Patria Plc has required granting of additional export permits from the state officials of Finland (Freyborg and Aholainen, 2023). In practice, the same would be the case with a U.S. contractor trying to export its product(s) containing Finnish technology to a third nation.

Partially due to the U.S. being a global seller of defence products and the sales being sometimes directed to nations (besides Ukraine) that are participating in ongoing wars, the option of practising licensing as the U.S. market entry mode should be considered with care and reflected against the benefits and challenges of market entry modes of partnership or joint venture; how would, for example, the appliance of ITAR instead of (or in addition to) the domestic export regulation to the products centric for cooperation – a theme discussed during the subchapter about experiences and expectations from the market – affect the nature of the partnership or joint venture or the future aspects of the Finnish company involved in either?

4.2.3. Partnerships & Joint Ventures

Businesses can interact together to achieve common goals and coordinate cooperation between the business entities partnerships are often formed. Partnerships in the defence industry can include resource exchange or any form of cooperation between two more parties, but more specifically, they include consortia, joint ventures, collaboration, licensing agreements, and offset agreements (Butler, Kenny and Anchor, 2000). All mentioned modes of inter-firm action can take place either domestically or through cross-border cooperation. At its core, any partnership that exists along a supply chain is either a non-equity-based partnership or an equity-based partnership (a joint venture) (Carnovale, Yeniyurt and Rogers, 2017).

Joint ventures (JVs) – or equity-based partnerships – are a form of inter-organizational cooperation that allows companies to perform complex mutual tasks that would be impossible to organise between two or more firms by using arm's-length contracts and/or without mergers and acquisitions (Moskalev and Swensen, 2007). While sharing characteristics with indirect exports, meaning that the companies involved can distribute tasks relating to export activities between each other, joint ventures and other forms of partnership typically involve deeper commitment between the companies and can have various shared responsibilities between two or more companies. Joint ventures differ from various other kinds of partnerships in the sense that an individual business entity is created, and the created entity is a separate legal entity from the two or more companies acting as its ordinates. Joint ventures, like the other forms of partnership/strategic alliance, are often practised for saving on costs, leveraging resources, combining expertise, gaining from intellectual property, and benefitting from synergies of the companies involved (Butler, Kenny and Anchor, 2000). Thus, joint ventures can provide a source of competitive advantage, unlock new revenue streams, and aid in entering new markets (HM Treasury, 2010). In fact, overseas JVs are an alternative for exporting as they allow a company to establish a presence in a foreign market and – depending on the type of the JV – they allow the capitalisation on foreign market business opportunities without taking on the full responsibility of the JV's outcome (Department for Business & Trade, n.d.b).

Partnerships – including joint ventures – in the defence industry can be created as *vertical*, *horizontal*, or *diagonal* (Nooteboom, 1999). In vertical partnerships, firms constitute arrangements in which they operate in different stages of a supply chain, and in vertical partnerships, the companies can be, for example, buyers and suppliers (ibid; Carnovale, Yeniyurt and Rogers, 2017). Especially in equity-based horizontal partnerships, two or more companies engage in collaborative partnerships (ibid), and in horizontal partnerships, the companies involved can be, for example, competitors. Horizontal partnerships are often considered to be interesting cases, as many of the suppliers engage in direct competition but can form a partnership when the cooperation's benefits – often evaluated through economic measurements – outweigh the pressures of competition (Zhang and Frazier, 2011). In diagonal partnerships, the other company (or companies) can be from an entirely different industry. (Nooteboom, 1999) According to Butler, Kenny and Anchor (2000), despite the type of partnership chosen, each partnership has one common feature: the transfer of knowledge. In each type of partnership, knowledge exchange happens between the parties, but not necessarily in all directions or in equal measure (ibid).

In addition to the categorisation based on the companies' position within a supply chain, joint ventures can be divided into four types: *consolidation JVs*, *skills-transfer JVs*, *coordination JVs*, or *new-business JVs*. In consolidation JVs, the alliance's value is produced by combining existing businesses. Consolidation JVs can be done, for example, to attain economies of scale for remaining viable in a competitive market. Skills-transfer JVs produce value when critical skills of one business are transferred into the joint venture. Hence, a requirement for entering such JV is that one of the companies involved possesses skills that the other party involved values and that are typically hard to develop in-house. In coordination JVs, the venture's value is produced by leveraging capabilities that are complimentary between the two (or more) companies. A requirement for a successful coordination JV is that the companies' capabilities are complimentary also in practice and not only during the JV's planning. Similar to coordination JVs, in new-business JVs, value is produced from the basis of the companies' existing capabilities for new growth in the form of a new business. In consolidation and skills-transfer JVs, the managerial focus is typically on leveraging operational synergies, whereas in coordinated and new-business JVs, the focus is put on understanding the new market opportunities of the partnerships. (Bamford, Ernst and Fubini, 2004)

Partnerships can be categorised according to the legal responsibilities of the partners. The categories based on the partners' legal responsibilities are limited liability partnership (LLP), limited partnership (LP) and general partnership (GP), and limited liability company (LLC) partnership – also known as a multi-member LLC. In the context of the United States, deciding on the partners' legal responsibilities can be crucial as, during the interviews, the U.S. companies were sometimes said to have a differing approach towards corporate law and contracts associated when compared to Finnish businesses. In short, based on the interviews, the U.S. has a different legal environment compared to the EU or Finland, and overall, their legal system is often characterised to be more complicated as each of the states has its own laws to follow, and sometimes when doing business, U.S. companies can take advantage of the situation where they possess better knowledge concerning their local legislation. An important notion made by one of the interviewees was that in Finland, for example, the law does not recognise a concept of unlimited liability, whereas in the U.S., this can sometimes be the case, and in the worst case, a notion concerning the practice can be included in the contract draft. Indeed, a Finnish company planning on forming a partnership with a U.S. company should consider all the possible options for arranging the partnership.

A limited liability partnership provides limited liability for its members. A separate entity is created in an LLP, and due to a less comprehensive legislative framework around the partnership, LLPs provide a greater degree of flexibility in arrangements between the parties involved; in limited liability partnerships, each of the parties involved is only responsible for their own misconducts or negligence. (Watson, 2019) A U.S. example of a limited liability partnership was the United Space Alliance between Lockheed Martin and Boeing which was dissolved in December 2019.

In some nations, LPs and GPs do not need a separate legal entity to be created, but in the U.S., where this holds for the latter – in most states – LPs are required to be registered with the Secretary of State. In both LPs and GPs, the collaboration between the companies involved is governed by the agreement(s) made between the parties involved (Huston, 2020). Thus, LPs and GPs can provide a great degree of flexibility between the parties involved. Where in the GPs, the parties involved are fundamentally considered to be equal, in LPs, there are two kinds of partners, and the main difference between the two comes from the liabilities concerning the business: Limited partners do not take part in activities beyond funding, and their liabilities are limited to their investments, whereas general partners have control of the organisation's actions and carry (unlimited) liability accordingly (ibid).

An LLC is one option for setting up a business entity in the U.S., yet, choosing an LLC as the business structure comes with its challenges when governmental organisations' procurements are made; an LLC can be considered a domestic company in one state, and a foreign company in every other state. This practice is due to legal reasons, and according to Internal Revenue Service (no date), each state may use different regulations concerning LLCs. Yet, while LLCs have their own limitations (and freedoms) concerning arrangements of a business partnership, they have become one of the more prevalent business models concerning partnerships in the U.S. due to LLCs' ability to provide a better level of owner's (or owners') asset protection compared to an unincorporated entity. Additionally, tax benefits are sometimes described as the biggest reason for establishing an LLC. (Crail, Haskins and Watts, 2022) While sharing features of both partnerships and corporations, LLCs are sometimes called hybrid entities.

No matter the type of business structure planned, in the context of defence industry sales and exports, joint ventures are sometimes seen as an alternative form of partnership for offset agreements, and they can be established, for example, in the context of industrial participation. In defence procurement-related joint ventures, the original equipment manufacturer (OEM) of the sold product(s) establishes a joint venture with a suitable company (or companies) from the procurer's defence industrial base. Two of the centric functions of such a joint venture are to plan and distribute workloads between the procuring nation's defence industry companies with the capabilities required for managing the planned workloads. Additionally, the joint venture can assist in technology transfer between the OEM and the local companies. (PwC, 2020)

When Finnish defence procurement-related offsets and industrial participation agreements are accounted for, Finnish companies have had long-lasting business partnerships with U.S. companies. Yet, according to an interviewee, outside of the two models of arranging partnerships, Finnish companies' success in creating partnerships with U.S. companies has been negligible. As earlier mentioned, the current driver for creating partnerships between Finnish and U.S. companies is the Finnish procurement of Lockheed Martin's F-35, and one of the secondary dataset's interviewed company representatives mentioned that they had an ongoing contract with a U.S. contractor. Nevertheless, based on the interviews, currently, while there are industrial participation-based partnerships between Finnish and U.S. defence industry companies, forming partnerships beyond earlier offsets and current industrial participation has been perceived to be challenging.

Considering partnerships and joint ventures outside of the earlier offset agreements and the current industrial participation, during one of the interviews, it was mentioned that their company had entered negotiations with a U.S. company concerning the manufacturing of their Finnish company's product in the foreign market(s). The original idea was that the Finnish-designed product would have been at least partially manufactured and distributed by the U.S. company, but the partnership did not place due to disagreements during the negotiations. Where the outcome of the contract negotiations could have been, for example, a licensing contract, details such as who would ultimately assemble the product and which company's name the products would have been delivered – and potentially marketed to third parties – under was not discussed nor disclosed. According to another interviewee, besides direct exports to foreign nations excluding the United States, their company has also performed sales in a way that has involved another company; the company has dealt with a U.S. company that has already had a contract with the DoD. In this case, the contract of the US company has been used as a so-called "funding vehicle" between the DoD and the interviewee's represented company. However, even in this case, the company has retained direct contact with the (end) customer.

Where partnerships and joint ventures with the U.S. defence industry operators are a potential option for Finnish defence companies, and them being perhaps the only feasible option for most when resource and capability limitations are considered, a noteworthy observation made from the basis of the interviews is that these modes of new market entry – especially in the context the U.S. defence market – seem to take place on the foreign operators' conditions. Hence, considering the degree of ownership and control an FDI allows, even with the high entry barriers of the U.S. defence market, the prerequisites and possibilities for this entry mode are worth estimating.

4.2.4. Foreign Direct Investments

In a foreign direct investment (FDI), an investor, be that a Finnish defence industry company makes a cross-border investment with the intention of influencing an enterprise, be that the Finnish company's new U.S. entity in a foreign market (European Commission, no date; OECD, no date). The investment can be made either by performing a greenfield investment or through a merger and acquisition (M&A). In the case of M&A, the term more often used to describe an FDI performed is brownfield investment. Despite conceptual overlaps, brownfield FDI is a broad term for any foreign direct investments that involve the acquisition of 10% or more of the total assets of a targeted foreign entity. Brownfield investments are more likely to occur in sectors which are highly regulated, rely on the land, or have established distribution channels. (Ragoussis, 2020)

Contrary to Ragoussis' (2020) findings, during the interviews, it was brought up that foreign defence companies often make FDIs by setting up offices in the U.S. to aid in their marketing and sales activities, though whether setting up an office in a foreign nation can be considered as an FDI depends on the length of a company's interest on the foreign market and goals associated with the investment. Yet, regardless of the interpretation of an FDI, during the interviews, it was mentioned that having an office in the U.S. does not automatically provide benefits in either marketing or sales, and neither does it necessarily provide equal treatment when competing for federal procurement contracts. Additionally, to question this approach, in a market where fewer firms have acquired most of the market share, the firms operating on the market can both individually and collectively profit more from collaboration than the competition (Stigler, 1952 via Cheng, 2009). When this is the case, if a foreign investor enters the market by introducing new capacity to an existing market, the investor's effort is often met with an aggressive response from firms that have established themselves in the market, and this is the response, especially from the market leaders (Yip, 1982). During the interviews, while it was mentioned that the U.S. market is layered in the sense that the smallest of procurements do not interest the largest of the U.S. defence contractors, there are enough companies in the U.S. market to ensure that even subsegments of the defence market have their established market leaders. Yet, while a brownfield investment could make more sense from the viewpoint of market competition, the acquisition of a U.S. defence company already operating in the market is rarely an option for Finnish companies as the scale between the companies is typically differing; the U.S defence companies are larger than the Finnish ones on average, and to perform a leveraged buyout of one of the smaller U.S. defence companies does not provide any guarantee of future procurement contracts from DoD or larger U.S. contractors.

Overall, due to the politics associated with defence procurements and the domestic defence industry's role in U.S. national defence, evaluating the true benefits of an FDI can be challenging. Yet, operating in the U.S. market typically requires some sort of presence in the U.S. market, which suggests that the examination of opportunities relating to partnerships and JVs could demand further attention from Finnish companies. In either case and especially in the case of greenfield or brownfield acquisition, the risk of FIRRMA (see Appendix 3) being applied when performing the FDI must be considered.

4.3. Push and Pull Marketing Strategies

In general, sales require promotional activities, and there are two ways to gain sales: 1) Exploiting a push-based marketing strategy and 2) Exploiting a pull-based marketing strategy. According to Brocatto (2010), when examined as policies, push and pull strategies refer to the ways in which information and/or products move between a consumer – be that the end-user, meaning U.S. armed forces, in this research's context – and a manufacturer. In the context of push and pull-based marketing, these terms refer to the promotional activities that are used to sell goods or services (Brocatto, 2010). During this chapter, the terms marketing and sales – and the activities associated – are sometimes used interchangeably. Yet, recognised, where sales are typically considered to be an activity performed in the context of marketing, they both aim for the same goal: to put a seller's – or a marketeer's – product in the hands of a willing buyer.

1) Exploiting push-based marketing

In a push-based promotional strategy, the company is responsible for promoting and selling its products to the end customers, and as described by Levy, Webster and Kerin (1983), the purpose of the strategy is to create (additional) profit opportunities within a marketing channel. Push-based strategies often focus on the members of a company's marketing channel(s) (Brocato, 2010). In the context of defence product sales, when the end-customer is often a governmental organisation and the end user the armed forces of the corresponding nation, there are two things that are considered to form the basis for a sales process.

On the one hand, the sales process typically starts with the user organisation being convinced of the effectiveness of the product. This phase has most to do with the technological competency of the product, implying that supply security and competitive pricing can be secondary. This suggests that defence-related procurements are product-centric, and it is, first and foremost, the product that gets purchased. Yet, this does not put supply security or principles of economics in a complimentary role for the technological competence of a product as the trinity must hold, as suggested by Taksás (2019).

On the other hand, as later discussed during the subchapter about the multi-channel marketing approach, organisations performing the sales need to be simultaneously able to influence the political field in the targeted country. In the case of many of the defence industry products, and especially in the context of weapon systems, the product must be a) safe to use and b) ethically acceptable. These can both be seen as mandatory conditions for a product to be politically supportable: When the end customer is the armed forces, political support from the targeted country's representatives is crucial. As an example, if a company aims to sell antipersonnel landmines to a specific market, it must ensure that the legislation is favourable and agendas of the political actors towards holding the law are aligned. In the context of the U.S. market, this hints that the companies should try to reach approval through personnel that are in favour of Donald Trump's decision to reverse the U.S. prohibition on landmines in 2020 (Human Rights Watch, 2020).

2) Exploiting pull-based marketing

Where in push-based strategies, companies put forth their information and/or products, in pull-based strategies, the customers are responsible for the market's "pull". Differing from push strategies, in pull-based marketing strategies, companies' marketing efforts are often aimed at the consumers instead of members of the marketing channels. (Brocatto, 2010) As described by an interviewee, in the context of defence products sales and in direct relation to pull-based marketing, in pull-based sales, the customer organisation has a clearly identified need, and they themselves lobby for the product for their own financing and similar pre-sales promoting is not necessarily required.

Indeed, there are cases where the products have made their impressions on the market(s), and the customers are pre-convinced of the products that they are planning to acquire. According to an interviewee, in these cases, the customers are aware of at least a) which companies can deliver the product, service, or system and b) what are the practical benefits of the product. In this sense, the push promotion part (1.) of the sales process has been priorly done by the product. Though, noting that the successful creation of pull marketing around a product can naturally be the result of prior effort(s) with a push marketing strategy. For example, a company's earlier push marketing activities may have been performed to gain sales in another industrial sector, yet the company has gained additionally gained a reputation as a defence products manufacturer, and hence, the pull from the market.

However, pull-based cases are extremely rare, and it was mentioned during an interview that in the context of the United States, it is beneficial for Finnish companies to understand that U.S. contractors generally do not know much about Finnish companies. Even more so, the U.S. companies do not go looking for Finnish companies: Whether the contractors would be searching for a partner for joint development or for outsourcing component production through supplier contract, in both cases, there is a lot of push towards the U.S. contractors from foreign competitors of the Finnish defence industry companies – this holds true, especially for the contracts that are tied to products with wide distribution and long-life cycles, such as the F-35 fighter jet. As described during an interview, getting the door open to the U.S. market can be easier through supplier contracts concerning other "less famous" platforms. It is also essential to remember that, for example, the more special products (such as complex high-tech products) are, in principle, developed and (within the limits of possibilities) manufactured within the United States for their crucial nature towards the U.S.

military capability. As described by another interviewee, Finland and various other smaller countries form kind of an exception to this rule because, in Finland, the government officials responsible for the procurement decisions usually turn to foreign manufacturers when these kinds of needs arise.

4.4. The Multi-Channel Marketing Approach

In marketing, with successful promotional activities, a company usually proceeds to sales and, with successful sales, enters distribution. In the phase of distribution, a company is in a situation where the goods and/or services must be delivered to the customer. Where services are characterised by *greater intangibility* (Berry, 1980) and *inseparability of production and consumption* (Parasuraman, Zeithaml and Berry, 1985), services are typically produced on-site (Jackson, 1995). Hence, services are not similarly tied to exporting procedures related to goods, and the following discussion will focus on the exports of Finnish defence industry products. Yet, as earlier discussed, defence products typically serve a longer period of time at the disposal of the end-user, and hence, support services of a product are a centric factor when procurement is considered, and potential options are evaluated. This suggests two things: 1) In the context of defence procurements relating to, for example, weapons systems, customers do not necessarily buy just products but rather offerings consisting of three major components; product, price, and service. The product can be examined through its features and benefits, whereas the price of a product is often examined through its total cost of ownership in the context of defence procurements. Services are often reviewed through their intangible benefits. (Levitt, 1981) 2) Support services are to be considered as a factor directly affecting the 'supply security' in the model of the Trinity of Defense Industry (Taksás, 2019).

In interviews with the company representatives, it was mentioned by two that firms need to start their marketing efforts by recognising customer needs and start network building amongst potential customer-base. Hence, when mapping customers' needs, scouting around is an activity that needs to be exercised by the companies. The focus of scouting is generally on expert events and other defence industry-related happenings, as told by one of the interviewees, but while these are the typical interests of scouting, sources for mapping customer needs can sometimes be found by accident and from unseen places, as told by another of the interviewees. For the people responsible for a company's marketing, there are various seminars where representatives of the end-users are present, which are ideal targets for the scouting activities, and according to an interviewee, these events typically provide a possibility of expert-level discussions. Hence, it is advised that a marketeer (or a person in an on-site marketing team) possesses a sufficient level of technical knowledge for leading conversations beyond the formalities of business talk and associated product introductions. In addition to seminars, according to an interviewee, various defence industry fairs provide an opportunity to deepen the earlier shared discussions with the potential customer base for a company that has already accumulated a reputation within the industry. Expectedly, active networking – both deepening the existing ties and forming new bonds – plays a key role in the sales of defence industry products.

Naturally, defence industry events are not the only source of information concerning customer needs and sometimes public sources can be exploited, but during an interview, it was mentioned that looking for specific needs, for example, by looking at the equipment inventories of a particular country's armed forces from public sources is often not possible. This is related to the secrecy requirements proposed by national security, and according to the same interviewee, on what becomes public information and what does not, as a rule of thumb, things that are in good order can be published. Things that are not in good order are classified as secret. Things that are in bad order, meaning the actual competence gaps, are classified as top secret. Expectedly, the actual new customer needs would be found behind the things defined as top secret. However, it should be remembered that different countries act in different ways in terms of communicating their national defence-related customer needs; Norway, for example, is very open about its capability plans, and the contents of the Norwegian capability plan are public information. The capability plan is a medium for Norway to communicate its future projects and the needs associated with these projects. According to one of the interviewees, similar documents to the Norwegian capability plans would be, and are, classified with classification level II in Finland. This suggests that geographical distance as such does not explain the differences between countries in terms of communicating customer needs; as earlier described, Norway, for example, has taken a very open approach towards communicating its defence needs to the market, whereas the Finnish approach is more conservative. The approach taken by the Finnish Armed Forces has more in common with the one taken by the United States than, for example, the one chosen by Norway. As mentioned by an interviewee:

“If something is not working, or something is not known, or some competence is lacking, then it is (considered) top secret. Then, basically, these are (sources of) new customer needs. Although, concerning this, different countries have different approaches”.

Overall, when excluding the exceptions, it can be said that finding out customer needs generally takes multiple scouting efforts and is characterised by sharing conversations with various people operating inside and/or outside of the defence industry. On whom should having these conversations be aimed, there seems to be no straightforward answer; defence procurements consist of various steps, and during each of these steps, there are often different people involved. If a company’s representative is pondering if defence products (or services) marketing activities are often about dealing with the wrong people, the following quote from one of the interviews should provide a straightforward answer:

“Start from above or below; it will be the wrong level, and the first conversation is usually always had with the wrong person”.

