



Turun yliopisto  
University of Turku

# **DRIVERS BEHIND THE INTERNATIONALISATION OF THE DEFENCE BUSINESS**

**Perspective of some Finnish experts**

Master's Thesis  
in International Business

Author:  
Niklas Mannfolk

Supervisors:  
Ph.D. Kari Liuhto  
M.Sc. Econ. Eini Laaksonen

20.02.2012  
Turku



Turun kauppakorkeakoulu • Turku School of Economics

## CONTENTS

1	DEFENCE INDUSTRY .....	4
1.1	Defence industry globally .....	4
1.2	Internationalisation of the defence industry .....	9
1.3	Objective and structure of the study .....	14
1.4	Key definitions .....	17
2	INTERNATIONALISING THE DEFENCE INDUSTRY .....	19
2.1	How companies internationalise .....	19
2.2	Why companies internationalise .....	27
2.3	How and why the defence industry internationalises.....	35
3	CARRYING OUT THE RESEARCH .....	40
3.1	Qualitative research.....	41
3.2	Desk research .....	43
3.3	Data collection.....	45
3.4	Data analysis .....	50
3.5	Research assessment .....	51
4	PERSPECTIVE OF FINNISH EXPERTS .....	55
4.1	Economic drivers.....	55
4.2	Technological drivers.....	57
4.3	Political drivers .....	59
4.4	Summary of empirical findings.....	64
5	CONCLUSIONS .....	66
5.1	Economic drivers.....	66
5.2	Technological drivers.....	69
5.3	Political drivers .....	70
5.4	The internationalisation of defence business .....	72
5.5	Suggestions for further research.....	73
	REFERENCES.....	74
	APPENDICES.....	82

## **FIGURES**

Figure 1 Military spending worldwide, 2010.....	11
Figure 2 World military expenditure (bn \$US) 1988-2010 .....	11
Figure 3 Research structure.....	16
Figure 4 Example of an international network.....	21
Figure 5 Integrated framework of internationalisation drivers .....	30

## **TABLES**

Table 1 Value of the global arms trade .....	9
Table 2 Firm internationalisation matrix.....	22
Table 3 Interview thematic structure.....	49
Table 4 Summary of empirical findings.....	64

# 1 DEFENCE INDUSTRY

*“Selling only to one side is not the key to successful arms trade.  
The key is not to get caught selling to both sides.”*

*- Anonymous*

Defence has traditionally been a national industry with little contact abroad. The need for an industry whose sole purpose it is to provide a nation or society with tools for defence has always been self-evident. Psychologically, of course, the desire to defend oneself and one’s brethren is one of the strongest emotions of all life. In order to do that, it soon became apparent to early man, mere hands and feet would not suffice.

This study uses the terms arms manufacture, arms industry, military services and defence industry rather freely, which may cause unintentional confusion. To avoid such confusion, a glossary with key definitions will be provided later. The above expressions are by no means synonyms, but are rather used to differentiate between different historical or economic phases of the same phenomenon. In addition, a differentiation is made between arms trade in general and the trade of small arms and light weapons (SA/LW), which is discussed mainly in relation to black market, or illegal, arms trade.

This study looks at the internationalisation of the defence industry from a Finnish perspective, and analyses state-owned enterprises in the European defence market. No particular company is used as a case study, and any references to existing companies in the study are purely there to give the reader a concrete example on a discussed topic.

## 1.1 Defence industry globally

While the manufacture of arms, which later developed into an advanced defence industry, has existed since the dawn of mankind, this study will not go into detail on the pre-historic events leading to the development of conflicts and wars. It suffices to state that from the early need for food or protection against wild animals, to securing the integrity of a society’s borders and resources from hostile groups, man has always used force to gain advantage, be it food, shelter, or other resources. The need for an industry to produce weapons for both attackers and defenders became imminent once the population grew and began to form groups and societies. Ultimately this led to confrontation and conflicts between different groups. (Vihottula 2010)