To support the notion made by the earlier mentioned interviewee, another interviewee’s advice for companies planning on their sales in defence markets was the following:

“Companies must find multiple conversations”.

In short, finding the right person is challenging. Partly for this reason, and according to most of the interviewees, building networks is extremely worthwhile and/or is a crucial activity for companies. Yet, concerning the challenges of networking, a made notion during interviews was that, especially with the largest of defence companies, finding the right people was very challenging, and these companies, structurally, were mentioned to be siloed. Additionally, it was said by two of the company representatives that in some cases, the contacts formed within the large foreign defence companies were based on, for example, previous collaboration with these companies; when the need to access different people from a different branch of these large foreign defence companies arose, the task of finding and contacting the then right people were considered to be extremely challenging. Though, before drawing hasty conclusions, as reminded by one of the interviewees, the network building activities and defence products marketing and sales, in general, should be practised keeping in mind that there are no universal rules for defence products sales and exports and there are no cases to be globally generalised – the differences come from between nations, progressing to companies, and proceeding from companies all the way to the product level. Nevertheless, some conclusions from prior experiences can be made, especially in the context of finding – and convincing – the right people.

"The United States and Saudi Arabia are prime examples, as the decision-making chains are very different. Every sale is different, and additionally, between different weapons systems for the same nation, the sales process is different. ... Everything is always different, depending on the country, weapons system, and business entity. "

(A citation from an interview)

Yet, whether in the U.S. or Saudi Arabia, as mentioned by two of the interviewees, having political support from the country of origin is important, and acquiring political support from the country of targeted sales and/or exports is crucial. Besides the political support that is centric – even more so if the matters are elevated to the government-to-government level – as discussed with an interviewee, especially within the organisations that are considered crucial for the success of the sales/exports, there is a need for both a top level with the possibility of influencing, for example, access to finance and an expert level with the required technological knowledge. Especially the experts within an organisation can perform in-house promotion and thus take the matter forward within their organisations. In-house promotion by technology experts is often required – referring to the requirement of technological knowledge – as a person with the ability to make decisions in his/her organisation must understand what is being done. While it is often assumed by the sellers, the persons with decision-making power do not automatically possess sufficient technical understanding concerning, for example, a product acquisition – and its benefits. In contrast, considering, for example, an end user's needs, what is truly needed can be found at the expert level, where the people might not have real influence related to, for example, budgeting and/or procurements. Yet, besides spreading straightforward technological knowledge about a product being sold, it is often necessary to influence perceptions shared amongst the buyers and end-users – such as a falsified image of contact mines wandering the seas – with the aim of positively influencing the decision-makers' perceptions of the products in question. The negative images concerning some products can often be based on incorrect information or concepts associated with earlier product analysis. An example of such a negative image is that where a contact mine is not operationally like a modern sensing mine, the (at least partially justified) negative thoughts associated with the contact mine are often shared between these two products.

Thus, overall, marketeers of defence products companies need to share conversations with various kinds of people and from various levels of different organisations. To clarify his/her task, a marketeer can categorise organisations that are typically involved in making a procurement decision into marketing channels. In this thesis, the suggested categories for the organisations are the channel of a foreign government, end-user, foreign contractor, business partners, and support organisations. There are many – and to some extent, unconventional – marketing channels that a company can – and sometimes must – use, and when dynamic capabilities are seen to refer to VRIO's "O" for an organisation (Cardeal and António, 2012), dynamic capabilities are required to adjust the company's resources and capabilities accordingly to these marketing channels' requirements.

When modelled from the basis of the information acquired from the interviews, the channels that are often required to be communicated through while maintaining the messages' focus on the goal of attaining a desired procurement agreement are the following:

(Image on next page)

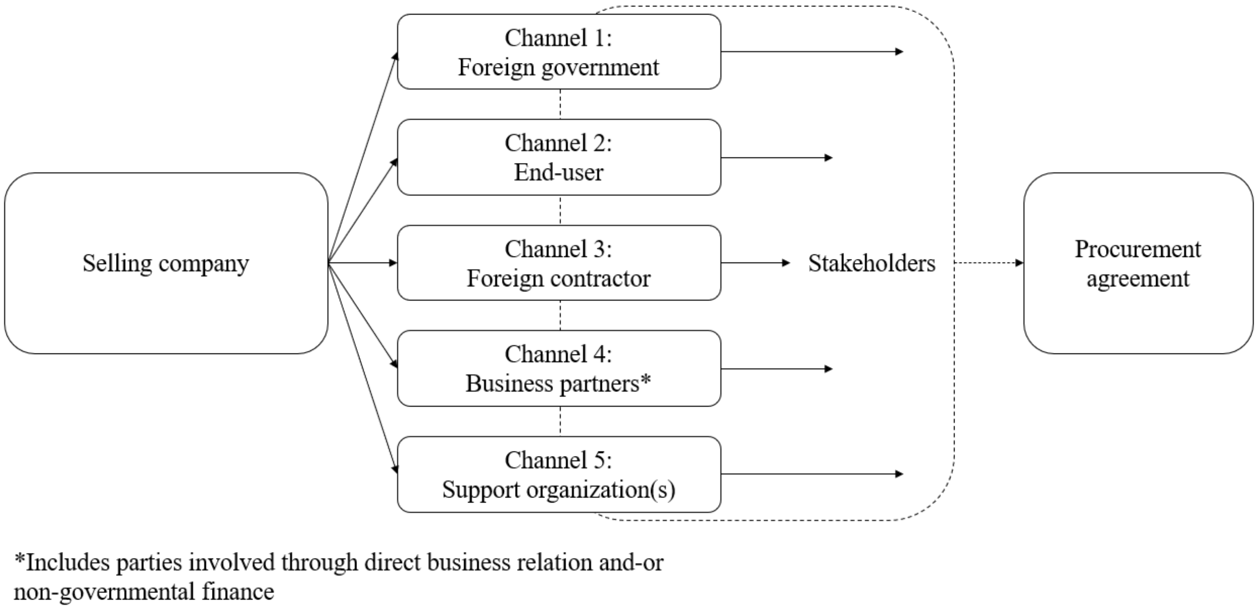

Figure 11: The suggested multi-channel marketing model (own illustration)

As the earlier paragraphs suggest, and according to an interviewee, finding one right person is typically not enough, and the seller needs to convince (at least) the following:

- An expert (Channel 2, Channel 3, Channel 4): The United States and the Not Invented Here (NIH) – convincing the experts is a challenge, and economic gain is not the only driver behind their decision(s). Naturally, not invented here is very often also supplemented with Not Sold Here (NSH).
- The end-user (Channel 2): Due to various misconceptions even amongst the representatives of the user level, image work is not only, for example, limited to politicians, but the purpose of image work is also to convince the representative council of the (potential) user.
- A person with decision-making abilities within the buyer organisation (Channel 1, Channel 2, Channel 3): People responsible for various tasks concerning some procurement, even with considerable status otherwise in the (buying) organisation, are not necessarily the ones making the procurement decision(s). Hence, it is important for the selling organisation to a) recognise and b) target and adjust their marketing accordingly.
- A person from the planning/design side (Channel 1, Channel 2, Channel 3): Processes relating to procurement are complex, yet, integrating a product – may this product represent anything from an individual component to a stand-alone weapon(s)

system – as a truly integrated part of multiple products covering production and/or weapons system is perhaps even more complex. Having a person who is capable of understanding and communicating how the integration process could be – or especially in the latter parts of the sales process should be – integrated into the acquirer's existing system(s) plays a centric role in the sales process. A person from the planning/design side is often a person with high technological competence.

- A person with access to funding from the political side (Channel 1, Channel 5): Defence product-related procurements, sometimes even made by companies, do not take place without the aid of governmental funding. Convincing a person with the ability to influence decisions relating to public funding is key.

In addition to the prior, a local partner is often required. As earlier discussed, and based on the majority of the interviews, the need for a local partner seems to hold, especially for the United States defence market.

While recognising and establishing connections with the stakeholders involved is important, getting them to push the sales process in the same desired direction is key. According to an interviewee, cooperation between the five stakeholders is facilitated by common goals such as "bang for the buck", that is, striving for the best performance at the lowest price. Thus, there is a commonly shared will amongst the stakeholders, yet their personal motives may be very different. For example, people who decide on funding may spin a thousand times the money in a day than the people working at the expert level do in the course of their work. Hence, a certain amount of money may not seem particularly significant at a certain level of the organisation – an example being the impact of one saved million in a billion. However, at the expert level, the job description of one person may be based entirely on the function in question, meaning, for example, saving a million from defence procurement costs, and as mentioned by an interviewee, the focus of that person's work may therefore be fully aimed at moving that function forward. Yet, while understanding the motives between the parties is helpful when trying to search for and motivate the right people to advance a business' cause, the challenge remains: how do you get stakeholders to want the same thing?

"They want bang for (the) buck, meaning best performance for a better price, so, there exists a commonly shared will, though, it may be that they have differing personal motives for why do they want something, and how".

(A quote from an interviewee concerning stakeholder collaboration)

As described by an interviewee, often the sellers' actions are to be directed at measures which allow the work of the individual working in the targeted organisation to be carried out, so to speak, "using the copy-paste method". In these cases, the provision of criteria for these people plays an important role. For example, the end-user must be supported by providing means and arguments that the end-user can pass on as "his/her" thoughts within his/her network of stakeholders: "This is why this is needed, this is why this is important, these are the kinds of threats we have, this is how this system compares to other systems". Proceeding on multiple fronts within the targeted organisation is important, as, on the one hand, data must be provided to the end user and/or an expert who can take the matter forward to the person making the actual procurement decision. On the other hand, a person making the procurement decision needs the corresponding information to be passed on to the party making decisions concerning the funding. These two, of course, while being a sufficient representation of the number of (key) people to convince in theory, represent in reality just a small portion of people involved in procurements, and as suggested during the interviews, people that are for one's business case are needed at all levels – and often from multiple organisations.

4.5. The Role of Buy American Act and Foreign Comparative Testing

In the U.S., policies generally limit defence procurements to domestic sources due to national security considerations. The Buy American Act (BAA) (41 U.S.C. §§ 8301-8305), which dates back to 1933, is an act that sets limitations for foreign acquisitions, and there are two conditions that are required to be present for BAA to apply: First, "the procurement must be intended for public use within the United States," Second, "the items to be procured or the materials from which they are manufactured must be present in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality". Exceptions to applying BAA can be made on a case-by-case basis if the act is inconsistent with the public interest or the domestic alternative is unreasonably costly when compared to foreign alternatives. (Fasick, 1978) The appliance of BAA starts with purchases that exceed the threshold of a micro-purchase which is often 10 000 USD or above. In addition to BAA, federal-level acts to follow are the Trade Agreements Act of 1979 (TAA) (19 U.S.C. §§ 2501-2581), which can permit a waiver from BAA to eligible products from designated nations, hence providing equal consideration for foreign products when compared to domestic options. Applying TAA requires that the financial value of a procurement exceeds a monetary threshold (for example, 183 000 USD), yet in the context of defence products, TAA is typically not an option as arms, ammunition, war materials, and items indispensable for national defence form an exception to applying the act. Additionally, Berry Amendment and "specialty metals restriction" are DoD-specific restrictions that limit DoD's options for foreign procurements. The Berry Amendment generally requires that DoD procures domestic origin products in categories such as textiles, hand and measuring tools, and stainless-steel flatware. The specialty metals restriction generally demands that all specialty metals used in, for example, aircraft, missiles, naval vehicles, tanks, automotive items, weapon systems, or ammunition are to be melted or produced in the United States. Hence, basically, all products with specialty metals should be, therefore, at least partially produced and assembled in the United States. (Carpenter and Murrill, 2022)

During the interviews, the discussion was mostly held around BAA and its effects on the procurement opportunities of DoD, but it was also discussed how there are options to bypass the BAA. Programs such as Foreign Comparative Testing (FCT) can provide foreign companies with the opportunity to introduce their products to U.S. Military Services (Beaverson, 2018). FCT is designed to connect foreign technologies to U.S. acquisition and development programs. Technologies viable for FCT should provide DoD with significant cost savings, performance enhancements and novel approaches. The FCT selection criteria come from the top down; for trying to meet the Office of the Secretary of Defense's (OSD) goals, but also from the bottom up; for servicing the needs of the operational level. (ibid) When FCT's selection criteria are examined through the model of the Trinity of Defense Industry by Taksás (2019), mission needs suggests the importance of supply security, and OSD's goals suggest the importance of economic principles, and both have the demand for technological competency. While the existence of an FCT programme can be seen to be tied with technology, when focusing back on balance between the three elements suggested by the trinity (supply security, principles of economics, and technological competence), an important notion to be made is that defence related procurements are not made by governmental agencies that operate in a vacuum; Competition between countries happens on various fronts besides technology, an example of such fronts being the distribution of resources. As earlier claimed, technological superiority appears to be key for military power, and indeed, as mentioned by two of the interviewees, a product that can be considered technologically superior to an existing domestic option must be equally (and sometimes exquisitely) available to the U.S. and, ultimately, be considered worth its asking price.

A foreign option is not automatically introduced into FCT, and while the organisation behind foreign comparative testing – the Comparative Technology Office (CTO) – does its share of scouting around for foreign alternatives, a company should actively try to approach the organisation built around the FCT programme to ensure that their product is considered amongst the alternatives. Eventually, a company needs to decide whether to approach the FCT or not and either decision shares characteristics with the push and pull marketing strategies. Despite the decision, a company planning on sales to the U.S. should know the basics of the FCT program and the organisation behind its operations (see Appendix 4).

Yet, while the dual purpose of FCT is to promote the interests of both the United States Armed Forces and the foreign defence industry companies, there are challenges relating to FCT from the companies' viewpoint. A suggested problem with FCT is associated with the current nature of modern defence arms systems; the seamless integration of components is more crucial than before as the technology has advanced, and many of the arms (systems) are interconnected. Hence, the significant performance enhancements, which are one most centric of the elements that the United States pursues with the FCT program, can be challenging to display with an individual product – or, furthermore, with a single component. While FCT is trying to connect foreign technologies with the DoD development and acquisition program, the matter is far from straightforward due to the secrecy and security requirements proposed for (and by) the companies operating within the defence arms industry. Especially in the context of foreign companies, the businesses can often rather hold on to their intellectual property than hand it over to a known-to-be-powerful governmental agency for examination and testing purposes in hopes of an uncertain procurement contract.

Additionally, approaching an organisation such as CTO can be alien as there is not a proven need for a program like FCT in Finland: As described by an interviewee, Finnish governmental procurement is quite open, and Finland is used to international tendering – even to an extent where things end up in international tendering that could be more meaningful to procure as a direct procurement from domestic operators to maintain local defence industry's competence and develop products/services. The two very different approaches towards foreign military acquisitions underline the importance of understanding the differences between the home market and the target market – a theme that was brought up during all the interviews.

4.6. About the Role of Politics

While there exists a throng of reasons for differences between the U.S. and Finnish defence markets, and arguably, while, for example, the size difference between these two nations is a factor that should not be ignored – referring to, for example, the opportunities for local manufacturing – the two nations, both being representative democracies, have a very different role in world politics. Arguably, within well-established nations, politics affect everything, and when the role of politics in the context of defence product sales is examined, a conclusion can be drawn that market economy models do not provide a sufficient picture of the surrounding business environment in the context of defence product sales. This is due to the power of politics over the defence industry, and political stability can be more important than a stable economy for the national defence industries. Especially in the nations that are key exporters globally, defence product sales are associated with foreign policy goals. As a target market, the United States is politically stable and has the world's largest GDP, which implies economic stability. Additionally, the U.S. is very self-sufficient when fulfilling national defence needs is considered.

As mentioned earlier, market economy models do not work as they are intended to in the context of the defence industry. Understandably, and according to an interviewee, there are some basic dimensions behind the operation logic of the defence market that corresponds with the models created for the examination of international business, but in general, the proposed ways that, for example, a market should operate by traditional international business models start to lose their value when the role of politics is introduced into the examination; The political dimensions found within any defence procurement can, without any market-based or economic justification, override all the selection criteria suggested by models such as the Trinity of Defence Industry. This means that a competing product can be shockingly more expensive and demonstrably significantly inferior in technological terms, yet the target of the procurement is the competing product and not, for example, the most technologically advantageous option on the market that fulfils the requirements proposed by the principles of economics. In other words, the price-performance ratio considered, the best product does not necessarily win.

The political environment of a nation is a combination of the nation’s internal and external affairs, and as suggested during the literature review concerning the PESTLE framework, it is perhaps easier to export defence products from a country that is politically stable but economically unstable than from a country that is politically unstable but economically stable. After the examination of the secondary dataset, the positioning of Finland can be found somewhere nearer the latter. This is not due to Finland being politically unstable but due to a certain level of unpredictability from the buyer’s perspective concerning the Finnish export permit procedures. Yet, political and economic stability are typically interconnected (Aisen and Veiga, 2011), and when export destinations are considered, a hypothesis made from the basis when performing this study was that without the limiting power of export permits, it would be typically easier – and expectedly more lucrative – to sell defence products to a nation with a stable economy but an unstable political environment than vice versa.

“Fundamentally, we are, arguably, in the same boat. Except that Sweden, Italy, France, especially France, sell to rather interesting countries".

(An interviewee’s thoughts on defence products sales by the members of the EU)

Finland complies with the European Union's common position 2008/944/CFSP on the export of defence equipment, yet, interpretations of the common position seem to differ between the nations that are following it. Sweden alone has managed to export to countries for which it has not been possible to export from Finland. Like Finland, Sweden does not export defence products to nations that are involved in an ongoing (or expectedly upcoming) war or that actively violate human rights. Yet, exports to these nations have happened by Sweden, and the exports have been made possible by the loopholes in Swedish export legislation. For example, exports to Saudi Arabia have not been permitted from Sweden since 2013, yet, it has been possible to make so-called sequential purchases based on old export permits, which enable new purchases to be made within the old contract frame by utilising the option of further deliveries. In addition, despite having one of the largest defence products exports per capita ratios, Sweden has managed to build and upkeep an image of a peace-promoting country and has sometimes been referred to as "The Humanitarian Superpower" (Ricknert, 2018; Stuttaford, 2015) – understandably, the global role of Sweden has been under scrutiny (Ricknert, 2018; Simons and Manoilo, 2019). Where in Sweden, Swedish arms exports are sometimes seen to contradict the nation's "feminist foreign policy" (Ricknert, 2018), in Finland, according to two of the interviewees, Finnish arms exports are often seen as a topic not to be conversated about and a topic for foreign politics to neglect. Naturally, considering the nations that Finland has decided not to export defence products to, one question to ask is why do exports to, for example, Saudi Arabia or Israel take place from other nations?

"In defence-related matters, they (political aspects) are unavoidably introduced, and no matter whether it is seen in a home country, they materialise with the export permits".

(A quote from an interviewee concerning the role of politics)

Besides the money, according to an interviewee, many of the nations operating actively with exports in the defence market – for example, France, Israel, United Kingdom, and the United States – have genuine strategic weapons systems to offer to their customers, and in these countries, the defence industry is a strong and integral part of achieving long-term strategic foreign policy goals. The systems engage the buyer countries to serve the political agendas of the selling countries, and Israel can be seen as a good example of mastering this practice. For example, as discussed with an interviewee, Israel has a significant foothold in Finland's defence procurements, meaning that Finland has a wide range of Israeli-origin defence products in its defence forces' use. and partially hence, these products – and the ties that must be kept in good order due to the length of the time in service of these products – contribute towards Finland's incentives to criticise Israel's activities in the world. Naturally, the United States could be held as another example of similar action, but when compared to various other alternatives, the country is quite open about its agenda by, for example, publishing its third offset strategy concerning some of the ultimate goals of FMS (Hillner, 2019). This implies that regardless of some of the arms transfers made by the U.S. being seen as unacceptable from the viewpoint of Finnish foreign politics, the United States is transparent concerning its motives and actions.

While exporting defence products seems to be easier to nations that are politically unstable but economically stable – and even if Finland would possess the capabilities and scale required to provide products to fulfil the U.S. national defence needs – the United States is far from the ideal target market in this sense. Indeed, the U.S. domestic politics can seem turbulent at times from a foreigner's perspective, but the fundamentals in their foreign politics have been stable when considering the context of defence products exports and imports, and few to no changes are to be expected: the U.S. sells, and other nations buy. Yet, a notion to be made is that foreign politics are often built on the basis of domestic politics. Domestic politics happen on state-level in the U.S., and each individual state has their own jurisdiction. Jurisdictions of these states need to have their laws aligned with the U.S. federal law, which allows Congress to enact statutes for limited purposes, and statutes give the right to executive branch offices to create regulations – such as the FAR and DARS. Yet, while the states operate under regulations supervised by the DoD, it does not mean that states would be short of power concerning decision-making – even when it comes to national-level defence procurements. As discussed with one of the interviewees, state-level support is crucial for the politicians in Congress and state-level support is also reflected in the U.S.' alignment towards imports of defence materiel; no outside distractions are desired for the domestic market since the palette is designed to form an entity. Support for the domestic defence industry is strong and planted deep within the societal and institutional structures in the United States. As described by an interviewee, these characteristics of the U.S. market and the politics associated are to be considered "mild" sales barriers for foreign companies.