Apart from a historical perspective, there is also a purely economic aspect to the need of societies to expand. Today we take the growth of nations for granted, encouraging developing nations to speed up their economic growth, and the aim of

every company today is increased growth, leading to growing profits. While most of today's societies have reached a state where the need for expanding borders has subsided, and concentrate instead on expanding economically, the fundamental notion is the same. In organisations and enterprises the expansion over borders has not ceased to exist, but is in fact more pronounced in the global market in which companies operate. In cases where one company buys out another without the approval of its board of directors, is even today referred to as a 'hostile takeover', giving the impression of attackers and defenders. In addition, the macro-economic hypotheses that unemployment is a prerequisite for economic growth (Bruninger – Pannenberg 2000; Keynes 1936) are direct descendants of the historical trade-off between staying in one area and expanding the population. The global market today is, in effect, an ever ongoing territorial war between companies attacking each other for resources, that is, demand.

Eventually the manufacturing of arms grew and specialised into an arms industry, which took its place at the forefront of technological advancement. In order for a specific group to gain or retain advantage over another, much research and development had to be put into the defence sector. Wars have mainly been waged between nations, which effectively made governments the primary customers of the defence industry. (Vihottula 2010)

While the above has been true since the dawn of time, numerous experts claim that we have entered an era of new wars, the majority of which are no longer inter- but intra-state wars (Wulf 2005). It is therefore natural, that the world's largest arms manufacturers are founded, governed or owned by national governments (Vihottula 2010).

Attempts to control the manufacture and trade of weapons have prevailed throughout history. Examples of such control include Roman emperors issuing outright bans on export of weapons and materials to barbarians, Greek leaders using propaganda against Roman-made short swords, the prohibition on crossbows by the Catholic Council in 1139, the French ban on longbows in the 14th century as well as prohibiting the use of poison gas in the 20th century, and the list goes on. (Holmes 2001) While prohibition of arms trade can be seen as a completely opposite agenda to what this study is examining, it is such governmental policies that have laid the foundation to the internationalisation of today's defence industry.

An explanation to the above statement can be found in a relatively recent example. After the defeat of Iraqi forces in 1991, information about the ease with which the Iraqi forces were able to acquire materials for the development of destructive weapons gave rise to widespread demands for better regulation of arms trade. Even before this many states with materials and development had in effect various control systems for arms export, but the Gulf War turned the world's attention to a possibility of effective

multilateral control. The permanent five members of the UN Security Council and the UN General Assembly were at the forefront of these demands. (Holmes 2001)

In recent decades, however, there has been an increasing trend of privatising military services and the defence industry. Almost universally privatization and outsourcing have become the favoured strategies for the transformation of the relationship between the public and the private sector. Privatizing military services is an extension of the general market-oriented privatisation concept favoured by conservatives in countries such as the United States of America, resulting in making the armed forces fit for combat without expanding their size. (Wulf 2005) In other words this effectively means that the aim of the defence industry today is increasing the value of the companies to satisfy shareholders (Vihottula 2010).

In the last two decades the defence sector has experienced a trend of excess capacity and a continuing trend of rising research and development costs, which in turn has made companies increasingly active in their efforts to internationalise in the search of cost benefits. (Sköns – Wulf 1994) The privatisation of the defence sector began in the 1980's, with the United States and the United Kingdom leading the way, courtesy of their respective leaders Ronald Reagan and Margaret Thatcher. Their systematic efforts first privatised the defence industry and then military R&D institutions. (Wulf 2005)

The end of the Cold War led to a relaxation in various governments' attitudes toward military technology transfers, which allowed a large group of industrialised countries to follow in the footsteps of the UK and US. (Sköns – Wulf 1994) These new attitudes eventually led to a new business model in the defence sector in which defence producers find new markets through specialising in certain defence products rather than basing their business plans on a diversified product range. Partially this has been caused by cuts in countries' defence budgets after the end of the Cold War, but the concept of expanding business interests at the expense of the public sector is a recurring company policy in times of industrial depression. (Kaldor 1981)

Whether the future holds a united defence industry of the EU or mergers between the defence companies of like-minded member-states remains to be seen. Currently only 10 per cent of total sales are international, which effectively demonstrates the domestic nature of the defence industry (SIPRI 2011).

Most of the research on the subject of defence industry internationalisation has its base in 1980's United States, as the industry universally was both government-owned and focused on the national market until the last decade of the Cold War. During that last decade the privatisation of the industry began and this eventually led to the actual internationalisation. (See Appendix 2)

Sköns and Wulf (1994) discussed the post Cold War era of the defence sector, and the relaxed attitudes of governments towards international trade, which allowed companies to search for cost benefits in foreign markets. Following the relaxation of

regulations, international trade within the defence sector was allowed to develop.

Trim (1999) compared the process of international defence sales from the viewpoints of the company and the government, which he divided into three stages:

- marketing oriented strategic characteristics from interaction between different actors
- the issue of knowledge transfer and the problem of keeping secret information secret
- the strategic direction of the firm and its relations to domestic and foreign actors

From the analysis of these factors he concluded that while the defence industry in general would internationalise just as any other industry, there are certain special characteristics to the sector which affect the way it can operate both on the internal and the external market.

In his continued studies Wulf (2005) outlined the history of privatisation in the defence sector and analysed its effects on the internationalisation of the industry. He concluded that since the beginning of privatisation in the 1980's, companies in the defence sector have begun expanding their markets abroad, and changing their principles to respond to budget constraints and an overall need to improve output. The privatisation eventually lead to companies specialising in certain areas of defence, and decreased the amount of firms trying to have as broad a spectrum of competence as possible.

Bitzinger (2009), in turn, discussed the factors affecting the European defence market in particular; outlining a number of new challenges, including the large merged US defence companies, which not only control their domestic market, but also compete with the smaller European actors in essential markets. Those large multinationals have sufficient funding to take research new technologies at a greater pace than their European counterparts, eventually leading to decreased market shares for the European countries.

Most official arms transfers today take place between governments, with arms manufacturers, banks and other formal instances closely involved in the processes (Holmes 2001). On the other hand, it would be naïve to assume that the official arms transfers are the only way defence-related technology or material is sold today. Informal arms transfer both exists and thrives in today's global market. The identity of participants in these transactions is often difficult to discern, and the legality of the transactions is usually questionable. These, often obscure, black or grey market operators make measuring the size of the international arms market technically difficult and politically controversial. While many market analyses are provided by governments and various non-governmental organisations (NGOs), their statistics must be treated

with prudence, as all parties involved have a personal, often budget-related, interest in exaggerating the figures. As a result, the size of even the formal international defence industry market is a matter of non-factual debate, let alone the informal one. (Holmes 2001)

While the researcher assumes that the black market aspects of arms trade are not unknown to readers, he recognises the need for examples.

The illicit trade of arms violates the laws or policies of the states where the transactions occur, including the source country and the recipient country, but also potential transit countries. As discussed above, the size of the informal market is unknown, but according to Schroeder (2008) it is assumed to be increasing. For example, he claims, an estimated 60-90% of the conflict deaths in 2005 were committed with illicitly traded small arms. While many long-running conflicts have been concluded by international interventions, there are still many on-going wars creating a demand for weapons.

Following the end of the Cold War, a large supply of arms was freed up and is now used to satisfy that demand. The supply has equally been added to by short-comings in peace processes, which have effectively failed in adequately disarming the warring parties, causing weapons to be recycled to other wars. (Lumpe 1997)

Illicit arms trade is the catalyst for civil wars, the cause for increased crime, and a veritable facilitator of international terrorism. The most alarming issue related to black market arms is the illicit trade of small arms and light weapons (SA/LW). According to the 2005 Small Arms Survey conducted by the Federation of American Scientists (F.A.S.) 60-90 % of annual conflict deaths in the world are caused by SA/LW. Stopping the illegal trade in these weapons is one of the priorities defined by the UN in their effort to reduce global conflict. (Schroeder 2008)

Some light on the elusive figures has been shed by the Stockholm International Peace Research Institute (SIPRI), which uses a distinctive system of trend-indication, rather than values, to indicate volumes. SIPRI estimates the value of the global arms trade in 2007 to have been approximately \$50.6 billion. (SIPRI 2011) In comparison, the national budget of Finland for the year 2007 was approximately 43.8 billion euro, or around \$57.7 billion (Finnish Ministry of Finance 2012). In other words, in the year 2007 the entire world was spending less than a small northern country's budget on arms trade. For figures on previous years, please consult table 1.