Continuing from sales barriers, when the Buy American Act was discussed during one of the interviews, it was mentioned that it comes across in both smaller and larger projects. In smaller projects, unless there are clear and significant benefits, both financial and performance related, the law obliges to buy domestic production. In large acquisitions, according to the same interviewee, the final procurement decisions are made by Congress, which basically means that local manufacturing should be performed in 26 states in order to gain support for an import operation instead of Congress choosing to favour strictly domestic production – anything less could mean a lost vote in Congress. Hence, largely due to domestic politics, it was mentioned that a company must have a strong presence in the U.S. market to get considered as an option in the larger procurements. A similar theme as the local presence due to domestic politics, *the need to look local*, was also discussed with another interviewee. The need to look local means that the company in question – if not U.S.

origin – must at least look like one and preferably have the earlier mentioned strong presence in the state(s) that it operates in. The need to look local implies that anything which brings a company closer to the U.S., meaning, for example, a partnership or a joint venture with a U.S.-based company, aids in the localisation effort, which in turn suggests that a company planning on U.S. market entry without the help of offset agreements should at least consider using local salespersons in their marketing activities. Yet, it must be remembered that having a local presence through an external representative does not affect how a foreign entity is treated in the context of defence procurements from the viewpoint of U.S. regulation. Hence, to summarise the requirements set by U.S. domestic politics, Finnish companies need to be committed to the localisation effort – and this concerns even the contractual arrangements-based partnerships.

4.7. Experiences and Expectations from the Market

According to experiences derived from the market, eventually, defence product sales are built trust, but trust and how to build it can have different meanings and associate differing actions across cultures. One approach towards the process of building trust is to categorise trust according to three categories and plan trust-building activities accordingly. Yet, regardless of whether the trust is being evoked or not, in democratic Western nations, there is a lot of verification done around the procurement process, which is to ensure that the procurement processes are just. Though, especially on a state level, individual persons may have noticeably more power over procurement decisions than in Finland. Hence, the decision-making power can sometimes be centralised in smaller – yet considerably large on a Finnish scale – U.S. procurements. Still, practising dubious activities such as budget gaming is not an option in the U.S., but a question to consider is if the basis – referring to the use of cost-plus contracts in defence procurements – on which defence products are priced overseas is justified. This can be a reason for concern, especially in the context of FMS. Additionally, as discussed during the interviews, not all companies are keen on entering the U.S. defence market for various reasons, such as business relationships with customers from other foreign nations, the potential appliance of ITAR, and the perceptions made on the limited profitability of the market. Reasons can be thought of to the point of frustration, and sometimes Finnish defence companies appear to lack the motivation towards the U.S. market entry process. Yet, the reference value of a DoD's contract is unmatched and sometimes enough of a motivator for the companies. Nevertheless, concerning NATO, the expectations of how the now-ratified membership of Finland will change business opportunities of Finnish defence industry companies in the challenging U.S. market remain limited, and this is partially due to the Finnish export permit policies. In NATO, concerning sales within the alliance and between its members, the importance of certificates is seen to be elaborated, and the role of security clearances – and options for attaining these clearances – are also discussed. If and when procurements are made, they come with varying levels of product stickiness, and the stickiness concerning defence procurements affects both the seller and the buyer. Yet, a notion to be made is that defence procurements can differ from each other drastically, as purchasing standardised ammunition is far from shopping for entire modern weapons systems. Eventually, despite the regulation around FMS, not all buyers face the same price.

As mentioned by an interviewee, selling defence products is built on trust. Yet, building trust is a complicated matter, and when trust is considered, there is variation across cultures, especially in the context of business-related negotiations. While it is typically considered in Western cultures that people are trustworthy until proven otherwise, the ways and to what extent the trust is being tested may vary across cultures. (Brett and Mitchell, 2020) It was mentioned during two of the interviews that in the U.S., things are often agreed upon, but nothing is certain until there is a written contract crafted around what has been agreed upon. Depending on the company, this may differ from their "Finnish style" of doing business, where one's word is often considered enough for a proof of intent, sometimes even of commitment, and contracts are considered as the last resort if things ever get complicated between the business parties. Whether this is due to the earlier mentioned fundamental differences between the common law and civil law systems was not discussed with the interviewees. Yet, conclusions can be drawn from the basis of the perception that, in general, common law sets different requirements towards, for example, contracts than civil law to provide the same level of legislation-based protection.

Regardless of the expectations towards the contents included in a written contract, according to an interviewee, while trust is key, building trust is a complicated process, and trust can be divided into three categories; political trust, technology trust, and trust built from the basis of the "face". When discussed of the three categories, it was said that where political trust is often externalised to third parties, especially as the smaller companies have little control over foreign politics of nations, it is nevertheless important for even the smallest of the companies to establish connections to people who have established themselves – or have connections – in local politics. This is due to the need for a foreign company to be politically acceptable in the targeted market for the company to be acknowledged in the context of competition concerning governmental organisations' procurements. As the name implies, technology trust is based on the perceived qualities of the technology that a company or its product(s) offer. When compared to political trust, building technology trust is more straightforward as its eventually a result of investments towards a company's R&D functions. Typically, to build a business case concerning foreign market entry, a company should have a sufficient level of technological competency to evoke technology trust in the targeted market. Expectedly, efforts such as product introductions to potential clients help in building technology trust. The trust based on "face" is connected to the earlier mentioned need to look local in the U.S. and should be approached similarly; a company and its representatives must have an active and established presence in the U.S. to be trusted upon. To overcome some of the challenges concerning trust built from the basis of the face, companies can (and should) consider hiring local agents to aid them in their face-building activities, yet, as mentioned by the interviewee, building face in the face foreign market typically takes time and is perhaps the most challenging of the three categories to develop. While the categorisation of trust can be helpful for understanding the complexity of the phenomenon of trust and how to approach building it, as described by the interviewee, the three categories should not be considered separate fields to work on. This is due to the perception made that progress (or backlashes) in one is sometimes easily transmitted into one or both of the others. As the political trust is partially externalised to third parties, the political aspect concerning defence product sales has an effect on the process of a company building trust in the foreign market. Ultimately, in the task of building trust in a foreign market, what a company is up against is about understanding and overcoming the disadvantages that Hymer (1960) has recognised, and of which Srilata Zaheer (1995) has developed a concept of – the Liability of Foreignness; the disadvantages and additional costs of being an operator from a foreign nation.

Yet, while defence products sales are based on trust, according to another interviewee, in democratic Western countries, there is a lot of verification activity placed within the procurement processes: There exist strong and powerful routines for procurement and documents with evidence must be very numerous to justify procurement decisions – especially in the case of foreign origin products. People working with procurements have great professional pride, and they have had education concerning the process. For example, a four-year course is required in the United States for a government official to be able to make defence procurements. Undoubtedly, from Finns' perspective, this can seem strange. On a practical level, as mentioned by the same interviewee, the procurement process in the U.S. should work as intended, and, for example, deviations from the process are to be transferred to the political side of things. While domestic products get differing treatment compared to foreign alternatives due to Buy American Act, it was discussed during an interview that, for example, budget gaming as such is not an option in the United States for local companies as various control mechanisms are strongly implemented over the procurement process – the implementation of tight control being presumably encouraged by several examples of the history of previous procurements and outright abuses of earlier defence budgets. Simply put, especially from the viewpoint of foreign product manufacturers, the product(s) cannot (nor should) be overpriced to serve the potential end-customers' dubious starting points. Yet, during another interview, it was mentioned that in the United States, an individual person might have noticeably more control over a procurement than in, for example, Finland. An army general in Finland has considerably less control over a procurement than a U.S. one has, and in Finland, after the Defence Forces Logistics Command has reached a conclusion in their comparison concerning product alternatives, the decision – if it has been earlier ratified by the government – is often cemented, meaning that no large changes are to be expected in the details of a procurement. Naturally, while the more centralised control over procurements might concern mostly smaller procurements, the scale of the countries and the armed forces associated do, in fact, contribute towards the perception of what is a "small" procurement, reminding of the differences in scale between the two nations' armed forces and defence industries.

Naturally, one of the questions relating to opportunities for budget gaming is the driver behind the earlier wave of mergers of U.S. defence industry companies: Is there a chance that the common domestic price-level of defence products has been bloated, to begin with, and BAA in combination with cost-plus contracts has safeguarded perhaps a better than (global) market profitability for the U.S. defence companies? Meaning, that while an earlier study by Mantin and Tishler (2004) shows that the period of mergers has not affected the prices of the products, it remains unclear if the companies operating within the U.S. defence industry have been enjoying better profits than an openly competed global market would have provided. Though, as later will be mentioned in this chapter, things are rarely as black-and-white in the context of defence product sales and procurements as one would perhaps prefer to think, and the following was said by an interviewee concerning the role of large contractors in the United States:

"The involvement of these companies goes so deep in the USG and DoD in terms of collaboration that, in some sense, the cost-plus (system) is somewhat justified as 95% of the personnel (in these companies) are American – American taxpayers".

From a foreign company's perspective, as far as the profitability of the U.S. market is concerned, it is ultimately up to the seller to decide the profit margins of their products, and the cost structure is generally not requested to be opened by the buyer. However, as earlier indicated, the DoD has opted for cost-plus pricing in certain of its acquisitions. In more detail, cost-plus contracts are contracts in which the company provides the buyer with a detailed explanation of the costs associated with the manufacture of an individual product, and a certain pre-agreed fixed percentage is added to these costs – that is, the unit price of the product – to enable the company to make a profit from the business. As mentioned by one of the interviewees, the case for the cost-plus is often transparency. Yet, as discussed with another interviewee, although the obligation to open the cost structure combined with the procurement model contributes to the transparency of pricing, on the one hand, cost-plus pricing is often associated with the transfer of the associated risks to the acquirer as negative side effects and, on the other hand, a low incentive to seek cost savings from the companies that have been included in the agreement. During three of the interviews, the impact of cost-plus contracts on innovation has also been considered, especially in complex products manufactured by a very limited number of companies and products with very high barriers to entry into the market. In short, in cost-plus contracts-related scenarios structure of the contracts can either boost or limit companies' incentives towards radical innovations – the opinions shared during the interviews tilting towards the latter.

With the cost-plus contracts, another thing to consider which relates to the pricing of the products is that, as demonstrated by earlier research (Rendon and Rendon, 2016) and discussed during one of the interviews, the U.S. defence market has had its cases of outright corruption, and defence budgets have been spent on projects that have been mainly beneficial for the people working on them. Though, as the industry is first and foremost operating in the domestic market, the question to answer is if the corruption is harmful, and if so, to what extent and to whom the most. Whatever the answer would be, things indeed get complicated when foreign markets are involved in the setting. According to an interviewee, while the profitability of FMS can be, and typically is, lower for U.S. companies, there exists a reason for the companies to get involved:

"U.S. companies get involved in FMS because for them it is riskless".

In FMS, the contracts inked around the sales and procurements provide protection for the manufacturers against fluctuations in material costs and exchange rates – as seen in the context of the Finnish F-35 procurement (Kukkonen, 2022; Pulliainen, 2022; Vilmusenaho, 2022) – and, as mentioned by two of the interviewees, foreign military sales are performed to advance U.S. foreign policy goals; even without the flexible contracts concerning the manufacturing costs, depending on the results, the latter can compensate for some shorter-term financial losses. Globally, not all nations are sold U.S. defence products, and not all nations are keen on buying them, but the same applies vice versa with some of the defence companies. If including the challenges of an entry process to the U.S. market, and when considering why any company would want to export anything to the United States, one should remember that there are two sides to the story, on the upside, the size of the market and the value of the reference are two good motivators. On the downside, there can be equally good motivators for companies not to market their products to the United States. As discussed with an interviewee, in many cases, exporting to the United States may stigmatise the company and limit its ability to operate in other markets – especially if the company has customers outside NATO countries (for example, the Middle East or Latin America). Attitude is dependent on what the company does; for example, in the case of the provision of information security services, which are often associated with at least a risk of some kind of backdoor, business activities with the United States may undermine the credibility of the business activities elsewhere.

As told by an interviewee, another thing that companies should consider when weighing the decision to enter, for example, joint development or joint business agreement with a U.S. company, is that a defence product which is being developed or manufactured in the United States can be treated according to the local legislation. This can potentially entangle the developed product – or possibly the entire product family – under the International Traffic in Arms Regulations (ITAR). ITAR is a U.S. regulatory regime whose purpose is to control and – when necessary – restrict the export of military-related products and technologies for U.S. national security and to promote the objectives of U.S. foreign policy. In practice, when a product goes under ITAR, it means that the export of the product is completely under U.S. export control – in addition to the domestic export restrictions. A procedure as such, meaning that when decision-making power is transferred to U.S. officials, may bring its own limitations or at least influence the company's ability to act according to its own planning.

Besides the chance of ITAR being applied, according to two of the interviewees, a production commitment requirement and the readiness commitment requirements, as well as the intermediate sales commitments, may be part of the requirements of the joint business, all of which may have a significant (negative) impact on the company's operations and other trade relations. Also, being at "arms reach" is typically a requirement in U.S. contracts, and, as mentioned by an interviewee, what companies are rarely aware of is that when a product is sold to a government organisation for a particular unit price in one state, it is also required to be sold at a corresponding price in the other states – this being the case if sales to other states are made. While the requirement towards one price may sound strange, the requirement follows similar logic placed in FMS, where the law of one price applies. Additionally, according to an interviewee, if a company is to enter into an agreement with the United States that includes a right of pre-emption and, for example, underwriting of a production reserve agreement combined with this – and although the company is often compensated financially for either of these – the company is easily placed in a situation where, for example, purchasing offers from domestic customers have to be refused especially because of the right of pre-emption. Yet, keeping in mind that some of the prior points are based on possible scenarios told by the two interviewees, and hence, do not propose exact limitations for doing business in the United States.

The requirements towards collaborating with a U.S. defence market operator can sometimes concern an organisation's structure. As discussed with a company representative from an organisation that was operating under a contract from a U.S. contractor, companies dealing with the U.S. may require a reorganisation of their existing organisation structure according to the needs of the (end) customer. For example, a certain structure related to the (information) security of operations can be required – this may, in practice, require the company to set up a new department that is entirely separate from its main business unit. Yet, as described by the interviewee, such proceedings are often compensated for, suggesting that a buying agreement from a U.S. entity can be the chance for a 'make-or-break' – this being especially the case for the smaller companies.

In addition to the requirements concerning a company's operations and structure, it was discussed during the two of the interviews that there could exist motivational challenges within Finnish companies that are partially related to priorly mentioned two. In these Finnish companies, there can be motivational challenges that are associated with the U.S. market entry as many of these companies are aware of the challenges relating to U.S. market penetration, and overall, when Finnish companies are considered, expectedly, it can be extremely frustrating for the companies to lose in tendering due to reasons that are found outside of the companies' control. This naturally can affect the companies' willingness to tie their resources into U.S. market sales – as mentioned during one of the interviews, there are various other markets that are more lucrative for a company when the focus of comparison is put on financials. Yet, also mentioned during the same interview was that when the U.S. – meaning DoD or one of the local companies operating within the industry – is considered, no other reference has a similar weight in a company's list of references. This naturally only holds true if the company is allowed to use the U.S. among its references. Still, as discussed earlier and mentioned by an interviewee, not all countries where a Finnish company can export its defence products consider the reference from the U.S. a positive thing. Keeping in mind that eventually, it is about business decisions for the Finnish companies operating within the defence industry, and ultimately, these companies need to consider which are the most lucrative markets with the best long-term benefits for them to operate in.

Now, with Finland in NATO, expectedly, according to shared conversations with the interviewees that were held before the ratification of Finland's NATO membership, the importance of NATO for procurements from Finland and the significance of the new certificates that opened for Finland as the country got ratified, as well as the procurements of small member states of NATO now potentially being partially direct to Finland – procurements from which Finland had previously been automatically excluded – were some of the expectations that were associated with Finland's decision to apply for NATO membership. Yet, when it was discussed whether the impact of (then potential) now ratified NATO membership was visible in the practical work of Finnish companies in the defence industry, the conclusions from the answers were the following: In short, no. For example, one of the company representatives mentioned that their company has already had NATO-coded products for a longer time, and Finland's proximity to NATO has been visible for a long time. Expectations within the companies were – and are – mainly focused on certain new market opportunities, such as procurements between the smaller member nations. Summarising, based on the opinions captured from the interviewees, it is not worth setting oversized expectations regarding membership, even though Finland's export opportunities will presumably improve – although not radically.

Yet, as discussed with an interviewee, one of the biggest changes related to NATO membership can be the improved predictability of Finland's export controls – especially from the customer perspective – and the clarification of the general defence products export policy. In the prior political environment and related arrangements, Finland's decision-making policy has "lived", so to speak, on average in periods of four years, that is, every government term. An example of the clarification of the general policy is the now-relevant need presented by NATO to review the export policy related to products of the defence industry, for example, with Turkey as the destination country for exports. Prior to joining NATO, there has been a widely shared negative attitude towards exports to Turkey for the past few years, and recognising, with the current turbulence in the political environment of Turkey around its presidential elections, and hence, where the exports to Turkey can still be seen as a matter of debate, the fact is that the two nations – Finland and Turkey – are now associated through a military alliance. Therefore, according to an interviewee, based on the alliance, the nation should be treated as a potential defence products trade partner rather than as a threat to (world) peace or human rights. As suggested by the same interviewee, if, for example, the export policy towards one of NATO's member nations changes, the treatment of other NATO members must also be made equal by eliminating non-alignments, and priorly, there have been no obstacles for exports to other NATO countries. Additionally, export policy to non-NATO countries should also be made equal with other member nations in the military alliance – there are, as earlier mentioned, many nations to which France, for example, does not have the same kind of problems associated with the grating of export permits as Finland does.

"Quite many people have an opinion concerning a situation where one is pinned with their comrade-in-arms in a foxhole, and the comrade runs out of ammunition - is one supposed to pass the comrade ammunition or not".

(A citation from an interviewee relating to the differing export policies)

To summarise the interviewee's statement concerning the change in the policy relating to export permits, the importance of harmonising export practices and policies can also be examined through development cooperation. For example, if Finland were to engage in development cooperation with an ally, for example, from the EU area, where Finnish companies would manufacture components as part of the product to be developed, to mitigate risk, the development cooperation partner country would not want to include in the cooperation an additional risk that the Finnish export licensing practice would prevent the end-product from being exported to one of its potential export destinations. In short, the expectations of harmonising export licensing practices are at least equivalent to the effects of actual NATO membership. The countries where the export policy has been similar to a development cooperation partner country have positioned themselves ahead of Finland when choosing a partner, as the security of supply is one of the three critical elements behind the product and/or service, as suggested by Taksás (2019).

Another topic covered with an interviewee – and relating to the export permit practices and matters concerning the process of building trust – was that it is also unfortunate that the buyer(s) have a very long memory when it comes to matters relating to previous procurements. For example, if an export has been refused by a component supplier or additional deliveries have been refused, these things are often remembered for decades – further underlining the importance of supply security. A company does not have the opportunity to directly influence the buyer's memory of the matters in question, and in practice, for example, a change of government does not in itself remedy the situation to be favourable to the exporting company – even if the export policy would change with the change of government – this referring to the importance of the political support mentioned earlier. Though, as suggested by the interviewee, even an apology made by a (new) prime minister, for example, of the incorrectness of the previous policy and the promise of the permanence of the future policy would not guarantee the situation to get corrected – underlining the statement made by another interviewee that exports of the defence industry are described as a trade of trust, and as earlier mentioned, building trust takes time and often requires long-term and determined work. Trust is, as sometimes said, slow to build and quick to destroy, and as mentioned by an interviewee:

"Unfortunately, the buyer has a very long memory concerning these things. If once exporting has been denied, or if in the middle of exporting, the buyer is not able to get

additional deliveries of something that they already have in use, they will remember it for decades".

Though, matters of trust are two-sided, and as discussed earlier, there is an element of stickiness in the defence procurements. Yet, the stickiness associated with the defence procurements has a dual nature. While the products sold do propose the customer with strong vendor lock-in and typically give the seller considerable control over the customer when the future of the procurement agreement is considered, it also complicates the sales process in various ways. When the sellers' costs towards the product stickiness are being considered, it was said by an interviewee that it affects the sales process drastically, especially in articles with longer lifespans, as convincing the buyer about the procurement decision's safety takes considerable effort from the seller and accumulates costs over time. As mentioned by the same interviewee, the buyer must be convinced that the product will be supported throughout its time in service and that the company responsible for the product remains both a politically and ethically acceptable partner – in hindsight, a real-world example of acquisition gone wrong is the Finnish Defence Forces' procurement of Soviet origin weaponry and the breakdown of Soviet Union in the early 90s. Yet, as expected, defence product sales are not solely about politics and national security but also about profitability, and indeed, as in B2B and B2C sales, the same rule holds in B2G sales: Without successful upselling from a business to its customer, the value of the business relationship can (and will) go under the scrutiny of the business acting as the seller, as told by the interviewee. From the viewpoint of the companies, customer relationships that are costly to maintain – especially if the estimated value of the political aspect is included in the calculations – are to be let go of.