**Table 1 Value of the global arms trade**

<b>Year</b>	<b>\$US bn</b>
<b>2001</b>	30,541
<b>2002</b>	35,311
<b>2003</b>	40,192
<b>2004</b>	46,158
<b>2005</b>	42,469
<b>2006</b>	45,118
<b>2007</b>	50,593

While almost a quarter of the global value of arms trade, \$12.8 billion, comes from the US arms trade, Russia has been steadily increasing its exports with around 11 % annually. Estimates set the value of the Russian arms trade at \$7.4 billion. The subsequent countries on the list are France, Israel and the UK. (SIPRI 2011) The annual figures for smaller exporters vary from year to year, as larger orders tend to constitute significant percentages of the total value of exports.

The CIA World Factbook (2010) gives similar figures, which supports the reliability of the data. The reasons for deviations may relate to the fact that the political climate in the target nations is such that so-called occidental researchers have difficulty obtaining accurate data from the countries in question. In other words, the data is based on estimates from trends and political analyses, and should be treated as such.

## **1.2 Internationalisation of the defence industry**

The manufacturing and trading of arms is international almost by default. The internationalisation of the modern defence industry, however, only began when nations started taking interest in co-operation for joint causes. In other words, it can be argued that a growing interest towards the increase of international military interventions began to form. These include both global operations, such as those led by the UN, and regional interventions, such as those led by North Atlantic Treaty Organisation (NATO) or the European Union (EU). During the Cold War most, if not all, UN peace missions were vetoed, and often the adverse relations between East and West led to blockades in the Security Council. Today, however, the primary task of most armed forces is the participation in international interventions, a clear alteration of the earlier policies. (Wulf 2005)

In fact, even countries not officially part of organisations are participating in interventions, forming ad hoc coalitions for politically justified causes. An example of this is the bilateral Partnership for Peace (PfP) with NATO, in which Finland has

participated since 1994. Participation essentially means supporting defence sector reforms in Partner countries, resource contribution to Trust Fund projects and co-operation in Civil Emergency Planning. While non-member countries refrain from actual political membership, the range of participation means that the respective countries in essence are operating internationally. (The Mission of Finland to NATO 2010)

A large number of governments support the indigenous development and production of weapons for foreign, military and industrial-policy reasons. A high level of domestic production of arms is perceived as an important factor for guaranteeing autonomy in foreign policy. Arms production is also believed to add to economic autonomy through its contribution to overall economic output, employment, and technological innovation. Similarly, support for weapon sales to foreign governments can be an instrument of military and foreign policy as well as industrial policy. (SIPRI 2011)

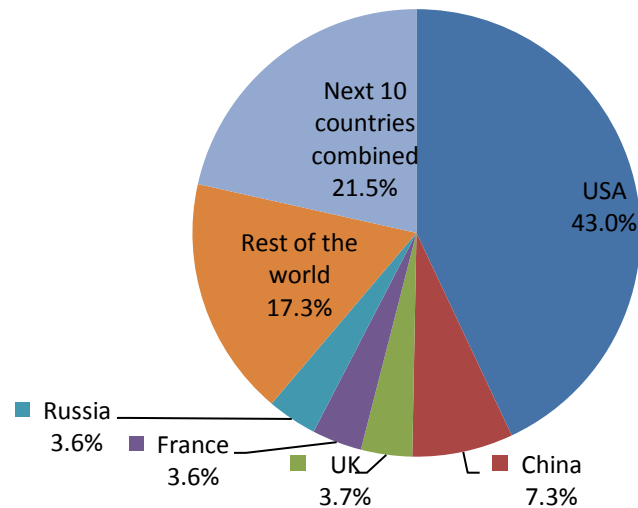
An additional issue then stems from the above, where the armed forces of countries are faced with new challenges and missions for which their historical experience is insufficient. Handling these challenges requires collaboration and a form of benchmarking from other, more experienced countries, pushing the operators into de facto international co-operation. (Wulf 2005)