While the state of competition in a defence market is not directly related to trust, as earlier discussed, less competition in a defence market industrial base can have various negative effects towards the quality of products. To question the approach taken on the localised operation of well-barriers U.S. defence market and its associated industry, according to an interviewee, as an example, the U.S. has been incompetent against its European peers in building battleships. This has been a result of various actions that have been taken to meet the changes in the requirements national protect the local industry against foreign competition. This is a view mostly supported by research concerning the U.S. Integrated Deepwater System (IDS) (O'Rourke, 2012; Brown, Potoski and Van Slyke, 2008), which is a well-known example of how good intentions can have bad outcomes in a constant changing environment. Naturally, when the ships are not planned to be exported to foreign countries, this is not a direct concern to, for example, a Finnish taxpayer, but, indeed, when considering that a far worse and more expensive, at least when considered as an individual weapons system, domestic product overrides the better foreign alternative, this is hardly the best "bang for the buck" for the U.S. taxpayers' money. Where things start to get complicated is that to keep things in balance, meaning avoiding inefficient spending and/or eventually losing the military capability to foreign powers, similar to, for example, its Finnish counterpart, and of the more peaceful solutions available, the U.S. defence industry also needs exports for the industry remain viable. Hence, eventually, potential inefficiencies in the United States defence industry's operations will be part of Finnish taxpayers' worries.

When maximising the utility of the Finnish taxpayers is concerned, a worrying example of a NATO-related external pressuring attempt towards further increasing Finnish defence spending is Richard Dannatt's comment on Finland bringing mostly moral support to the union (Mäkilä, 2023). Yet, as earlier indicated, increasing (Finnish) military spending is not necessarily a problem itself; the problem lies within what the buyer gets, and if the quality of products procured is questionable, from whom to purchase them? In either case, the Finnish defence industry – and its exports as the industry needs exports to be viable – play a centric part in the answer(s). For the requirement concerning Finnish defence industry exports, it is somewhat irrelevant whether the exports are handled through, for example, industrial participation-related offsets or not. Yet, as told by two of the interviewees, from the viewpoint of national security, this might not be the case.

4.7.1. Current State of the Industries

From the viewpoint of both business opportunities and national security, understanding the current state of the defence industries in Finland and the United States can be considered crucial. This chapter has been written based on the earlier literature and experts interviewed, and the contents of this chapter are divided into four categories, of which three are according to the Trinity of Defense Industry (Taksás, 2019). First, the technological competency is discussed, and then the principles of economics are examined, and after that, experiences and expectations concerning supply security are under scrutiny. Finally, other requirements concerning the defence industry and how Finnish companies within it meet these requirements are discussed.

Technological competency

According to the interviewees, Finnish defence products, in general, are competitive in the international markets, and there are some products/product categories that some Finnish companies have had unrivalled options to offer. Yet, while there have been successes, there have also been failures, and as described by an interviewee, not all defence products have succeeded in meeting the end users' expectations when they have been evaluated by the experts:

"With this project, it has risen to attention that there are articles that we have thought we are world-class leaders in. ... When experts have been introduced that have seen similar articles in action, they have been not impressed on any level, quite the contrary, they have drafted lists of things that need to be done to raise these articles to the minimum level".

Why the falling behind in technological competency has happened with certain products/product categories was left without a definitive answer during the interviews. However, two suggestions were provided by two of the interviewees. These suggestions were the relatively low level of procurements from Finnish defence companies by the Finnish Defence Forces as procurements have been constantly made from the international defence markets, and the other was the exploiting of offsets agreements – both of which arguably concern the structure of the Finnish defence industry.

The structure of the Finnish defence industry has changed during its history, and as discussed during one of the interviews, part of the Finnish defence industry R&D has been externalised to foreign countries through earlier (countertrade) offsets and current industrial participation. Where claiming that the entire Finnish defence industry would be caught in an "offset loop" due to being submissive to a foreign offset strategy would be misleading, based on the interviews, it holds true that some Finnish companies (still) benefit from offset arrangements more than others. However, despite the imbalance between the companies, during the interviews with industry experts, it was brought up frequently that the Finnish government does not demand the use of offsets through industrial participation as often as the representatives of various companies within the industry would wish. The shared opinion amongst the companies for this is, according to an interviewee, that the low eagerness towards demanding industrial participation is due to that 1) the EU has determined agenda towards tightening the control over offset agreements, and 2) Costs relating to offsets agreements are deduced from the Finnish Armed Forces defence budget. Yet, in the context of U.S. exports, offsets play an important part, and indeed, it seems to be the case that the Finnish defence industry exports to the U.S. are tied to procurements made from the U.S.-based contractors, again suggesting that the third U.S. offset strategy works as intended.

"It is futile to expect that the American comes into the table with their money bag – it is the opposite".

(A citation from one of the interviewees)

Reduced to basics, to do business with the U.S. requires one to do business with the U.S., and when the EU's agenda towards reducing the use of offsets in defence products trade is considered, as a small member nation, there can be little that Finland can do to affect it. However, as discussed during one of the interviews, a second problem behind the low level of interest towards the exploitation of offsets in Finnish defence procurements is that in the current system, the offsets are deducted from the Finnish army's defence budget. This removes the incentives for active demand of industrial participation in the context of Finnish defence procurements as this is not (at least directly) beneficial for the end-user. If the policy of not demanding industrial participation is undesirable for all the parties involved is another topic of debate, as some studies have shown that offsets have typically not lived up to the expectations of the nations that have been responsible for the procurement(s) (Brauer and Dunne, 2004). Also recognised that similar to the U.S., large multinational defence companies operating within the European market should not gain excessive market power from the European defence market as this is not beneficial for the industry as a whole and comes with its own regional security concerns. Similarly – as noted by the DoD (2022) – it has in the U.S.

Yet, as discussed with an interviewee, exploitation of offsets (or industrial participation) is not straightforward, as some Finnish companies have gotten stuck in their development partially due to offsets. In the companies in question, there is – or has been – a negative habit of cutting on development after technologies have been transferred in relation to industrial participation-related offsets. This has resulted in a phenomenon of an “offset loop” where these companies move in leaps when technological advancement is concerned, and as described by an interviewee relating to the use of offsets:

"In certain projects, we have been left at the technology stage that prior projects have introduced".

For a while, a company such as the suggested is at the forefront of technology’s edge due to access to foreign technologies acquired, but where other companies – typically from foreign nations – move with the technology’s edge due to their constant investments to research and development, product(s) of a company such as suggested starts to lose in technology competence with time, and as mentioned by an interviewee, this is the case until the company is included in the next set of offsets from industrial participation. While this allows the company to maintain a technology-based advantage when compared to, for example, companies operating in developing nations, it does not guarantee that the company’s products would be fit for competition in the Western defence market when medium- to long-term competition is considered.

"The problem is that these companies do not continue investing (in R&D). They remain there, and then comes the next procurement after 20 years, and that is when they leap to the next level (of technology). "

(A quote from an interviewee)

Remaining stagnant in a product-centric market where a company’s success can be dependent on its positioning at the technological forefront can be harmful to a company, as described by an interviewee, and if a company’s product is not technologically competitive, it is eventually seen in the company’s sales. A procurer from developed Western nations typically has access to most of the products offered in the global defence market even when foreign politics are considered, and in these markets especially concerning more complex products, price is important but not necessarily a key decision-making factor. When considering a procurement’s impact factor, nothing guarantees that replacing outdated products with less outdated ones meets the end-users requirements. In turn, selling defence products to developing nations is a business where a seller can easily find themself in a situation where the export permit is not granted by their local government or when, for example, belonging to the European Community, the exporting is against the shared common position towards defence product exports.

As challenging as the situation may be within the defence companies facing the offset loop, as mentioned by an interviewee, bang for the buck is what motivates people responsible for the procurements, and in most cases, defence products do not only need to be technologically competitive but also need to be available for a reasonable price especially when the price to performance ratio is considered. Hence, even in the case of products from the bleeding edge of technology, Finnish defence products' positioning from the basis of the principles of economics is a topic worth examining.

Principles of economics

"When manufacturing costs are considered, Finland is competitive with its European peers, and on par with Norway – if not cheaper".

(A quote from an interviewee)

During the interviews, one of the themes often discussed was the pricing of products, and according to an interviewee, globally, Finland is not known for having the cheapest labour available. However, as also mentioned during the interviews, in the context of designing and manufacturing defence products, Finland was said to be competitive amongst its Nordic and European peers, and when compared to Norway, Finland was considered to be the cheaper of the two options from the viewpoint of a foreign buyer. In this sense, requirements proposed by the principles of economics in the Trinity of Defense Industry (Taksás, 2019) should be met by Finnish defence companies. The notion of Finnish products' price competitiveness was made in the context of tangible products that involve both material and manufacturing costs. In the case of software, as discussed during another interview, the case can be different. In fact, the company representative mentioned that they were required to increase the price of their product to be a sensibly priced option in the foreign market. The decision was made due to the requirement of one price between individual states' governmental organisations as buyers. As earlier indicated in this study, this requirement is like the one proposed in the context of U.S. Foreign Military Sales (FMS). Yet, even in FMS, there is room for negotiation, and considering the earlier, as there are a lot of politics involved within defence arms procurements and sales, the end-destination of the product is likely to affect the price of the product. According to an interviewee, when the acquisition price of Finland's F-35s is being considered, the more one digs deeper into the subject, the cheaper they begin to seem. This seems to support the view that when the paper prices of FMS are being considered, the buyers face the same "sticker prices", but when the externalities of the acquisitions are internalised, the acquisition prices can vary drastically. Also, while the law states the price for the FMS to be the same across the buying countries – which must be the same or higher than the price paid by the DoD – there is no single approach concerning controlling the contents of the industrial participation or offsets related.

Having no uniform approach towards industrial participation offsets can be seen as a risk as it can include an incentive for a nation to keep the companies allowed to enter either direct or indirect industrial participation artificially limited by keeping the financial amount of industrial participation demanded closely tied to the estimated production capabilities of these companies – this being especially a risk from the perspective of (open) competitive markets when few state-owned companies with strong political support are dominating a nation's domestic defence industry. Naturally, companies that are favoured in industrial participation gain various forms of competitive advantage over their peers, one of the most centric ones being the technological competencies typically acquired. Also worth noting is that in the context of direct or indirect industrial participation, while, for example, the U.S. is unlikely to buy above the market price, overseeing prices paid within the agreements is hard as the contents of the industrial participation are to remain hidden from "outsiders".

From the basis of the practice with FMS and offsets associated, and as discussed during an interview, companies marketing (tangible and/or intangible) products to the U.S. should consider adding the option of negotiating the prices of their products by adding complimentary services to their products, and by doing so, differentiating their products into unique offerings and that will be seen as (additional) value-adding solutions by the customers (Goldman, Nagel and Preiss, 1995; Penttinen and Palmer, 2007). While adding these complimentary services increases the unit costs of sold products and likely complicates the deliverance of the product due to the characteristics of the services associated, if the profit margins allow, these services could and likely should – especially in the case of U.S. market penetration effort by a foreign company – be procured from local service providers. Though, making the notion that providing complimentary services is expectedly easier in the context of intangible products, such as software. Nevertheless, such practice would steer the focus of U.S. market entry strategies towards partnerships and JVs, and when partnerships are considered, from the U.S. procurers' viewpoint, when, for example, partial manufacturing of a defence product is placed abroad, supply security is being compromised, as noted by Taksás (2019).

Supply security

During the collection of the secondary dataset, the topic of supply security was often discussed with the company representatives, and in line with Taksás' (2019) suggestion, supply security was recognised to be one of the key components when achieving a procurement contract was considered. Yet, as discussed, while in Finnish companies, the importance of supply security was internalised, the approach towards supply troubles was brought up, and the conclusion was that in case of supply troubles, the ideal solution from the supplier's side is often considered to be related to arbitration. Yet, from the purchaser's side, the demanded solution is typically to have proceeding(s) according to defined compensation methods within the procurement contract – what are the extent of the liability – implying that unlimited liability is unheard of in the context of Finland's business legislation – these methods can vary drastically. Especially with foreign buyers possessing an advantage over the contract negotiations, unalert Finnish companies can find themselves on the brink of bankruptcy in case supply security is compromised, and the contract underwritten includes far-reaching liability concerning supply-related challenges. Yet, to have a contract to underwrite, a company must have something that the U.S. needs in the first place.

A constant need for the latest technology can be found in U.S. aerospace programs, but there exist multiple requirements for a firm to be even considered access to one of these programs. In these programs, where volumes can be low, and the buyer's requirements towards the security of supply are hence easier to meet without extensive production capabilities, the importance of information security is elaborated, though, not only in the U.S. aerospace programs but overall in the Western defence industry, the importance of information security is crucial. According to an interviewee, Finnish companies operating in the defence industry have security arrangements in place and a security agreement with the Finnish Defence Forces; FSC (Facility Security Clearance) and PSC (Personal Security Clearance) can be acquired through the Defence Forces. Overall, Finnish companies do not have any real problem areas in these matters, but there is quite a lot of so-called US-only information in the United States that is not even shared with NATO partners, and this suggests that the U.S. requirements concerning information security can – and in some cases will – propose challenges for the Finnish companies. To hinder Finnish companies' expectations towards the U.S. markets, and according to a second interviewee, this seems to hold true, especially in the context of U.S. aerospace programs.

Despite some of the potential challenges concerning, for example, information security, ultimately, many of the challenges mentioned in this thesis are tied – but not limited – to the scale of Finnish companies, thus, raising an issue of differences in the scale of the counterparties, which can affect the perception of Finnish companies' security of supply from the procurer's perspective.

"Security of supply is critical when evaluating (the) suppliers".

(A quote from a company representative)

As mentioned by an interviewee, a U.S. contractor can be of such scale that even if its intention would be to hug, the contractor could end up crushing the smaller corporate entity involved – this phenomenon is partially related to the earlier mentioned requirements towards supply security and associated liability requirements. Yet, especially with these large U.S. defence contractors, Finnish companies were said to often face a situation where their solution offered is aimed at a segment that is too narrow when the collective interest(s) of a defence branch was considered – this being especially the case with weapons systems and software related services. The core of the problem was also mentioned to be the empirical perception that the Finnish companies which are most eager to do business with the large U.S. contractors are the ones often lacking in scale, and the ones that have reached the scale hoped for are often the ones that can be unwilling to put in the effort required towards actively operating in the U.S. defence market. Expectedly, the Finnish companies that have grown above expectations considering the scale of the counterparty by the U.S. companies are the ones that are already exporting internationally to various other destinations or operating in the U.S. civil market through different products. This assumption is based on the view shared by an interviewee that in Finland, the local customer is too small, and exports are thus often needed for the Finnish defence industry company's growth.

Nevertheless, during the interviews with the Finnish non-manufacturing support organisations, meaning Confederation of Finnish Industries (EK) and Business Finland, the conversation was often steered towards products manufactured in Finland that were not directly related to national defence or defence arms, and especially solutions related to digitalisation were in the focus of these organisations. Understandably, overcoming the challenges related to, for example, scale is easier to overcome with an intangible product and/or associated services. Admittedly, the support organisations' policy towards Finnish exports has its advantages; besides avoiding much of the politics that are typically associated with the transfer of tangible defence products, when considering the scale of the counterparty and the demand(s) associated, scaling up the production of, for example, a software or SaaS company is relatively effortless compared scaling up a company operating in some of the 'traditional' manufacturing industries. Also, as earlier mentioned, when exporting defence products, politics gets involved, and the exporting of defence arms or defence industry-related items becomes complicated from various aspects – this is the case both in the country of origin and the target of the sales and/or exports.

Other requirements

As discussed by the company representatives, starting to do business in the U.S., according to the local business culture, takes considerable effort from the company and usually requires relatively large investments. Even getting into a position where a company can enter negotiations with a U.S. procurer can take time and tie a considerable amount of a business's resources. In addition, deep knowledge of the U.S. market – especially when dealing directly with the DoD – was considered mandatory. Besides the formerly mentioned, having good relations with people in key positions both domestically and abroad was mentioned to make the difference between success and failure. Financially, especially for smaller Finnish companies, the role of an external sponsor can be crucial. In words of an interviewee:

"Often, the terms in an initial contract draft are unacceptable … Continuing the (contract) negotiations typically require additional investments".

As discussed during the interviews, not all Finnish companies possess capabilities for the U.S. defence market, and there is work to be done in organisations of all levels. Capabilities are often seen as combinations of skills (Teece, Pisano and Shuen, 1997), and when the skills of an organisation's employees are included in the organisation's intangible resources, considering that there is a suggested skill gap in some of the Finnish companies, during a meeting held with an industry expert, it was mentioned that there are still Finnish companies that have CEOs with difficulties managing communications in business English. Especially in these companies, creating required English language documents – which are often plentiful – from the basis of the ones written in Finnish can be a challenging task and additional support from external parties is expectedly required. As external help typically comes with incurred costs, having internal competency in the target market language(s) is suggested to be extremely important for Finnish companies planning to pursue U.S. market entry. As priorly mentioned, a company needs to look local in the U.S. market, but additionally, it should also sound local, too.

Despite the efforts of localising a Finnish company according to formerly described requirements, a mistake sometimes made by the Finnish companies was mentioned to be the introduction of the wrong people to the right meetings. This phenomenon was discussed to be connected partially to cultural differences in business negotiations. In Finland, things are often said to be discussed on a very technical level to the extent that it is sometimes done even while pitching a product to an unfamiliar audience. In the U.S., this was often mentioned to be seldomly done. In fact, when wrong-level discussions are combined with poor pronunciation, the products pitched can turn even more alien to the audience. Hence, dynamic capabilities are required to navigate the U.S. market to the best of a company's opportunities. Possessing dynamic capabilities can be seen as mandatory for directing, distributing – and in some cases merging or acquiring – resources of a company (or companies) to best suit the foreign business environment's various needs.

Still, there are times when everything that the companies have control over is done right, but procurements are not underwritten in favour of these companies. This can be due to defence product sales being sometimes overshadowed by politics, and hence, especially smaller companies possessing typically little to no control over government matters should not operate alone in the foreign market(s).

4.7.2. Governmental Support

The importance of top government support for defence product sales is hard to overemphasise, and according to an interviewee, this support is not implemented in an optimal way in Finland when the interests of Finnish firms operating within the defence industry are being concerned. Indeed, the situation can be described as complicated among the companies operating within the Finnish defence industry. To be true about the matter, governmental organisations are subject to public funding, and similarly to private enterprises, they need to secure their interests when the funding of their operations is concerned. This creates incentives for the governmental organisations to start providing their support at stages where a lucrative procurement contract seems more likely, and to companies which seem to be already experiencing some "pull" from the market and or are operating at a scale that can provide sufficient (quick) returns for the efforts required from the governmental organisations. Similarly, organisations with closer ties to Finnish government organisations or that are partially owned by the state appear to have better chances for additional support than their peers. Additional support means, for example, the people working in the support organisations exploiting their private networks beyond the requirements of a task assigned and/or, for example, respected public figures campaigning for these companies that are better established in a nation's politics.

In comparison to Finland, in Sweden, for example, as discussed during two of the interviews, the Swedish monarchy has done its share of promoting SAAB's weapon systems to international markets. In Finland, in contrast, the president has not typically been an active party when the promotion of Finnish defence industry products is considered. Where the role of a president in the context of defence products can be seen as a matter of debate, a suggestion was made during one of the interviews concerning the promotion of Finnish-origin defence products: The promotion should include active support from the end-user(s) of the products. In practice, this would mean that various representatives of the Finnish Defence Forces should get involved in product promotion by being present at promotional events and similar occasions. Naturally, the people from the armed forces should be able to provide field-based experiences of these products – this would require the armed forces either as the customer for these companies or alternatively governmental funding for the companies in case of product development is done, for example, in cooperation with the Finnish Defence Forces. In either case, for the Finnish defence industry companies, it would mean that the Finnish Defence Forces could be included in the earliest parts of the companies' promotional strategies concerning the sales process of their products and/or services. Yet, as indicated by two of the interviewees, this is not the case – at least for most of the Finnish defence industry's companies.

"Finland is a respected nation and a respected partner, the Finnish Defence Forces are held in value, and their know-how is (internationally) appreciated. If Finland procures something, it is an excellent reference (for the seller). ... Finland could take advantage of this".

(A quote from an interviewee)

Where Sweden has the well-liked royal family to promote their local defence industries, according to two of the interviewees, Finland's defence exports and associated stigmas related to these exports are strongly personified by certain people who play a strong role, especially in the activities of the Ministry for Foreign Affairs. In Finland, people are often very cautious about military actions – this can be seen, for example, in the speeches and statements of Finnish politicians. Also, as mentioned by two of the interviewed industry experts, in Finland, the export of military equipment has generally been considered a bad thing. Although, with the Ukraine war and the Finnish F-35 acquisition programme, the attitudes of many politicians have quickly shifted in favour of exports. Still, behind this, at least previously – and expectedly once again in the future – widely shared opinion, there may be no understanding of the extent and number of issues that the defence industry influences – provoking the question from one of the interviewees: "What is the justification (for the attitude(s) towards the defence products exports)"?

"Now, there exists a general situation where the defence industry is not squinted at as much as it has been".