The subsequent challenge is then to determine which global authority has the right to decide when and where this global collective of armed forces can be used, and for what purpose. There is currently no system of accountability for global decision-makers, resulting from the fact that democratic control has failed to develop in time with the advancement of international interventions. (Wulf 2005)

The global defence industry economy transformation over the last decade through new trends in military expenditure and technology has reinforced the dominance of the United States. The costs of R&D for new technology are constantly increasing, and there is a growing need for information technology solutions to support this new type of network-centred warfare. (Dunne 2006) Experts agree that the USA is currently the only country not facing structural disarmament due to lack of resources needed to replace conventional military capability with modern systems. (SIPRI 2011; Bitzinger 2009; Dunne 2006; Wulf 2005)

Figure 1 shows an analysis on world military spending as respective percentages of the total for the year 2010.

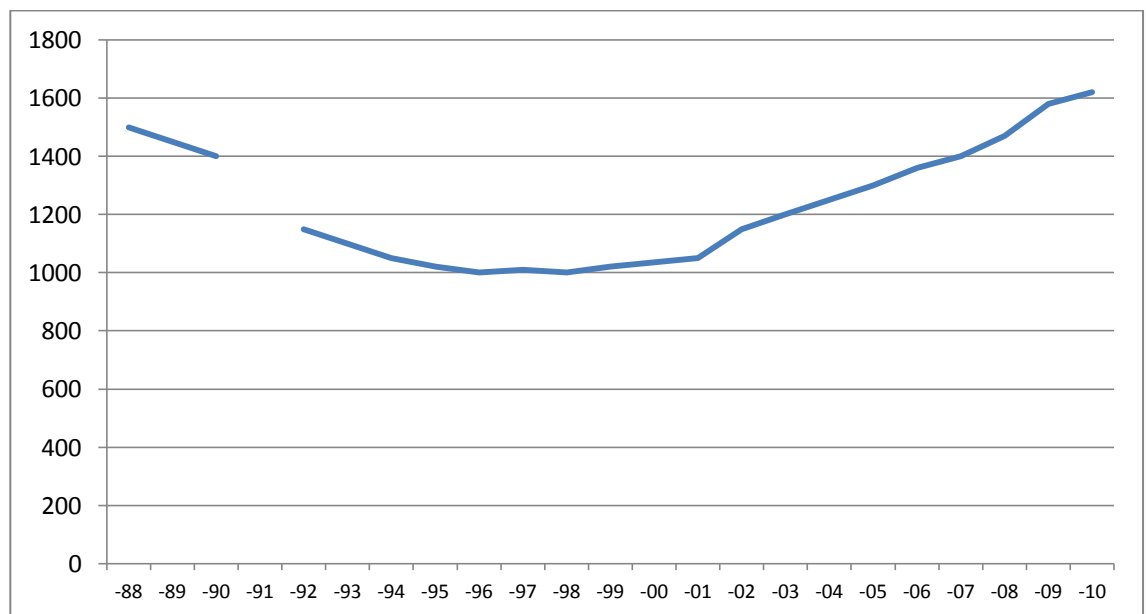
## Military spending worldwide



**Figure 1 Military spending worldwide 2010 (SIPRI 2011)**

There is also consensus on the relaxation of government attitudes after the Cold War. While major military powers still tend to prefer to procure from national industries, the defence industry has since become increasingly consolidated, due to diminished markets and elevated R&D costs. (Dunne 2006; Wulf – Sköns 1994)

Figure 2 shows a graph depicting the development of global military expenditure since the Cold War.



**Figure 2 World military expenditure (bn \$US) 1988-2010 (SIPRI 2011)**

Most historic periods of active privatisation of the defence sector, including that in the USA and Europe after World War II (1950's), the USA and UK after Vietnam (1970's) and globally after the Cold War (1990) can be explained by Kaldor's (1981) hypothesis on military sector reductions paralleled with outsourcing of defence-related activities to private companies. Increased pressure from the private sector caused governments to reduce their involvement in companies in times of slow production. This trend tends to be a result of combined commercial interests and political lobbying. (Wulf 2005)

While precise figures on the value of arms trade are difficult to come by due to their strategic significance, so-called military services, in essence outsourced defence industry trade, make up for a significant amount of modern military contracts. In the USA alone, the defence department budgeted a total of \$295 billion in prime contracts in 2006. The British 'Defence Support Services' market estimated at \$7.3 billion in 2005, while the German expenditure is estimated to be \$2.1 billion. The European Defence Agency quotes a figure of \$17.5 billion in 2006 to come from outsourced contracts. (SIPRI 2011)

While Figure 2 seems to indicate further growth in value, many analysts of the international arms market suggest that the arms market may have reached equilibrium, with neither dramatic reductions nor vigorous expansions in the future. Demand fluctuations in times of tensions and conflicts will remain a natural part of the arms market, as any other market, but in the long term, experts argue, the market is stabilizing. It is equally true, however, that the defence industry and its international arms trade will remain a controversial issue, as is proved by the recent scandals surrounding some supplier states. A global demand for more responsible arms trading has risen, giving birth to lobbying campaigns for global codes of conduct. (Holmes 2001)

The European defence industry is currently under strain and must, in the 21st century undergo change in order to maintain its economic and technological competitiveness in relation to the continuously advancing US defence industry. The main reason for the US defence sector's advantage over its European counterpart is the consolidation and rationalisation of its entire defence industry since the end of the Cold War. Eventually the private companies that had been formed at the expense of the public sector began merging, creating the so-called mega-defence companies of Boeing, Lockheed Martin, Northrop Grumman, Raytheon and General Dynamics, which today effectively oligopolise the US defence industry. (Bitzinger 2009) On the other hand, despite the above outlined, it can be argued that the defence industry ultimately is a national industry with close ties to the governments of each respective country. Whether privatised or national, the defence industry is effectively a global actor with great political and economic importance for governments' use of power. (SIPRI 2011)

The previously outlined trend of mergers has not yet occurred in Europe, where formerly government-owned private defence companies today battle for control of the markets. These companies are still de facto national, even though they are no longer state-owned. The largest stakeholders may no longer be the governments, but as discussed earlier, the most important, if not only, customers are essentially the national governments. (SIPRI 2011)

In light of the above, Bitzinger (2009) outlines the following challenges for the European defence industry:

- How are European defence firms going to square the circle between the growing US economic and technological challenge and static or declining European defence resources?
- What is the optimal structure and form for the European defence industry to ensure its economic and technological competitiveness?
- What future national responses regarding defence-industrial policy, requirements, procurement and production are likely to be the most – or least – effective solutions to these economic and technological challenges?
- What is the role and significance of defence industry internationalisation (regionalisation and globalisation) in this readjustment process?
- What is the impact of the still quite powerful countervailing forces of nationalistic protectionism and of trans-nationalism on the process of creating a more Europeanised defence-industrial base?

The above challenges can be transferred to concrete examples of recent years, where national defence companies competing nationally, such as the Finnish Patria Industries Oy, struggle to find competitive advantages and increase their market shares in the ever modernizing defence sector. With the continuous renewal of defence-related IT-systems, as well as the equipment, combined with the broad spectrum of product choices available to the buyers, the pressure is constantly on to give customers a reason not to choose the competitors' products. (Taloussanomat 2008)

For the past one hundred years, the defence sector has been largely immune to internationalisation, operating in a national environment where the industry was owned, funded and operated by governments. Defence production was an inherent part of politics, both domestic and international. National security was paralleled with industrial capabilities, affecting international relations in a very real way. (Hayward 2008)

### 1.3 Objective and structure of the study

Dunne (2006) takes the analysis of the expected changes further, and outlines a number of trends and drivers, dividing them into the following categories: sociological, technological, economic and political.