(A citation from one of the interviews)

By the persons interviewed, the change in the politicians' speeches and actions is expected to last from somewhere between 5 to 10 years, at the most. This provokes the question of whether the disruptive change suggested by White et al. (2022) in global defence spending is a trend or a fad and whether supply chain-based disruption towards the increase in competition of critical materials is permanent. Additionally, relating to earlier mentioned politicians' speeches and actions, attitudes often change slowly, and as discussed during an interview and the literature review chapter of this thesis, the defence industry has been earlier considered as an unsustainable industry by the EU. Hence, one ought to consider which of the changes affecting the defence industry are permanent. An opinion shared by one of the interviewees relating to the subject was the following:

"I don't see this (Ukraine war) as it would have changed the underlying thoughts so drastically that in the next five years, the industry would not be in the same situation as in January (2022)".

Besides the often-negative attitude towards the industry's core function – the core function being the designing and manufacturing products that are to end human lives if needed – from a business viewpoint, the defence industry is often perceived as an exporting industry among other exports – a vision of how exports support Finland's own security and foreign policy goals, and how there is a close link between them, are completely ignored or misunderstood. Yet, as suggested by AFDA (2022), a vibrant defence industry supports national security. Understandably, the matter is not straightforward; if Finland's foreign policy is – and has been – aimed at promoting peace through pacifistic solutions, the past (and likely the future) governmental actions and policies align better with the Finnish government's approach towards its foreign policy and its goals.

Despite the policy, as mentioned by an interviewee, support towards the industry is expressed in some ways, and indeed, exports, and people working with the exports, are celebrated, for example, because of one's years in service of the industry. Naturally, as told by the interviewee suggesting the enhancement of the Finnish Defence Forces' active participation, governmental support will be given eventually, but to have it upfront and for all the companies within the industry would be desirable. Meaning, that government officials should promote the entire Finnish defence industry more actively and not only to chosen companies in the latter parts of their sales processes. As brought up during various interviews, the arms trade is eventually a matter of trust, which suggests that early support from governmental officials, meaning, especially the end-user, would aid in building a positive and trustworthy image of the Finnish companies within the eyes of potential foreign customers. Especially now, as joint operations and their rehearsals have become commonplace among the various armed forces associated with NATO, the presence of user level can be considered highly important during the events that the Finnish companies take part in. Yet, similarly beneficial for the Finnish companies would be increased usage of local products by the Finnish Armed Forces, as during, for example, these joint military operations and/or practices, the armed forces would provide the members of various foreign armed forces – the potential future end-users – combat situation-based product demonstrations during their sessions.

In two of the interviews, it was discussed how the level of governmental support varies between countries. In the latter of the two, a real-world event of South Korean defence product sales was used as an example, where Korea had reached a series of agreements with Poland. Currently, where the United States is said to hold the pinnacle in technological competence, South Korea is acquiring footing in the global market with its production capabilities associated with supply security. Between late July and October 20, 2022, Poland signed acquisition agreements with South Korea to equip its armed forces with a total of 1000 K2 tanks, 672 K9 self-propelled howitzers, 48 FA-50 light combat aircraft and 288 K239 Chunmoo K-MLRS units (Głowacki, 2022). According to the interviewee, while this is a large defence acquisition by any standards, what makes it especially interesting is the South-Korea's supporting act of purchasing roughly 40 billion USD worth of Polish government obligations. Considering the offering made by South Korea, particularly in the current environment where many economies seem to be facing challenging times and many countries' production capabilities are put to the test by collapsed supply chains (Ellerbeck, 2022), it can be hard to find a better alternative from the defence market when the money and the products are both put on the same table by a seller who has production capabilities which few can match. When South Korean governmental support towards its defence industry is compared to Finnish, it was mentioned during the interview that a similar decision to aid the acquirer financially by purchasing its government debt would not likely take place.

"It is somehow hard to see the Finnish government aiding, say, Patria's exports by purchasing (foreign) obligations with four … or even one billion (euros)".

(A quote from one of the interviewees)

Understandably, the scale of the industry and the expectations towards its future aspects vary between the two countries, but while it may be the case that South Korea is actively trying to establish itself within the defence market – as the country has done in, for example, consumer electronics and cars – one might ask that could Finland try the same although in a smaller scale? Even with the ultimate unique product, the earlier success of Nokia would not be a suitable indicator of Finland's potential, as the sales and exports of mobile phones were not similarly controlled as the products of defence industry products are, and perhaps most importantly, they were not similarly subject of foreign politics as the defence industries' operations are. Yet, when a nation's peacetime prospects are concerned, both serve the same purpose: they can provide a surplus of trade balance and provide financial prosperity to the nation. Although, one might ask, would South Korea buy foreign government obligations to, for example, aid its sales of consumer electronics? This suggests that from the basis of the financial value of the exports, placing the defence industry as an industrial sector amongst any of the others is an understatement of its importance.

According to an interviewee – and corresponding with the earlier literature on the topic (Feinstein, 2011; Holden, 2017) – the defence industry's role as an employer (see Appendix 2), especially in Finland, is not nor should be the main driver for investing in the industry's efforts of enhancing its business performance through increased exports. The reasons for focusing on the competitiveness of the Finnish defence industry are suggested to be looked from elsewhere; it is a key in national security as the industry requires know-how on how to upkeep and update the acquired weapon systems when necessary – an example being that the Finnish Defence Forces still possess and uses arms that have been manufactured during the Soviet era. Naturally, acquiring spare parts and other components for weapons systems has not been an option in recent years. The domestic capabilities for these systems are crucial, and the same is sad to apply to the current and future acquisitions of defence products for the use Finnish army.

Admittedly, things can change, and as the world has witnessed, long-held principles can also be overruled to give support to the favourable winner of the war from the perspective of the supporting nation's foreign politics. Such an act was done by Finland on 28 February 2022, when the principle of not exporting defence products to a country that is participating in the war was rejected by making the decision to send various kinds of defence material to Ukraine. Earlier, Finnish aid to Ukraine was planned to exclude defence products, but since the overruling of the principle, the contents of the aid sent to Ukraine have gradually shifted from non-lethal defence materiel to defence arms. Besides the principle held earlier, Finnish legislation affected the export processes of foreign military materiel of Finnish origin (Stenroos, 20222). Estonia, which was to export artillery that it had bought from Finland, and that had been manufactured in Germany, had to wait for Finland's permission to provide the aid of the much-needed weapon to Ukraine (ibid). According to current legislation (282/2012), when the once-purchased defence arms manufactured by Finland are planned to be re-exported by the current end-user, the permission to transfer the arms must be acquired from the Finnish central government or Ministry of Defence. While a procedure like this is commonplace in many countries selling defence products within the EU – where the members are to follow the Council Common Position (2008/944/CFSP) of the European Union – the approach toward export control varies drastically between the member countries and even between the Nordics (Kytömäki, 2015). Similar challenges with the current export regulation, as in Estonia's arms transfers to Ukraine, were met in the context of the earlier discussed case of Rosomak's defence products exports to the same destination (Freyborg and Aholainen, 2023). Nevertheless, due to the observed – though expectedly temporary – changes in export policy for humanitarian causes, it can be stated that the Finnish government can provide its support in time of need. Yet, export regulation is just one aspect of Finnish defence products exports, and besides government support, and as later discussed in this thesis, different Finnish companies need different kinds of support in their sales and export-related activities.

4.7.3. Development Funding

Finnish companies, like their foreign counterparts, need funding for their R&D activities, and in Finland, there are multiple types and sources of funding, both private and public, available for the companies operating in the defence industry. Options of private funding ranging from debt to equity-based financing, debt ranging from collateralised bank loans to venture capital, and international financial markets providing lenders – or potential stock owners – from all parts of the world, examination of options for funding of development activities is limited to public providers during this chapter.

Funding from the EU's European Defence Fund (EDF) is an option amongst the many for funding Finnish defence companies, but two well-recognized domestic options are funding from Business Finland or from Finnish Industry Investment (Tesi). Both Tesi and Business Finland are entirely state-owned, but while Tesi has its focus on the funding of Finnish companies, Business Finland aims to provide a vast range of other services to companies planning to expand their businesses. Indeed, Business Finland, in addition to the Association of Finnish Defence and Aerospace Industries, having access to a broad network of U.S. contacts – both in governmental organisations and in the private sector – is an important help for Finnish companies considering the option of entering the U.S. market, and as mentioned during the interviews, Business Finland's help can be crucial for a company when matters are needed to proceed to the government-to-government level.

However, when access to funding in Finland is considered, it is easier to obtain state funding for a large amount than for a small amount. According to an interviewee, by the time a company goes to Business Finland with a proposal of 10,000 EUR, the company is faced with a shocking amount of paperwork. Yet, when doing the same thing with a proposal of 10 million EUR, the company gets to talk directly with the right people (and about the right things), which proposes a question: Is this fruitful for the Finnish companies? Especially for the Finnish SMEs that are planning on entering the well-barriered (and, from their perspective, uncertain) U.S. defence market with a product (or, in some cases, a concept of a product), the situation is challenging. These Finnish companies, being often aware of the high risks involved, are thus unwilling to put their entire businesses on the line – but would be interested in trying the U.S. markets – do not approach the support organisations with their business cases. Though, recognising the fact that a debt of 10 million EUR, which is tied to some specific market entry plan, and the plan's success being uncertain, to say at least, is not very tempting from anyone's perspective. Indeed, as discussed with an interviewee, the U.S. market can still be considered to be a make-or-break opportunity for many of the smaller Finnish companies – and potentially a "money hole" for the Finnish state-owned support organisations if the entries are not properly planned, managed and successfully executed. Nevertheless, penetrating the product-centric defence market – especially in the U.S. – typically demands radical innovation from the new entrants, and radical innovation often requires risk-taking from both the innovators and the parties responsible for their funding. Furthermore, the desired extensions of the defence industrial base both in the EU and the U.S. eventually require new companies to enter the industry.

"A small company does not exist without something new and innovative, especially in the defence industry. Nobody establishes a new company to manufacture cartridges".

(A quote from an interviewee)

The complex challenges concerning defence industry companies' public funding – and the effect it has on innovation – have been modelled in an earlier study by Martin Blom, Fulvio Castellacci and Arne Fevolden (2014), and this being considered, an examination of alternatives from the foreign markets' arrangements was made during the literature review of this thesis.

During two of the interviews, when citing a study involving the examination of Swedish and Israeli defence industries and their markets (Devore, 2014), the view of the coordinated market of Sweden and the liberal market of Israel was not shared by the interviewees interviewed during the collection of a primary dataset. It was mentioned that when looking for a better option for comparison, Norway – and Denmark to some extent – is closer in market and industry characteristics to Finland than either of the two, noting that while Kongsberg is bigger than Patria, they serve a similar purpose for the two nations. Despite the notions made, examination of Israeli and Swedish markets was considered beneficial for understanding the distinctive characteristics of the Finnish defence market – and hence the companies operating within it – as the two nations represent two very different governmental approaches taken towards, for example, funding of defence products development, and thus broaden the view on the potential operation models of national defence industries in countries with parliamentary democracies.

In Sweden's coordinated defence market, significant development work is carried out by the state, whereas in the case of Israel, the volume of procurements made by foreign countries inevitably brings development money to its local defence industry (Devore, 2014). According to an interviewee, both countries are very self-sufficient when procurement of military equipment is considered, and in Sweden, the self-sufficiency rate is over 90%, which is on the level of France. In the case of Finland, referred to being "a country built on military-self-reliance" (Weinberger, 2022), being self-reliant does not concern military procurements to the same extent as the reference from Weinberger's (2022) article would suggest, as many of Finnish Defence Forces' weapons systems are procured from foreign nations and/or companies. Though, is self-reliance a meaningful target for Finland when the future of its defence procurements and local defence industry is considered? Indeed, what is most beneficial for the taxpayers, entities responsible for national defence, or the domestic defence industry may differ in various aspects, and as suggested by Devore (2014), many defence industry analysts consider that only the largest of states have capabilities for sustaining their defence industries in scale that can contribute with impact towards their national security.

As told by an interviewee, and with Finland's membership being approved by NATO, the communicated message from the alliance concerning procurements has been that NATO's members should aim their procurements towards certified standardised equipment – meaning buying so-called bulk products – and keep the focus of their defence procurements on the alliance level, thus suggesting that national defence specific procurements should be left on less focus. The communicated message somewhat conflicts with the interest of national-level defence and local industry's role within it, but as the Ukraine war has proven, alliance-level support is crucial when defending against a larger invading nation such as Russia. Will the guidance concerning procurements be temporary advice for the alliance members due to the ongoing war in Ukraine, or longer-term guidance considering the future aspects of the collective defence of the North Atlantic Treaty Organization remains to be seen. Though, no matter if new development projects that would require additional sources of funding would be introduced due to Finland's membership in NATO, from the basis of the interviews, it can be stated that "selling bulk" on the alliance level requires means of production to match the needs of many, and domestic defence industries of nations size of Finland rarely possess these means, and as mentioned during one of the interviews, things that NATO will change for export opportunities of the Finnish companies remain limited, and expectedly the same will apply to Finnish companies' development funding.

"Considering export permits, nothing has changed".

(A quote from an interviewee)

Sources of funding can be considered a centric factor behind the structure of national defence industries (Devore, 2014), and continuing with the comparison of Sweden and Israel, when the interviewees were asked how Finland would rank on an axis where Sweden would represent one end and Israel the other, both suggested that Finland would be on an axis of its own. This is due to Israel having a state very close to the key players – even if the market would be perceived to be otherwise liberal. In Sweden, also, a large part of the development is financed by the end-user, whereas in Finland, this is not the case. Indeed, in Finland, the state is close to the key players through these companies' ownership, but research and development activities are largely funded with the income generated by the companies. The income-funded development was said to be especially the case when the Finnish defence industry as a whole is considered. According to both interviewees, overall, the Finnish Defence Forces' research and development funding is limited. Especially when compared to competing companies located in foreign countries, there are no prerequisites for competitive development activities supported by public funding through the Finnish Defence Forces.

"The ability of the Finnish Defence Forces to carry out development activities is ... worryingly small".

(A quote from an interviewee)

In recognition, as told by one of the interviewees, the Finnish Defence Forces perform a lot of research and development projects, but when the funding is considered, the research concerning these projects is done on small budgets. According to another interviewee, in terms of the continuation of domestic know-how through local defence industry operators – which can be seen as the basis for supply security for many of the procurements made from foreign countries – the situation has not been on a sustainable basis for the past ten years. In practice, this can be seen, for example, in the targeting of weapons system-related procurements on the ready-made systems developed and manufactured by foreign companies. According to the interviewees, there is no funding for the more expensive R&D projects, and the downside here is the erosion of domestic know-how – supporting the industry experts' view of only the largest countries being able to upkeep their local defence industries in a meaningful way (Devore, 2014). As described by both of the two interviewees, an associated problem with constant foreign procurements is that during the life cycle of the product(s) procured, money is constantly poured abroad. This can result in the diminishing of Finland's own ability to develop products specifically for our domestic conditions, which is questionable and does not correspond to, for example, the policy held by Sweden. However, even the approach currently favoured by Finland has its advantages, and as described by the interviewee:

"The good thing about it is that the users immediately get what they want. ... Though, it is not all black-and-white".

Indeed, in defence products acquisitions and sales, structures around the processes are often complex, and as mentioned later by the same interviewee, relating to the typically-made decision by Finland to announce its defence procurement contracts for open international tendering – and thus often openly communicating about competence gap(s) in national defence to external parties – and then eventually making most of these procurements from abroad:

"It is good from the viewpoint of competitiveness: If a company succeeds in the Finnish defence industry, the company is provenly competitive in the international markets as it has been already confirmed by Finland".

Though, when the viability of the Finnish defence industry is considered, it would be more beneficial for the Finnish companies to be the ones responsible for the immediate deliveries. Nevertheless, as discussed with one of the interviewees, the less established Finnish defence industry companies sometimes lose in tendering as they do not have readymade products to provide for testing purposes. In more detail, as discussed with the same interviewee, this is because these companies belong under the definition of Technology Readiness Level (TLR) 6 – not 7, 8 or 9 as often expected by the procurers – with their products, and in many cases, this has a critical effect on the outcome of the tendering process due to the evaluation criteria applied. Naturally, when examining the situation from the procurer's perspective, the first question to come to mind is: Who would buy a concept of a product under development and without a prototype to test? However, where the role of product testing is to secure a product's usability for the end-user and/or buyer, it is also a way for the companies to receive critique concerning their product that is still (or sometimes continuously) in development. Especially when developing industry-leading products from the bleeding edge of technology, it can be challenging when a company does not have a clear picture of how the company's product(s) compares to its peers and, expectedly, the best (and sometimes the only) critique can be heard from the end-users. Understandably, the situation concerning product reviews is more challenging for companies that are developing products that are single-use by their nature. This is the case with, for example, advanced ammunition, mines, missiles, or components that are used in earlier items.

In this sense, in the current boom of defence products' global demand, it would likely be beneficial for Finnish governmental organisations and Finnish defence industry companies to tighten their cooperation and try exploring and exploiting all the possibilities for enhancing foreign exports performance – this naturally does not only concern U.S. exports. However, as mentioned during one of the conversations held with a company representative, increasing the level of cooperation between defence industry companies, in general, can be rather challenging as the situation often is that the companies would be partners during one project and competitors during another. Companies, eventually, want the opposite of the procurer's wants, meaning the "best buck for their bang".

Indeed, in partnerships, and especially in the context of JVs, companies often have differing expectations toward cooperation, and this typically affects the companies' willingness to invest in the partnership (Bamford, Ernst and Fubini, 2004). Willingness to invest and commit to the partnership can be seen as crucial due to the overall secretive nature of the industry, and especially concerning new product development (NPD), a situation where both companies would be equally committed to a project was suggested during one of the interviews to be potentially achieved with the help of an external third-party coordinator or an escrow to control the unwanted technology spillover(s). For a fertile soil for collaboration, as mentioned by two of the interviewees, local integrators, such as Patria in Finland, have provided product platforms that many of the domestic defence industry companies have developed their products on and/or for and have often simultaneously served the role of domestic cooperation coordinators. However, as described by one of the interviewees, Patria's role as the local integrator has started to erupt as Norwegian money has started to flow into the company. Although if this is due to Norwegian money or, for example, due to Patria gaining access to new partnerships through their tightened cooperation with Kongsberg is a question that has to be left unanswered during this thesis. Kept in mind that eventually, it can be seen as Patria's obligation to secure that their platforms are equipped with the best and/or most suitable products available – especially when the end/customers' needs are concerned – and as sometimes indicated during this thesis, the best and/or most suitable products are not always the domestically designed and/or produced ones.

"Without exports, there is no Finnish defence industry – the local customer is too small".

(A citation from one of the interviewees)

Especially when the defence industry is seen as one industry amongst others and hence often met with similar expectations concerning profitability, besides opportunities for external funding, defence industry companies require steady source(s) of income to fund their activities (including R&D). An individual company within the defence industry faces – at least according to some of the industry experts – a cyclical demand which can alter drastically between peace- and wartime, and due to the nature of the procurements – the procurements having long intervals and procurement size being large when measured in units and/or financially – the implications for Finnish companies are that they should be exporting to a large number of countries for the industry being viable. Also, industries dealing with tangible products for which production is not easily scalable typically require more predictability from the environment than companies operating solely with intangibles, meaning that most of the Finnish defence industry's companies require steady (or preferably growing) demand for their products. Putting the effort to focus solely on a single market – or customer, for that matter – is typically not an option for these companies – that being the case outside of Finland and the Finnish Defence Forces and the smallest of the Finnish defence industry companies. Where the requirement of steady income can affect a company's decisions concerning, for example, new market entries and R&D projects, as described by AFDA (2022), most of their member organisations also operate outside of the defence industry. While this can be considered a good thing, as operating within multiple industries gives companies similar benefits as exporting to multiple countries, this can also create further incentives for these companies to focus elsewhere if a) the barriers of entry are considered too high or b) the efforts for further internationalisation are not sufficiently supported.

Naturally, besides the priorly mentioned, there are alternative uses for income within the Finnish defence companies, and a theme discussed during the interviews of the secondary dataset was the certificates and how they can be costly, especially for smaller companies to acquire. Certificates are required by many foreign buyers, especially in the U.S., and they often are expensive to acquire. Yet, while the requirement towards certificates can be present in, for example, open market bidding, certificates have not been perceived as an obstacle to cooperation as some of the companies without the formally required certificates have been given the option for auditing by the procurer. In some cases, this has meant that the companies audited have arranged their production to meet the proposed requirements. In other cases, the requirements have already been met by the companies, but they have been unwilling to acquire these certificates due to their price and uncertainty on how they affect their business performance in other markets. During the discussion with one of the interviewees, the topic of certificates related to NATO and their impact on business opportunities within and outside of the alliance was also brought up, and as discussed during the interview, from a business perspective, the NATO-related certificates are an opportunity, especially if a company has the means for "selling bulk".

Of the NATO certificates, some are available or partially available for the public. Some are confidential and not available but for NATO's members. Especially the latter can give Finnish companies an advantage over their foreign peers that are not part of the defence alliance, but more importantly, and as also described earlier in the subchapter about the current state of the industries, they can open doors for new sales opportunities within NATO. However, they can also introduce unexpected cost-related barriers for some of the smaller companies operating in the Finnish defence industry, raising the question of whether acquiring certificates should be a focal point of development funding provided with taxpayer money. Understandably, the risk is that many of the companies could entirely externalise the acquisition of the certificates to be handled by the public, potentially leaving companies with pre-existing certificates in a disadvantaged position due to sunk costs involved. Especially when companies operating under – or entering – industrial participation are involved in the discussion, the question of who should pay for the certificates required and to whom and how becomes extremely complicated.

4.7.4. The Ultimate Unique Product

Not all products are designed to be sold in bulk, and with these products come some differences in the market. No matter whether the products are considered bulk or more unique, the defence market operates in a product-centric logic, and Finnish companies, often operating with more unique products, were said during one of the interviews to have a product-centric approach concerning their operations. Relating to these companies' product-centric approach, described through a metaphor by an interviewee, it was mentioned that many Finnish defence industry companies often fall into the cardinal mistake of selling an axe when the customer, in fact, needs lumber. Continuing with the metaphor, to make things worse, eventually, many of the Finnish companies tend to sell similar "axes" with different weightings to them. The problem in this is that, for example, the two companies trying to sell components that differ from their characteristics but are meant to serve the same purpose in an end-product that is vaguely described or up to the buyer to decide which it is are examples of such axes. An approach like this not only puts these companies in a disadvantaged position in the open competition but can also increase rivalry between the two for unwarranted reasons. This suggests that if the challenges are found from the approaches taken in sales and marketing, spending more on out-competing a domestic rival in technology competency in the context of competing for a foothold in foreign markets can be disadvantageous for both companies. This raises the question of whether the local competition of the companies could be avoided by enhancing cooperation between the companies during product development or alternatively by developing the product-related business cases further and thus further differentiating the products – or in this case, business cases – offered. This naturally does not mean that companies should stop striving for the creation of the 'ultimate unique product' altogether.

However, if sales and marketing processes are centric in U.S. defence market sales, what is the role of unique products in U.S. market entry? The requirement for having a unique product was often discussed during the interviews, and when an example of such a product was asked from one of the company representatives, the discussion turned towards a product developed in Finland was brought up as an example. Yet, even in this product's case, the product alone was what the company in question was mentioned to be interested in. For them, the product's role as a component of a military training system in development was what made the business case that raised their company's interest. In this sense, unique products are needed, but so are unique business cases. Recognised, as discussed during most of the interviews held with the companies' representatives, when the product is unique enough, getting their product sold to the potential customers will take less effort on the company's side than with a product that is average by its capabilities.

Indeed, during an interview with a company representative, it was brought up that what is expected of Finnish companies from the viewpoint of a U.S. defence contractor is not only unique products but also unique business proposals. This means that the companies should try to see the business case beyond their products and recognise their products' opportunities associated with either an existing product platform or a new one. In both these cases, from a contractor's perspective, it is often not sufficient for a company to display the potential strength of their product within a platform, but they also need to have some sort of plan for how the product is to be integrated within the platform, and what resources capabilities does the integration process require from either the contractor or the company in question.

Yet, even with products that have unique capabilities, the worst competitor often is an option that is *good enough*. From the Trinity of Defense Industry's (Taksás, 2019) perspective, good enough options are the ones that do no not similarly excel with their technological capabilities but are typically cheaper than the product with the unique technological capabilities and which are provided with sufficient supply security. As discussed during an interview, what determines that is good enough for a customer depends on the customer's needs, typically based on previous use and experiences derived from it. In the case of marketing a product for a potential customer, the good enough option is often the product currently in use.

While the uniqueness of a product can sometimes be in the eye of the beholder, three examples of good enough alternatives are the following:

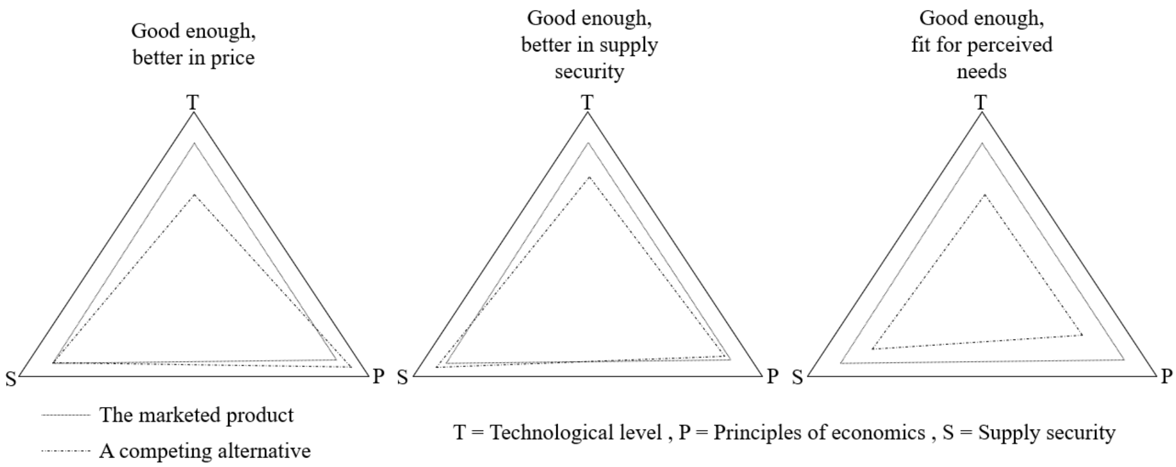

Figure 12: Examples of good enough (own illustration, based on the model by Taksás, 2019)

Of the three options of good enough, only the ones that are either better in price or better in supply security (or better in both) can be considered potential competitors in the context of procurements. This is due to the reason that while the option of good enough that fits a customer's perceived needs might be an option in the form of a product that is currently in service, it is not an alternative when procurement of new defence product(s) is made by a government agency. For DoD, programs such as FCT are to ensure that foreign comparatives are evaluated during the procurement process. Additionally, as stated in the BAA, the requirement of procuring domestic products can be bypassed if the procurement of domestic products is inconsistent with the public interest; this is the case when a domestic option is an insufficient quality, quantity, or unreasonably costly. With the U.S. contractors, avoiding good enough options that are fit for perceived needs is driven by market mechanisms; in a highly competitive market such as the U.S. defence market, procuring products, components, or services that are subpar when compared to their alternatives, is against the contractor's interests. Yet, this does not exclude the chance of strategic acquisitions – or the role of offset agreements in, for example, component acquisitions. This suggests that when there is an existing offset agreement involving the acquisition of components from a nation that has procured defence products from a U.S. contractor, the market mechanisms do necessarily work as intended. While offset agreements are inked for limited periods, the ongoing U.S. defence sales ensure that new ones are to replace the old. In this sense, relying solely on the unique product in defence products sales to the U.S. can be risky, and according to an interviewee:

"Offsets are prioritised".

Concerning earlier examples of success due to the ultimate unique product, Finnish companies have been able to convince the U.S. Department of Defense with their defence-related software. In such cases, the companies have been approached by the DoD, and direct marketing efforts towards DoD have not been made by the companies. Yet, as earlier mentioned, such cases of pull-based sales typically involve earlier efforts of push-based marketing and, as mentioned by an interviewee, are extremely rare.

4.8. Summary of Findings

Foreign market entry strategies consist of strategic planning and marketing activities. The marketing activities included in the planning should initially be about achieving sales. Sales proceed with distribution, and of the sales and distribution channel strategies available, a company can choose between direct exports, indirect exports, licensing and franchising, partnership(s) and JVs, or an FDI. When examining the marketing strategies, there are two ways that a company may choose to promote its products and/or services in the defence industry: either by pull-based marketing or push-based marketing. From the basis of the interviews, companies selling defence products to foreign markets should consider exploiting a multi-channel marketing approach when trying to convince the key stakeholders involved in the procurement(s), as the marketing needs to take place on multiple fronts simultaneously. To aid in the U.S. market penetration effort, a company deciding to sell directly to the DoD may consider using the help of the Foreign Comparative Testing (FCT) Program to bypass the Buy American Act (BAA). Yet, as earlier described, both internal and foreign politics do play a centric role in procurement decisions, and they introduce an element of unpredictability to the sales processes of defence products. Ultimately, as earlier experiences from the market(s) have shown, convincing the user organisation of a product's advantages is an essential part of the sales process, and there are alternative approaches that the selling organisation may consider exploiting while taking on the task. The underlying structures of the defence industries associated, meaning both local and foreign industries, shape the marketing process in various ways, and eventually, it is up to the availability of local and foreign governmental support – and potential development funding – for the companies to undertake the challenge of new market entry. Indeed, as defence procurements are typically product-centric, to secure governmental support and/or development funding, a defence industry company needs to have a good product associated with its offering. Suggesting, in some rare occasions, market entries simply happen due to a company's 'ultimate unique product' – the ultimate unique product being something that many companies seem to strive for with their development activities.

Overall, the U.S. market can be described as challenging to enter without a unique product or taking part in industrial participation, or having strong governmental support. What is also often suggested for the companies is to have sufficient resources for the market entry, as the market entry ties both funds and time. Additionally, an unofficial requirement for the companies is to have production in multiple locations within the borders of the U.S. – this is especially the case when trying to reach a contract from DoD.

When considering the capabilities of Finnish companies, there are multiple product categories that the companies should have worthwhile offerings, but to upkeep the technology competitiveness of Finnish defence companies requires investments. A mentioned problem during the interviews was that the level of governmental support, may this support take the form of promotional activities or providing funding for development, was comparatively low for the smaller-sized Finnish companies. This does not mean that there would not be support available for the development activities of smaller Finnish defence companies, but a centric part of the challenge was suggested to be that it is often easier for the companies to apply for large amounts of funding rather than smaller sums. As the R&D needs to be funded from a company's income or alternatively with large debt, it creates an incentive for the companies to keep the focus of their R&D activities in risk-averse projects, and risk-averse R&D projects are typically focused on incremental innovations on some existing products. Hence, the outcome of a company's R&D activities is rarely a unique product but a competitive product, and competitive products are seldom what the U.S. procures. Yet, where it would be beneficial for the companies to get access to a less restrictive source of funding, the matter is complicated from the funder's perspective as, eventually, the difference between welfare and investment comes from future expectations of cash flow(s). Nevertheless, the development of the ultimate unique products is needed, as having a unique product helps in (any) foreign market penetration, but perhaps more important than the unique products are the unique business cases.

5. Discussion

Transferring changes in the business environment onto the strategic plans of the organisations or as cautiously integrated goals of foreign politics requires careful consideration. It must be kept in mind that the interviews of this study have been mostly held with defence industry professionals, and the conversations have been held during the Ukraine war. While this does not directly undermine the credibility of the study, it is important to distinguish that the managerial and policy implications relating to the course of action have been derived during a time when the counter-arguments towards the industry's operation (and the methods associated) have been put on halt. This means that, for example, the enhancement of governmental support toward SMEs operating within the defence industry is not necessarily the best course of action during a time when the Western world is – at least temporarily – experiencing peacetime.

5.1. Theoretical Implications

The discourse held by scholars around the topic of defence industry exports – including arms trade – is often tied to the surrounding environment and current events in it. Scholars have tried explaining defence industry companies' export performance (Castellaci and Fevolden, 2014; Hartley and Belin, 2019), and models such as Castellacci and Fevolden's (2014) provide a framework for understanding the complex nature of defence product exports. Yet, as the scholars such as Christine Nielsen (2005) and Nicos Antoniades (2022) have indicated, many of the existing models either ignore or alternatively downplay the role of politics in the operation of the defence industry. While Antoniades' (2022) research has focused on how companies can gain political competitive advantage in the U.S. markets, his study that connects RBV to politics has yet to gain recognition amongst academics. Additionally, earlier mentions on how entire industries can gain political advantage have been made by David Yoffie (1988). Where Castellacci and Fevolden's (2014) research focuses on the companies that have been successful in their exports, in the context of this study, the firms that have been unsuccessful in their U.S. market entry and/or exports play equally – if not more important – role as the successful ones. Hence, examination of the role of politics – a factor that at least the smaller Finnish companies have little to no control over – ought to be considered crucial. Yet, the role of politics is challenging to introduce to the existing theories of IB and IO, and the approach taken in this thesis was to introduce politics to these theories through the buyer's viewpoint. Hence, as it is eventually up to the seller to market his/her product to the buyer, and by assuming that the buyer has recognised a pre-existing need for procurement, the buyer's decision-making in defence procurements can be simplified and captured with the help of the model of Trinity of Defense Industry by Taksás (2019). When findings derived from a PESTLE analysis are combined with the Trinity of Defense Industry's requirements, the forces behind a defence procurement become clearer. For example, while Taksás (2019) mentions that the elements of the Trinity are of equal value, and while this expectedly holds true from a product's perspective and under a favourable setting, when a defence procurement is made in an unfavourable setting – for example under bad economic (E) conditions with a bad economic forecast – the procuring nation is expectedly willing to quite literally "cut on the corners" of the Trinity. Alternatively, in the case of politics (P), a procuring nation entering a war can limit its options of sellers to nations that are willing to export defence products to countries that are participating in an ongoing war. Combining the buyer's and seller's viewpoints with

PESTLE and Trinity of Defense Industry, the possibilities of a procurement contract can be examined and thus estimated, and eventually, unrealistic or unfavourable combinations can be eliminated.

However, as earlier mentioned, it is eventually up to the seller to market his/her product to the buyer, and hence, considering further theoretical implications, this study was to establish a framework for defence industry companies to exploit in their strategy work concerning new (foreign) market entries by finding and connecting suitable models for the task. The process of international market entry has been priorly described by Franklin Root (1994), and Root's research on the topic has produced a four-step framework with steps for 1) assessing products and for foreign markets, 2) setting objectives and goals, 3) choosing the entry mode, and 4) designing the marketing plan. Root's model of the elements of an international market entry strategy (1994) was used as the theoretical framework that the models and frameworks PESTLE, Porter's Five Forces, OLI, and RBV were aligned with. Ultimately, the contribution of this thesis to the existing body of knowledge is how earlier scholars' theories and models align with each other. While there are noticeable gaps between the models, and some of the models are partially overlapping, they all serve a purpose in the process of planning and designing an international entry strategy.

Therefore, during this research, a description of how a defence industry firm planning on exports must be aware of the current state and future changes of their external environment - both domestically and in the foreign market – was made. The models used in explaining these phenomena in companies' external environments were PESTLE and Porter's Five Forces. The characteristics of the external environment play a crucial role in Root's suggested 1st step of assessing products and foreign markets. As the companies are experts on their products, and this thesis was not a case study, examination of how the companies should assess their products from the basis of the products' qualities was ignored. Additionally, as the external environment sets boundary conditions for companies' operations, the models of PESTLE and Porter's Five Forces were connected to Root's 2nd phase of setting objectives and goals.

An examination of the U.S. defence market was made during the study, and as described in this thesis, the U.S. market is perceived to be a challenging market to enter for foreign companies. Furthermore, there exists a strong political will to keep things that way. Hence, companies planning on U.S. market entry need to be careful when selecting their favoured entry model. To aid in the effort, the model of OLI that puts focus mainly on the external environment's requirements was connected to Root's 3rd step of choosing an entry model (in addition to the 1st and 2nd steps).

Yet, examining external factors alone is not sufficient as companies need to be capable of, for example, executing their formulated market entry plans. Hence, showcasing how a firm must also understand its internal capabilities and how these capabilities can set them apart from the competition was made. Furthermore, it was explained how firms need to possess dynamic capabilities to adjust their resources accordingly to the marketing strategies, which are ultimately based on perceived stakeholder needs in the market(s). Additionally, dynamic capabilities were suggested to be related to the process of assessing and formulating mutually value-adding partnerships. Hence, RBV, which puts focus on a company's internal factors, was connected to Root's 4th step of designing the marketing plan (in addition to the 1st and 2nd steps).

Finally, to describe the differences between the stakeholders, a model containing the categorisation of key stakeholders and of their roles in organisations was made. Where this model is not connected to the exploited earlier theories, it is to explain the process of marketing in the context of defence product sales by examining the subject from a more micro than macro level. When the operating environment of an individual is examined from this level, an observation can be made that complexity in the structures observable at the macro level can further complicate events at the micro level, and complicated events extend the requirements towards an organisation's capabilities. Due to the involvement of strict and extensive regulation and the role of politics, defence product sales are performed differently from most other types of industrial product sales, and the number of involved stakeholders from different organisations is more comprehensive than, for example, in the sales of everyday consumer goods.

Understandably, the suggested approach towards the examination of the subject is not without its flaws, as effects of concepts such as the Iron Triangle or Revolving Door are not covered in the model. The suggested concepts would aid in understanding how both the defence industry and politicians have power over the business environment of the companies – and how this power is exercised from one nation to another through foreign politics and/or defence procurements. In the modern global economy, money can be considered a weapon system (Joyce and Blankenship, 2020), and it appears that a position of power is the result of military power, and military power is nowadays achieved through technological superiority. Hence, when money is used as a weapons system, how a country can tie its foreign policy goals into the use of its money – especially in the context of defence products sales and procurements – defines the holder of the technological superiority. In terms of 2021 GDP, where Finland is a modest-size economy on a global scale (Wisevoter, no date), it does need to adjust and mostly has adjusted its expectations of "conquering" the U.S. market accordingly.

In summary, from a theoretical perspective, the established connection between Root's model of the elements of an international market entry strategy (1994) and the selected models of IB and IO introduces an alternative viewpoint and a simple framework for examining the foreign market entry planning process. However, whether the established connection is relevant either in theory or in the real world, or both, will be determined by the framework's usability, and usability is typically proven by the results achieved, which leads to a suggestion that the managerial implications of this thesis ought to be discussed.

5.2. Managerial Implications

The managerial implications suggest that the Finnish companies, which are convinced of their product(s) and see them fit for the U.S. national defence needs, should try actively to seek various forms of governmental support in their market entry efforts. Yet, as explained during the study, while governmental support would benefit a Finnish defence industry company with its sales effort(s), in the case of a country size of Finland, no amount of support from, for example, the Finnish Defence Forces' user-level experts would change the deeply embedded structures both within the foreign acquisition regulation system or in the U.S. society. The defence industrial autocracy of the U.S. is a result of planned actions and serves a dual purpose for the nation: It provides the best guarantee of national security through supply security, but it also provides means for achieving both short- and long-term foreign political goals. Hence, to acquire a foothold in the U.S. market, the current structuring around the market requires that a foreign company planning to enter the U.S. market must either enter the market by a) setting up enough local production in the U.S. to be considered as local by the U.S. standards, b) performing joint venture or exploiting another mode of partnership with a U.S. partner, or c) by gaining access to the U.S. market through offsets relating to a defence procurement performed by Finland. Additionally, there is the option of d) developing the ultimate unique product that will be procured from the company responsible for the development by either one of the U.S. defence industry giants or the DoD.

What seems to be internalised in the Finnish defence industry companies is that Finland will unlikely ever be a rival for the largest current – and likely future – defence industry's exporters (see Appendix 5), such as the United States, Russia, France, China, Germany, South Korea, or even Sweden, for that matter, but the defence market can provide various opportunities even for its smaller operators. Holding true, these opportunities are tied to the global defence market conditions – currently meaning the setting looming around the Ukraine war and associated tensions between the superpowers and atmosphere of increased military spending – and larger procurements that can also open doors for the companies that have been left out of the industrial participation agreements that are typically connected to these procurements. However, in the case of the United States, the barrier to overcome for Finnish companies is high outside of industrial participation, and procurements of the size that could warrant demanding industrial participation are not done on a yearly basis in Finland.

When considering the funding of the companies operating outside the industrial participation agreements, the implications are that companies should actively seek funding from government agencies, but with the known challenges, the potentially available funding should be met with a well-planned R&D that provides the basis for novel business cases to be sold. The role of the Finnish Defence Forces in development funding was considered to be questionable, as the defence forces were considered to be too small as a customer and unable to support companies in meaningful development projects – meaningful meaning the bigger development projects requiring large funding and the reason for this expectedly being the planned function of the Finnish military organisation and its associated budget constraint(s) towards R&D projects. As can be seen from the Finnish Defence Forces' guidelines towards what projects to undertake (Kosola, 2012), the military organisation is unlikely to be a partner capable of providing funding for Finnish defence product startups planning on the U.S. defence market entry anytime soon, and indeed, when the requirements towards funding associated with a new market entry to the Western defence markets are considered, the rule to follow is the sometimes-heard idiom in the context of U.S. markets:

“Go big or go home”. This underlines the importance of marketable business cases, both from the perspective of attaining external funding and entering the U.S. markets.

The door to the U.S. market is currently open. Still, even with the help of the F-35 acquisition, the high level of self-reliance in U.S. military procurements, differing needs considering national defence and associated product acquisitions, differences in U.S. defence market scale and structure, differences in societal structure, culture, and business culture propose challenges for the companies when a successful market entry is considered. This provokes the question, is the United States a market worth pursuing by the Finnish defence industry companies, and what should be the Finnish government’s, Finnish governmental organisations, or, ultimately, the Finnish Defence Forces’ role in supporting the Finnish domestic defence industry in this? Especially with the risk of inefficient spending of Finnish taxpayer money, the suggested question demands more attention from the public. With Finland being a NATO member and NATO being strongly reliant on the military strength of the U.S., the expected outlook is that Finland – along with the other NATO members – will need to further redirect its defence products acquisitions towards products offered by United States defence industry giants. Problems associated with the high reliance on these giants is a theme that has been recognised by the White House. Yet, will the attempts to distribute the market more evenly between the U.S. companies remains to be seen, and furthermore, how will the planned changes affect the chances of foreign companies trying to enter the U.S. defence market is similarly left without an answer.