The most important *sociological drivers* affecting the defence industry include, according to Dunne (2006), the structure and location of the workforce in the defence sector, declining demand and the resulting industry concentration, growing proportions of R&D work, and the increasingly dispersed geographical distribution of the supply chains, which may eventually lead to specialist regions within the EU for different types of weapons system. Trim (1999), on the other hand, predicts rationalisation and expansion as developments in the defence industry are driven by technology, which brings us neatly to the technological drivers expected to affect the defence industry.

As discussed earlier, *technological drivers* in terms of barriers of entry has always been vital for the defence industry, and it is difficult to see new entrants in the production of major weapons systems (Dunne 2006). Entry barriers are evident in the defence industry owing to the fact that defence is associated with internal and external security (Trim 1999). However, says Dunne (2006), new entrants may be found in the new areas that are opening up within the sector, due to the increasing importance of network-centred warfare and of communications and control technologies in the field of operations.

While *economic drivers*, due to security concerns, often are viewed as being of secondary importance when discussing the defence sector (Dunne 2006), they do provide entry barriers in terms of the role of the state in each market. The costs associated with innovation and the resulting costs associated with developing a new technology are considered major strategic issues. This in itself means that high-technology applications for the military need to be viewed from the perspective of clearly outlined specifications which have time frames assigned to them. (Trim 1999)

Ultimately the bottom line is that the state controls the size and nature of the market, the number of companies in it, and the role of foreign producers, while rising costs continue to put pressure on the government. With the growth of privatisation, the influence and importance of financial capital will increase throughout the European defence industry. (Dunne 2006)

*Political drivers* and security concerns have dominated the defence sector and will continue to do so, and while the role of the state remains vital in defining how the market operates, international agreements are likely to increase in importance as relationships between companies strengthen across borders (Dunne 2006). Trim (1999) adds that when a defence related technology becomes outmoded, it is possible to extend the technological life-cycle by establishing a trade agreement with another government.

The defence industry, in addition to undergoing constant technological changes, is heavily affected by the political decisions taken by governments. The changing nature of the industry makes up-to-date theoretical research on the subject rare, if not non-existent, and forces researchers to draw conclusions from constantly updating sources.

On the other hand, the defence industry as a whole has undergone several major changes in recent years, including increased competitive pressure, which makes it an interesting industry to study. Especially the drivers behind the internationalisation of the Finnish defence sector are an area on which virtually no up-to-date academic research can be found.

Most earlier research conducted on the internationalisation of state-owned enterprises is from the late 1980's, and can therefore only be used as rough guidelines when studying SOEs today, not to mention the defence sector. In Appendix 2 are outlined some more contemporary research on the particular characteristics of the defence industry. The conclusions of this earlier research include a number of new challenges for European defence industry, such as merged US defence companies competing with European companies in essential markets, and new company policies of expanding markets abroad. The increased competition has led to defence companies specialising on certain areas, rather than one large SOE having as broad a spectrum of competence as possible. All in all there seems to be an increased relaxation of government attitudes towards international trade, which in turn allows companies to find cost benefits in other markets.

The aim of this research is to describe various drivers behind the internationalisation of the defence business from a Finnish perspective. Due to the specific nature of the industry, only the economic, technological and political drivers will be discussed in this study. The theme will be discussed thoroughly in the analytic part of the study, and questions relating to the theme will be answered within the research process. The main question is aided by the following sub-questions:

1. What are the economic drivers for internationalising defence business?
2. What are the technological drivers for internationalising defence business?
3. What are the political drivers for internationalising defence business?