For Finnish companies, the managerial implications relating to the hardship of exports outside of industrial participation can be divided into three categories. If a company’s sales do not take place outside of offset agreements, it can be due to 1) Finnish firms’ internal capabilities, such as lack of target market knowledge, insufficient production capabilities from the customer’s perspective, and/or gap in technology competence, 2) the quality of a company’s external collaborations, such as its ties to the end-users, government officials both domestically and internationally or the quality of a distribution partner or the counter-party in a JV performed, 3) external environment, meaning the factors covered by PESTLE, such as the U.S. defence market structure and the surrounding economy and its institutions, or the potential limitations proposed by Finnish export legislation.

Behind which of the three the reason for the hardship in U.S. sales and exports is found, the managerial implications adjust accordingly:

Internal Capabilities: Firms that have shortcomings in their internal capabilities should re-evaluate their chosen market entry model and estimate if some of the shortcomings could be overcome through external collaborations through a partnership. If that is an option, the company should consider if the partnership could raise concerns about compliance with the external environment's requirements. If a partnership is not an option for the company, the company should either develop its internal capabilities, which is often costly and takes time or search for an alternative market to enter. As mentioned by one of the industry experts, not all Finnish companies are on par with the global competition – especially when the U.S. market's specific needs are concerned.

External Collaborations: If challenges are found in a company's external collaborations, the company should either consider switching its collaboration partner(s) or developing internal capabilities to meet the requirements of a different export model. Before deciding on either, the company should be aware of potential restrictions proposed by its external environment. As described by an industry expert, for example, changing a partner from a domestic one to a foreign one can open markets in one place but close markets elsewhere.

External environment: If the challenges are found in the external environment, an individual company typically has very limited options to affect the external environment it operates in. As with the case of shortcomings in internal capabilities, a company should either develop its internal capabilities to overcome the external environment's challenges or alternatively try to establish partnerships for the same purpose. Focusing on either has its downsides, as focusing on internal capabilities is costly and does not guarantee to overcome of the external environment's challenges, and focusing on external collaborations can come at the expense of internal capabilities as a company's external environment is associated with constant evolution and hence, changes in the external environment places its demands for companies to develop their internal capabilities. As described by the industry experts interviewed, on a larger scale, the negative effects of the latter decision, meaning focusing on external collaborations, can be seen in the current state of the Finnish defence industry, and additionally, grow the risk of centric defence industry companies entering an "offset loop". Like a nation with the consequences of its procurement decisions, a company can get stuck to their partnering decisions.

Nevertheless, for Finnish companies, entering the U.S. defence market happens on U.S. terms – and changes to this are not to be expected. Hence, from the basis of this study, the suggested way to enter the U.S. market is by exploring the opportunities provided by partnerships and various forms of inter-organisational activities with U.S. companies. For the companies weighing their decisions on partnering with U.S. companies: Business still is – and likely always will be – much about trade-offs, and so is entering the U.S. defence market without the aid of local firms. So far, without the aid of a local entity, offsets, or the ultimate unique product, the success of Finnish defence companies' U.S. market entries has been negotiable. Hence, Finnish companies wanting to enter the U.S. defence market should be actively searching for potential partners from amongst U.S. companies as this is expectedly the quickest and most cost-efficient way of new market entry in the context of a well-barriered U.S. defence market. While all forms of partnerships come with additional risk(s) when compared to, for example, direct exports, the chances of successful market penetration increase in relation to the risk taken. Where responsibilities in a partnership are often distributed during negotiations concerning the cooperation, during strategy work, chances of achieving procurement contract(s) with an offering based on the partnership can be estimated with the suggested combination of PESTLE, Porter's Five Forces, OLI, RBV, and the Trinity of Defense Industry. Eventually, by searching for partners with complementary resources and capabilities, a firm can enter a situation where the decision to approach a U.S. company for a business proposal can be made (or rejected). Yet, before approaching a U.S. company, considerations towards the potential outcomes of the partnership and how the outcomes can be seen from the perspective of U.S. regulators (and/or U.S. industry rivals) should be considered; FDIs concerning defence products designing and manufacturing are to be expected to be reviewed by the Committee on Foreign Investment in the United States (CFIUS) – this being largely due to FIRRMA (see Appendix 3) – and cleared under the National Industrial Security Program (NISP). Indeed, as mentioned by all the company representatives interviewed, contract negotiations play a centric role in the U.S. and, at times, can be time-demanding and require vast amounts of resources, and, as shown by the study of Chi and Seth (2009), whether to undertake a JV can be critically dependant on how the partnership is structured.

5.3. Policy Implications

From the basis of the interviews performed for this study, a conclusion can be drawn that Finnish defence product sales to the U.S. are tightly linked with earlier offsets and current industrial participation. While the hopes and expectations within the Finnish defence industrial base are that procurement project(s) like F-35 would open doors for Finnish companies, it is yet to be seen whether the Finnish companies will be able to perform sales to the U.S. accordingly. In Denmark, which is an original partner country in the F-35 programme, the success in sales has been negligible, but that does not automatically mean that Finland would face similar results. Recognised, the U.S. defence market is similarly challenging for the Finnish companies as it is for the Danish companies, as the structure built around the market remains unchanged for foreign companies. This holds true, especially with product offerings that consist of tangible products; The chances of penetrating the market are slim, and considering the challenges in partnering with the U.S. defence giants, it should be remembered that Denmark, for example, is an original F-35 partner nation. However, Finnish companies have been successful in selling software solutions to the DoD. This suggests that the interest of, for example, the Finnish Confederation of Industries towards enhancing the export performance of digital products and/or services has an empirical foundation.

Yet, focusing too much governmental support on the companies that operate in the field of digital solutions involves risks of their own; while lines of code can potentially disarm an incoming missile, they certainly do not stop a bullet. As the Ukraine war and its casualties have demonstrated, while technology gives an edge and ultimately decides the winner, much of the modern war is still fought with conventional weapons. In this sense, creating business opportunities for one segment can lead to the unintentional creation of vulnerabilities in other(s).

Be that with tangible products or not, if the Finnish companies are unable to penetrate the U.S. market without the aid of offsets relating to industrial participation agreements, and the procurements of Finnish Armed Forces start to concentrate on the products of U.S. manufacturers increasingly, the risk is that the centric companies of Finland’s defence industry will gradually enter “offset loop”, thus, start being increasingly dependent on offsets and simultaneously being unable to counter or control the potential negative effects of U.S.

offset strategy. While the challenges concerning an offset loop are dependent on whether offsets – or may that be industrial participation – are considered problematic or not, a thing worth considering is that when procurements are made from foreign nations, supply security is often compromised, and as mentioned by an interviewee, defence sales – and hence procurements – are built on trust. With the offset loop, the importance of trust is elaborated; oversight and management of, for example, efficient funding of R&D is done by the selling nation, and if oligopolies can exercise power over the seller's market, the potential negative effects of the situation are felt in all the nations involved.

Indeed, one of the problems relating to the potential offset loop is that while NATO is seen as a safeguard by most Finnish citizens, it is also seen as a political alliance by most politicians. In addition, NATO is seen as a defence alliance by the representatives of the armed forces but also seen as a selling organisation and/or sales channel by the companies operating within the defence industry. Avoiding further use of theories such as Public Choice by James Buchanan and his associates (Shughart II, 2013) in the context of this research, which of these perceptions is right can be seen as a matter of debate, but who gets the most out of their definition when measured in financial terms seems obvious. Reminding, the largest of the defence industry companies are not government-owned but privately owned listed companies, and indeed, as described by officers from the Center for Army Lessons Learned (2009) and scholars Renanah Joyce and Brian Blankenship (2020), money can be seen as a weapons system – and at least in theory, can be used as such by anyone. However, as suggested by the defence industry analysts, the procurers' options seem to be limited, especially if the Western defence industry's consolidation continues (Béraud-Sudreau, 2020; Department of Defense, 2022; Mantin and Tishler, 2004), and indeed, NATO currently provides the best safeguard for Finnish national defence, and in short, of all the available options it can be considered as the best of alternatives – this notion holds especially in the current status of world peace.

Developing competencies of the European defence industry has been a topic examined by scholars, and currently, the EU seems to take things in a similar direction as suggested by the scholars; to enhance the industry's innovation, the structure of the industry needs reform. Where, for example, EDF funding is planned to aid Europe in developing its own defence industry and hence its own defence capabilities, a question looming around the subject is whether developing and upkeeping a competitive industry is a feasible option for the European Union. Another question to consider is whether the funding can help in reforming the European defence industrial base or eventually just enter into the larger European defence companies through the smaller and medium-sized ones. If so, will the funds ultimately end in the largest of U.S. contractors as the balance of trade is heavily tilted towards the West? So far, European defence companies have often failed to compete with the U.S. ones on the global markets and many of the existing product categories. When nations like South Korea are trying to establish themselves in the European markets with so far unrivalled production capabilities in particular defence products and being able to provide attractive performance for the price, the business case for European defence products seems to be increasingly found from technology competence. Yet, as earlier suggested in this study, and empirically perceived from various industries, developing the ultimate unique products takes large investments and equally involves large risks. At least so far, the United States has been unrivalled in defence products-related R&D spending.

5.4. Topics for Future Research

From the viewpoint of both the national defence and avoidance of inefficient government spending, further research towards the avoidance of the suggested offset loop is required. Additionally, how to include the concept of Iron Triangle and the concept of Revolving Door further in the context of defence industry sales and exports, whether it be in the case of FMS or Finnish defence products sales and exports, and to procurement decisions made by the foreign governments and/or contractors would be beneficial in expanding the understanding concerning modern arms trade and wellbeing of citizens of the two or more nations involved. Alternatively, if offsets are to be taken as a defence industry-related standard and hence mostly ignored as a source of concern, further research on the determinants of mutually beneficial business partnerships between the Finnish and U.S. companies should be performed. While these partnerships can be formed outside of offset agreements, the trend has so far been to form them in the context of countertrade or industrial participation. Topics such as between which size of companies the partnerships should be formed and how these partnerships should be structured to overcome both the typical and more industry-specific challenges of various shared business activities in the context of, for example, joint ventures, expectedly provide topics for research that can hold value not only financially but also academically. Especially if the consolidation process of the defence industry continues, an interesting topic(s) of research should be to whom should the Finnish companies be sold, and more precisely, how? If not, research on how the Finnish Defence Forces could be further included in the R&D projects and processes of Finnish defence industry SMEs would be a topic of interest for all the parties involved. Additionally, whether Finland should learn from America's example of structuring its defence industry and embedding the defence industry's societal role could be researched.

5.5. Conclusions

Understandably, there is no uniform approach towards enhancing the sales and export performance of Finnish defence industry companies in the demanding defence market of the United States. While the Finnish defence industry companies operating outside of the industrial participation agreements might face similar challenges when trying to sell to the well-defended U.S. market, the companies can have vastly differing needs for the forms of support that they require. Expectedly, for the larger companies that have established themselves within the home market, it is more beneficial to try to steer their operations towards industrial participation as the contents of these agreements are not similarly exposed to market competition and, for example, a company's importance from both economic and national defence perspective can affect whether a company is being included in the industrial participation or not. Whether steering government procurements to favour industrial participation is an option for the largest of the Finnish defence industry companies remains unclear, and typically neither (be that steering of a company's operations or government's procurements) is an option for the smaller companies.

There are ways the Finnish government can ensure that the companies within the industry get to have more equal chances of approaching the U.S. market, or any foreign market for that matter. This can be done by, for example, further redirecting Finnish Defence Forces' smaller procurements towards local options and by finding the will and ways for more efficient funding of the smaller firms in the industry – the latter being the promoted policy both within the European Union and the United States. In the long run, this may not only serve the purpose of the smaller and less established companies operating within the industry but also benefit both Finnish and U.S. societies. Eventually, it is the taxpayers' money that is being used in making the procurements and, to a certain extent, funding the R&D within the industry. Recognised, especially as Finland is not one of the centric nations in the global defence products market, an associated issue in state funding without the involvement of state ownership is a risk of funded companies being acquired abroad by larger defence industry multinationals. While the money invested would get compensated when these acquisitions happen, the expected cashflows are cut short, and if the products developed are required in Finnish national defence, the products need to be purchased abroad. Yet, getting the best and most suitable products – be these procured from abroad or manufactured domestically – to support their nation's defence should be what the taxpayers are expecting, as that is what gives the best guarantees of defence security. Then again, Finland is in a position where it needs to redefine the role of national defence as the product requirements of national defence, and NATO's alliance-level defence can be contrary in some cases. In other words, the ultimate question of whether to make or buy needs to be approached from a different angle in the future.

Besides the formerly mentioned and supplementing both the managerial and policy implications of this study, no matter the decisions made by the Finnish government regarding its defence procurements or the decisions made by the Finnish defence industry companies concerning their defence products sales and exports to the U.S., a notion made during the study, and a notion to further evaluate within the organisations involved, is that the capabilities required for any of the entry modes are in case of most companies either needed to be purchased – or rented – from (typically) abroad or developed in-house. The former was mentioned to be challenging as finding the right people to, for example, act as a company's agents in case of indirect exports is hard, and compensation demanded by the agents can be high – sometimes too high by the people that would have sufficient skills and connections for the task at hand. With that said, when the decision to hire an unsuitable agent is made, the company responsible for the recruitment decision can face a situation where the money spent can be treated as sunk costs – this being the case especially if the plan of the U.S. defence market entry is reversed and not revisited. Additionally, when, for example, making sales to the larger U.S. defence companies, the requirements towards understanding the U.S. legislation – both federal and state level – start to arise as the foreign companies are often met with a contract draft that requires considerable effort towards contract negotiations for making the contract mutually agreeable and, with the associated risks are internalised, beneficial for both. In direct exporting, the need for knowledge concerning regulative frameworks around government procurement starts to arise, and in the case of both the knowledge of U.S. legislation and regulations, as with the agents, the required expertise is often only found abroad and-or is financially unattainable for many of the companies. With partnerships, JVs, and FDIs, the list of required capabilities gets longer, and expectedly, the associated costs of attaining them become similarly higher. Leaving the question hanging: what can be done with this? Focusing on the latter, developing these capabilities “in-house” in Finland can eventually only be done to a certain extent, and tasks like acquiring networks from the U.S. is still done by either travelling, sending, or relocating people to the United States. This costs money, and only a few of the Finnish defence companies are either capable or willing to make these investments – leaving the task to the government organisations. This puts emphasis on the suggestion made during the interviews that more Finnish defence companies should have access to these organisations’ resources and capabilities, and that is if the plan concerning the future of both the European and Finnish defence industries is to foster innovation in the industry and broaden the defence industrial base of the regime(s). Further considering the extent to which and where the capabilities for the disposal of Finnish defence companies can be developed and be the answer in domestic institutions, a question worth pondering is whether Finland should take a more American approach towards its arrangements concerning, for example, developing the capabilities within its universities by establishing, promoting, and maintaining more visible but also more profound connections between the Finnish Defence Forces, defence industry, and tertiary education institutions.

With the priorly mentioned, an additional problem brought up during the interviews was that the Finnish defence industry has challenges in attracting future talent as the younger generation(s) appear to be more demanding towards the ethical considerations and the aspect of sustainability connected to one’s occupation. While the two are valuable and irrelevant to an apparently ongoing trend of practising postmodernism in the examination of the surrounding reality, challenging the role of the defence industry seems futile from the viewpoint of critical realism. Throughout time, arms have played a crucial role in human development. Hence, one might go as far as arguing that the defence industry is equally crucial as the defenders themselves, as without the arms, the early defenders of our humankind would have lost their chances against more capable carnivores during prehistoric times. In the modern days, while the role of preying carnivores has faded, it appears that our humankind is under a constant threat from within the specie. Indeed, while recognising the enemy has become more challenging, its definition has stayed the same and is still associated with a threat. In this sense, the rules of prehistoric times still hold, and as recent events have proven, we still need arms to defend ourselves and the things we hold to value.

Indeed, while the defence industry evokes various strong emotions in different people, and the tone of discourse around the industry and the topic of national defence, in general, varies with the environmental changes, the industry and its related phenomena should be subject to more research as a) national defence concerns us all, and b) avoiding the spread of mostly emotion-based opinions would be beneficial in removing the stigma over the Finnish defence industry and in clarifying both the politicians' and the industry's role in the Finnish national defence.

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Appendices

Appendix 1:

Conversion rates based on the European Central Bank average from the period of 4 January 2021 to 31 December 2021 (except for Danish Krone (Politi, 2023))

EUR 1	=	DKK 7,4400
EUR 1	=	NOK 10,1636
EUR 1	=	SEK 10,1461
EUR 1	=	USD 1,1827

Source: European Central Bank;

https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_reference_exchange_rates/html/index.en.html

Appendix 2:

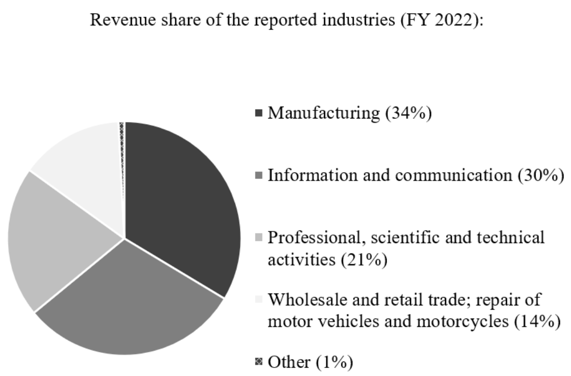
Statistics-based information on the Finnish defence industry

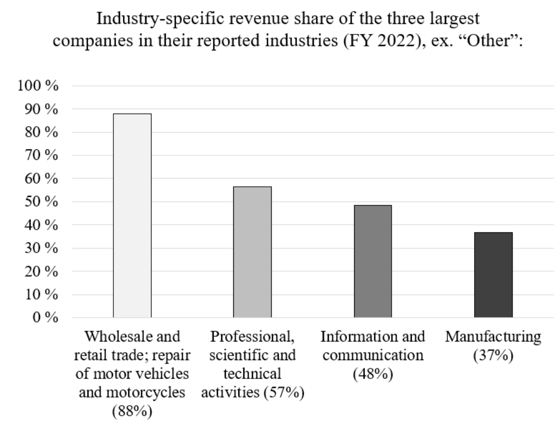
The Finnish defence industry is perhaps best represented by the information and statistics gathered by the Association of Finnish Defence and Aerospace Industries (AFDA), and the following information in this appendix is mostly based on the published material by the AFDA. When searching for Finnish defence industry companies operating in the defence industry, one quickly meets a limitation concerning Standard Industrial Classification TOL 2008 categorization. The TOL 2008 is a classification system used in Finland, and it consists of five hierarchical levels (illustrated with code G 45191):

1. The character level (main groups); G Wholesale and retail trade; repair of motor vehicles and motorcycles
2. The 2-digit level; 45 Wholesale and retail trade and repair of motor vehicles and motorcycles
3. The 3-digit level; 451 Sale of motor vehicles
4. The 4-digit level; 4519 Sale of other motor vehicles
5. The 5-digit level; Wholesale of lorries and other heavy motor vehicles

The Finnish companies, similar to the companies in the United States that are to use North American Industry Classification System NAICS 2022, need to pick an industry where they operate based on their primary function, and most of the Finnish defence industry companies practice manufacturing. Where in Finland, the TOL 2008 complies with the NACE Rev. 2 utilised by the European Community for the first four digits, and localization has been done only in the 5-digit categories. Both classifications have a very limited selection of categories for companies practising defence products manufacturing; for example, Patria Land Oy – best recognized for their armoured wheeled vehicles (AMV) and indirect fire systems – is labelled under the category 45191 (Wholesale of lorries and other heavy motor vehicles) and in 2021 there were 117 other corporate legal entities operating in the same category (Statistics Finland, no date) and which of only two are listed as AFDA members. Undoubtedly, not all – if any – of the remaining 114 companies in this TOL 2008 group manufacture defence products. In NAICS, the limitations concerning these subcategories are less restrictive, expectedly, due to the U.S. having both more “purely” defence products companies and more economic value in defence product manufacturing.

In short, when the reported revenues of the AFDA members are examined through sources such as Asiakastieto, one quickly comes to the conclusion that in many of the largest AFDA member companies, most of the revenue is generated from industries other than the defence industry. This is due to AFDA's estimate of the size of the Finnish defence industry being around 1,9 billion euros in 2021 (AFDA, 2022), where the combined revenue of the AFDA members, according to Asiakastieto, was little over 6,7 billion euros during the same year.





Revenue-related information of AFDA members

When the combined revenue of AFDA member organizations and how its distributed between their reported primary industries according to TOL 2008 is examined, manufacturing is responsible for 34% of the total revenue, whereas the information and communication sector is responsible for 30%. With just 30 companies in the sector, this gives an indication that per company, the revenue-generating capability of the information and communication sector would be larger. Yet, as indicated in the second chart, the three largest companies in the information and communication sector are responsible for nearly half of the sector's revenue, and in fact, many of the smallest – both in revenue and personnel – AFDA member companies can be found from that particular sector.

A notion to be made is that the largest of the companies employ a considerable amount of people on the Finnish scale. Additionally, an interesting fact concerning the properties of the two of the largest sectors in employee headcount is that the average size of a company would be considered a large enterprise with 250 or more employees. However, the mean in both is around 100 employees, suggesting positively skewed distributions.

AFDA member companies as employers (according to TOL 2008 main groups)

Employee statistics		Companies	Emp. total	Emp. percent	Emp. mean	Emp. median
C	Manufacturing	68	8901	26,29%	135	36
J	Information and communication	30	10955	32,35%	391	98
M	Professional, scientific and technical activities	21	11976	35,37%	599	113
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	16	1876	5,54%	117	19
H,K,O	Other	3	152	0,45%	51	62

20 largest AFDA members

#	Company name	Revenue (2021)	Profits (2021)	Personnel	TOL 2008	
1	CGI Suomi Oy	452 634	55 926	3316	J	62010
2	Fujitsu Finland Oy	356 265	10 506	1588	J	62010
3	Accenture Oy	349 264	18 247	2492	M	70220
4	Vaisala Oyj	343 315	23 539	1411	C	26510
5	Atea Finland Oy	337 951	6 711	386	G	46510
6	Scania Suomi Oy	286 997	29 590	593	G	45191
7	Cargotec Oyj	267 443	-6 987	207	C	28220
8	AFRY Finland Oy	227 809	17 721	2179	M	71127
9	Kongsberg Maritime Finland Oy	219 542	49 087	500	C	28990
10	VOLVO FINLAND AB	219 516	14 229	419	G	45191
11	Millog Oy	217 305	17 951	1050	M	71129
12	TietoEVRY Oyj	179 910	-54 718	98	J	62030
13	Patria Aviation Oy	165 362	6 994	1198	C	26510
14	Teknologian tutkimuskeskus VTT Oy	153 716	16 498	2130	M	72193
15	Istekki Oy	153 074	2 471	833	J	62020
16	Oy IBM Finland Ab	148 772	26 221	357	J	63110
17	Digia Finland Oy	143 412	14 960	1194	J	62010
18	Sitowise Oy	138 669	9 541	1566	M	71121
19	Rauma Marine Constructions Oy	135 003	-53 887	208	C	30110
20	WithSecure Oyj	125 761	-12 632	573	J	62010

Sources: AFDA (2022), Asiakastieto; https://www.asiakastieto.fi/ and Statistics Finland; https://www.stat.fi/en/luokitukset/toimiala/

List of AFDA members (arranged according to revenue)

#	Company name	Revenue (2021)	Personnel	TOL 2008	
1	CGI Suomi Oy	452 634	3316	J	62010
2	Fujitsu Finland Oy	356 265	1588	J	62010
3	Accenture Oy	349 264	2492	M	70220
4	Vaisala Oyj	343 315	1411	C	26510
5	Atea Finland Oy	337 951	386	G	46510
6	Scania Suomi Oy	286 997	593	G	45191
7	Cargotec Oyj	267 443	207	C	28220
8	AFRY Finland Oy	227 809	2179	M	71127
9	Kongsberg Maritime Finland Oy	219 542	500	C	28990
10	VOLVO FINLAND AB	219 516	419	G	45191
11	Millog Oy	217 305	1050	M	71129
12	TietoEVRY Oyj	179 910	98	J	62030
13	Patria Aviation Oy	165 362	1198	C	26510
14	Teknologian tutkimuskeskus VTT Oy	153 716	2130	M	72193
15	Istekki Oy	153 074	833	J	62020
16	Oy IBM Finland Ab	148 772	357	J	63110
17	Digia Finland Oy	143 412	1194	J	62010
18	Sitowise Oy	138 669	1566	M	71121
19	Rauma Marine Constructions Oy	135 003	208	C	30110
20	WithSecure Oyj	125 761	573	J	62010
21	Solita Oy	124 993	930	J	62010
22	Airbus Defence and Space Oy	121 236	351	J	62010
23	Sako Oy	108 180	351	C	25400
24	Valtra Oy Ab	103 549	994	C	28300
25	REJLERS Finland Oy	95 147	945	M	71127
26	Marioff Corporation Oy	93 169	305	C	28290
27	HT Laser Oy	92 683	335	C	25620
28	Finnair Technical Services Oy	87 541	624	C	33160
29	Reaktor Innovations Oy	80 077	478	J	62010
30	Oy Forcit Ab	71 999	250	C	20510
31	Bittium Wireless Oy	61 471	500	M	72193
32	Nammo Lapua Oy	59 583	229	C	25400
33	Insta Defsec Oy	53 908	378	J	62020
34	Patria Land Oy	51 667	242	G	45191
35	Nixu Oyj	39 370	274	J	62020
36	Aspocomp Group Oyj	39 123	141	C	26110
37	ThyssenKrupp Aerospace Finland Oy	37 035	20	C	25620
38	Toijala Works Oy	34 918	176	C	28990
39	Elomatic Oy	32 947	140	M	71127
40	Huld Oy	32 324	390	M	71127
41	Senop Oy	29 678	54	C	25620
42	Miilux Oy	29 287	103	C	28990

43	Jetflite Oy	29 012	62	H	51102
44	ICEYE Oy	27 897	204	M	71121
45	Nammo Vihtavuori Oy	25 386	102	C	20510
46	Patria Oyj	23 348	88	O	84110
47	FSP Finnish Steel Painting Oy (FSP For Surface Protection Oy)	19 597	161	C	25610
48	Saurus Oy	18 098	67	C	29200
49	Etteplan Oyj	17 992	69	M	71127
50	Champion Door Oy	17 490	59	G	46699
51	Savox Communications Oy Ab (Ltd)	17 271	102	C	26300
52	Inspecta Sertifiointi Oy	16 042	72	M	71202
53	Conlog Oy	15 703	88	C	29200
54	Nordic Traction Oy	15 051	55	C	25930
55	Boomeranger Boats Oy	13 648	41	C	30110
56	Insta ILS Oy	13 644	94	C	33130
57	Mectalent Oy	13 385	93	C	25620
58	Sisu Akselit Oy	12 754	38	C	29320
59	SSH Communications Security Oy	12 511	90	J	62010
60	Rohde & Schwarz Finland Oy	12 329	23	G	46699
61	Temet International Oy Ltd	10 762	46	C	25110
62	Varjo Technologies Oy	10 695	127	J	62020
63	Saab Finland Oy	10 556	66	G	46140
64	Inission Lohja Oy	10 364	71	C	25990
65	DA-Group Oy (DA-Design Oy)	10 104	85	M	71127
66	Combitech Oy	10 006	97	J	62010
67	Mastsystem Int'l Oy	9 808	28	C	25110
68	Furuno Finland Oy	9 662	44	M	71127
69	Noptel Oy	9 332	36	C	27900
70	Bertin Environics (Environics Oy)	8 383	53	C	26510
71	Robonic Ltd Oy	8 330	14	C	33160
72	Aker Arctic Technology Oy	8 045	52	M	71127
73	Suomen Erillisverkot Oy	7 933	125	J	61200
74	C.P.E. Production Oy	7 841	32	C	14190
75	Finn-Savotta Oy	7 011	42	C	13922
76	OY Plastex Ab	6 910	35	C	22220
77	Suomen Huoltovarmuusdata Oy	6 443	20	J	62030
78	Finnsonic Oy	6 363	25	C	25990
79	Jet-Tekno Oy	6 287	24	C	25110
80	Marine Alutech Oy Ab	6 260	51	C	30110
81	Veikko Nummela Oy (Esteri Group)	5 862	25	G	47529
82	FinnProtec Oy	5 826	5	G	46699
83	Lumikko Oy	5 697	22	C	28250
84	Raikka Oy	5 465	29	C	25620
85	Alamarin-Jet Oy	5 309	22	C	30120
86	Okun Koneistuspalvelu Oy	5 261	36	C	25620

87	Bevenic Oplatek Group Oy (Bevenic Oplatek Oy)	5 083	46	C	26600
88	Lajupek Oy	4 659	34	C	25620
89	Cojot Oy	4 572	14	C	26300
90	Beyond Gravity Finland Oy	4 252	28	C	30300
91	Oy Telva Ab	4 037	13	G	46140
92	Milectria Oy	3 969	28	C	27320
93	Milcon Oy	3 790	15	G	46691
94	KT-Shelter Oy	3 549	7	C	13960
95	ATLAS ELEKTRONIK Finland Oy	3 277	10	J	62010
96	FY-Composites Oy	3 255	20	C	22290
97	KAR-Lehtonen Oy	3 218	14	C	29200
98	Patricomp Oy	3 161	31	C	25110
99	Harri Haavikko Oy	3 034	16	C	25620
100	Observis Oy	2 840	23	J	62020
101	Systematic Oy Finland	2 817	5	J	62020
102	Nokian Metallirakenne Oy	2 743	26	C	25110
103	Defia Oy	2 543	18	C	26110
104	Mikro-Pulssi Oy	2 472	13	C	27900
105	Silverskin Information Security Oy	2 468	23	J	63990
106	Kenno Tech Oy	2 399	8	C	25110
107	BaseN Oy	2 299	19	J	62010
108	Fitelnet Oy	1 960	7	J	63110
109	Bevenic Combinent Oy Ab	1 938	12	C	27900
110	Sarco Oy	1 921	16	C	27900
111	Verkotan Oy	1 881	19	M	71202
112	Advenica Oy	1 869	n/a	J	62010
113	Suomen Terästekniikka Oy	1 868	14	C	25610
114	Geneset Powerplants Oy	1 640	9	G	46691
115	IC2 Feeniks Oy	1 498	11	M	71202
116	Hentec Oy Ab	1 473	8	M	71129
117	Telenor Maritime Oy	1 260	21	C	26300
118	Toptester Oy	1 204	9	M	71202
119	Harp Technologies Oy	1 141	11	M	72193
120	Kongsberg Defence Oy	1 081	5	C	32991
121	Arctest Oy	890	8	G	46462
122	Isaware Oy	797	n/a	J	62010
123	Cleamix Oy	731	8	G	46462
124	ReOrbit Oy	729	3	J	61300
125	ConFoot Oy (Oy ConFoot Ltd)	680	2	C	29200
126	Image Soft Oy	576	10	J	62020
127	Captium Security & Defence Oy	569	n/a	C	25990
128	Kuva Space Oy	494	7	C	30300
129	Nordic Drones Oy	461	5	C	30300
130	XD-Invest Oy	459	2	K	64990
131	Nsion Oy	436	17	J	62010

132	Ingenjörsfirma Trans-Auto Oy Aktiebolag (Trans-Auto Oy)	435	4	G	46140
133	Crosshill Oy	256	2	J	62010
134	Glenair Oy	160	1	G	47410
135	FCS Avionics Oy	92	n/a	M	72193
136	Silent Steel Oy	54	n/a	C	25620
137	Exote Oy	28	3	C	24100
138	Anarky Labs Oy	8	7	J	62010

Members, but excluded from the list: Aufwin Defence Systems Oy, Dobbelgänger Oy, Frestems Oy, Ilmatieteen laitos, InPlace Solutions Ab Oy, Jyväskylän Ammattikorkeakoulu Oy, Jyväskylän yliopisto, Oulun Ammattikorkeakoulu Oy, Oy Scantarp Ab, Scandinavian Seaplanes Oy, T & G Sarkkinen Oy

Sources: AFDA (2022), Asiakastieto; https://www.asiakastieto.fi/ and Statistics Finland; https://www.stat.fi/en/luokitukset/toimiala/

(For the full dataset, contact: matteus.palola(at)yahoo.com)

Appendix 3:

What is FIRRMA?

Signed by former president Donald Trump, FIRRMA, an abbreviation of the Foreign Investment Risk Review Modernization Act of 2018, is a law that has been made to strengthen and modernise the Committee on Foreign Investment in the United States (CFIUS), which is a multi-agency government body that is chaired by the Secretary of the Treasury. CFIUS is the committee responsible for reviewing foreign investment for national security considerations, and CFIUS is authorised to review certain transactions involving foreign investment in the United States. The right to review foreign investment-related transactions has been given to CFIUS to determine the effect of such transactions on the national security of the United States. (U.S. Department of the Treasury, n.d.)

While FIRRMA, with the sense of Congress, is intended for blocking transactions from countries of "special concern" that have a strategic goal of acquiring critical technologies (and/or infrastructures) with the capability of impairing U.S. national security, the law can potentially be applied to any transaction by a foreign person or government that can have negative effects towards the U.S. national security through, for example, cumulative control over critical technology, critical infrastructure, or critical material(s). (Jackson and Cimino-Isaacs, 2020)

FIRRMA, expanding the CFIUS jurisdiction over foreign investments in U.S. companies responsible for manufacturing, fabricating, developing, producing, designing, or testing critical technologies, alone is not to be considered as a potential source of concern as Finland and the U.S. have held good terms in both politics and business. Yet, during one of the interviews, it was said that foreign disturbances to the U.S. defence market are unwanted, this especially being the will of local industry operators, and hence, a thing worth considering is whether the military-industrial complex would be capable of preventing foreign FDI through its governmental networks by pleading to the FIRRMA. While an FDI with a financial value large enough to provoke the interest of the industry giants would unlikely be performed by a Finnish entity, the transfer of technologies in the context of, for example, strategic alliances or joint ventures could potentially raise their curiosity. How are intellectual property rights (IPR) treated after a prevented joint venture where the transfer of, for example, foreign-origin technology has been completed? Concerns such as this should be considered during the contract negations – further underlining the importance of U.S. (defence) market knowledge and the knowledge of the multiple bodies of regulation associated.

Appendix 4:

The Basics of Foreign Comparative Testing Programme (FCT)

FCT is a DoD's programme for evaluating and introducing foreign-origin alternatives in the context of defence procurements. The purpose of FCT is to test items and technologies having high Technology Readiness Level (TRL) and that are from U.S. foreign allies or other friendly nations. The FCT programme exists to satisfy recognized defence requirements economically and quickly. FCT is operated by the Comparative Testing Office (CTO), and according to empirical evidence, FCT has benefitted U.S. taxpayers by leveraging foreign R&D to improve U.S. armed forces' operational performance. (Department of Defense, 2007)

When discussed with an interviewee, several points were made concerning FCT:

- For a company to get into consideration for FCT, the end-user must have a distinctive need in some of the defence branches, or the end-user is considering acquiring new technology.
- For the seller, FCT also provides a possibility for financing the testing of a foreign system.
- For the purchaser, FCT is an opportunity to verify that a foreign system is more affordable in terms of the purchase price – keeping in mind the increased comparison price set on foreign products in defence procurements due to the Buy American Act – and more advanced technologically.
- FCT can give legitimacy to bypass the Buy American Act, but both conditions (price, technology) must be met with a significant difference.
- Companies from outside the United States applying for FCT have no direct possibility to pressure towards the appliance of FCT.
- DoD has its own organization for FCT consisting of people commanded from different branches of the armed forces, who are tasked with promoting FCT's activities: International marketing of FCT's activities and the opportunities it creates, and searching for potential products from the world and other activities aimed at developing cooperation.

- FCT's organization is easy to access – it is possible for them to propose different technologies, and if necessary, they will take the matter further to their own branches of the U.S. armed forces.
- FCT does not actually make decisions; the organization has budget money, but they always need an end-user and/or -customer in the background.
- For the seller, FCT can be seen as an agent/promoter for foreign companies and their offerings.

Appendix 5:

Arms exports by nation (USD, in millions)

	2017	2018	2019	2020	2021	Total	Global rank
United States	**11909**	**9824**	**10923**	**9233**	**10613**	**52502**	**1**
Russia	6234	7097	5531	3686	2744	25292	2
France	2343	1996	3713	2484	3954	14490	3
Germany	1948	1073	1000	1217	914	6152	5
Italy	774	496	351	847	1717	4185	6
United Kingdom	1173	704	957	556	601	3991	7
South Korea	742	1056	694	778	566	3836	8
Spain	817	704	303	962	612	3398	9
Israel	1268	704	349	400	606	3327	10
Turkey	169	231	239	233	380	1252	12
Sweden	80	155	215	286	332	1068	13
Ukraine	376	259	162	116	86	999	14
Switzerland	173	240	216	182	147	958	15
Canada	70	115	223	109	119	636	17
Norway	146	59	31	72	58	366	22
Finland	**31**	**45**	**27**	**12**	**14**	**129**	**28**
Denmark	22	31	4		27	84	31

Source: SIPRI Arms Transfers database; https://www.sipri.org/databases/armstransfers

Arms imports by nation (USD, in millions)

	2017	2018	2019	2020	2021	Total	Global rank
South Korea	1052	1100	1480	1292	720	5644	7
United Kingdom	1002	519	342	639	893	3395	12
United States	**522**	**378**	**844**	**747**	**738**	**3229**	**13**
Israel	540	546	521	372	610	2589	14
Norway	352	527	401	427	492	2199	16
Turkey	428	488	760	94	271	2041	17
Italy	726	312	178	202	229	1647	22
Canada	331	169	176	236	254	1166	30
France	76	183	99	215	46	619	40
Denmark	52	49	43	67	345	556	42
Spain	68	136	35	64	125	428	51
Finland	**50**	**101**	**93**	**63**	**36**	**343**	**53**
Germany	43	14	38	52	159	306	56
Sweden	46	7	7	3	145	208	64
Ukraine	4	70	23	18	39	154	69
Russia	93	52				145	72
Switzerland	34	10	13	10	10	77	89

Source: SIPRI Arms Transfers database; https://www.sipri.org/databases/armstransfers

Arms exports by nation (USD, in millions)

	2017	2018	2019	2020	2021	Total	Global rank
United States	**11909**	**9824**	**10923**	**9233**	**10613**	**52502**	**1**
Russia	6234	7097	5531	3686	2744	25292	2
France	2343	1996	3713	2484	3954	14490	3
China	1601	1306	1504	775	1085	6271	4
Germany	1948	1073	1000	1217	914	6152	5
Italy	774	496	351	847	1717	4185	6
United Kingdom	1173	704	957	556	601	3991	7
South Korea	742	1056	694	778	566	3836	8
Spain	817	704	303	962	612	3398	9
Israel	1268	704	349	400	606	3327	10
Netherlands	1050	462	253	478	299	2542	11
Turkey	169	231	239	233	380	1252	12
Sweden	80	155	215	286	332	1068	13
Ukraine	376	259	162	116	86	999	14
Switzerland	173	240	216	182	147	958	15
Australia	98	38	104	413	173	826	16
Canada	70	115	223	109	119	636	17
UAE	99	114	128	188	48	577	18
South Africa	87	85	96	106	83	457	19
Belarus	50	79	159	59	98	445	20
Brazil	37	100	10	162	88	397	21
Norway	146	59	31	72	58	366	22
India	56	44	18	151	33	302	23
Czechia	88	89	31	30	1	239	24
Jordan	80	1	101	13	15	210	25
Belgium	17	21	57	27	48	170	26
Indonesia	95	15	9		17	136	27
Finland	**31**	**45**	**27**	**12**	**14**	**129**	**28**
Portugal	56	3	3	46	11	119	29
Serbia	3	27	26	34	7	97	30
Denmark	22	31	4		27	84	31
Lithuania		60			2	62	32
Bulgaria	31	14	10	3	3	61	33
Pakistan	3	2	1		53	59	34
Austria	22	7	3	9	16	57	35
Poland	10	24	9	0	3	46	36
Qatar		3	11		29	43	37
Slovakia	22	12	2	3		39	38
Unknown supplier(s)	6	4	11	3	14	38	39
Greece	30					30	40

Source: SIPRI Arms Transfers database; https://www.sipri.org/databases/armstransfers

Arms imports by nation (USD, in millions)

	2017	2018	2019	2020	2021	Total	Global rank
India	2980	1705	3444	2813	4414	15356	1
Saudi Arabia	3929	3266	3485	2543	1723	14946	2
Egypt	2388	1680	1039	1323	1355	7785	3
Australia	1656	1557	1189	1657	1235	7294	4
China	1302	2052	1436	870	901	6561	5
Qatar	665	620	2199	943	1767	6194	6
South Korea	1052	1100	1480	1292	720	5644	7
Pakistan	877	879	669	760	884	4069	8
UAE	853	1151	800	534	440	3778	9
Japan	441	654	911	699	885	3590	10
Algeria	1139	1291	164	661	237	3492	11
United Kingdom	1002	519	342	639	893	3395	12
United States	**522**	**378**	**844**	**747**	**738**	**3229**	**13**
Israel	540	546	521	372	610	2589	14
Indonesia	1169	339	212	269	328	2317	15
Norway	352	527	401	427	492	2199	16
Turkey	428	488	760	94	271	2041	17
Singapore	430	594	517	180	157	1878	18
Netherlands	33	144	492	570	589	1828	19
Viet Nam	783	604	160	32	244	1823	20
Iraq	1004	477	139	1	26	1647	21
Italy	726	312	178	202	229	1647	22
Thailand	322	628	291	154	136	1531	23
Bangladesh	330	151	738	57	101	1377	24
Morocco	605	462	48	12	225	1352	25
Afghanistan	252	322	396	240	69	1279	26
Oman	777	277	86	85	4	1229	27
Kuwait	111	95	51	62	899	1218	28
Philippines	276	18	187	349	349	1179	29
Canada	331	169	176	236	254	1166	30
Kazakhstan	216	298	228	269	85	1096	31
Jordan	368	187	233	157	67	1012	32
Brazil	94	267	153	155	234	903	33
Taiwan	493	99	64	99	138	893	34
Myanmar	215	188	193	212	60	868	35
Poland	154	71	319	196	109	849	36
Azerbaijan	290	365	44	28		727	37
NATO**	25	21	70	399	196	711	38
Belarus	147	142	333	13	62	697	39
France	76	183	99	215	46	619	40

Source: SIPRI Arms Transfers database; https://www.sipri.org/databases/armstransfers