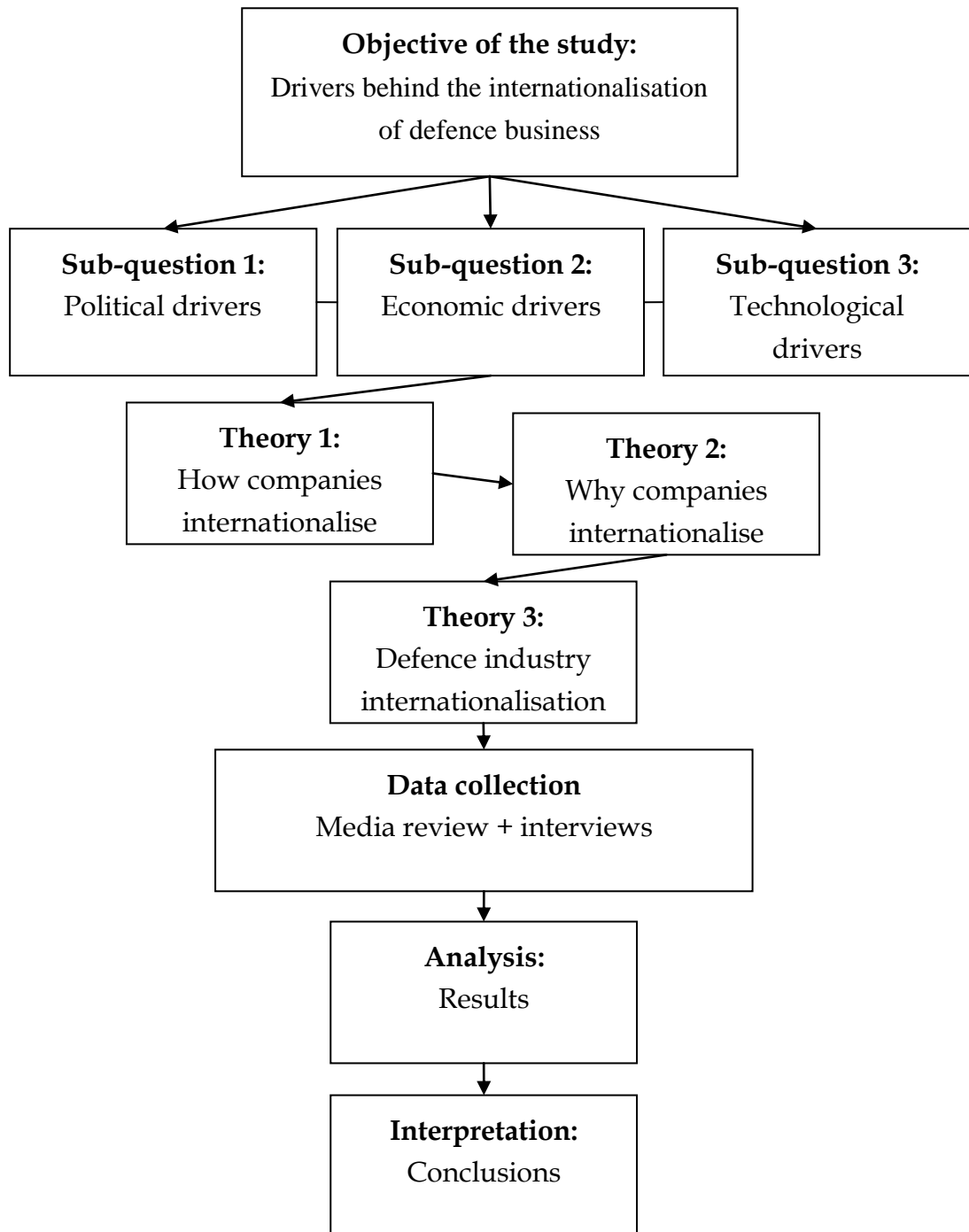
The research follows a basic pattern, starting with a general introduction to the field of defence industry, outlining what effects the industry has on society, and explaining what it is the researcher wants to achieve.

Chapter two is the theoretical section, where first some general theories on internationalisation are outlined, in order to understand how a company internationalises. The second part of the theoretical chapter focuses on why companies internationalise; that is, drivers affecting the internationalisation of companies.

The third section of the framework section combines the two previous sections to form an overall picture of the theories behind the drivers for defence industry internationalisation.

In the fourth chapter all the information gathered from literature and media reviews, as well as the interviews is presented, and finally, the analysis and conclusions gather and discuss all the data collected in relation to the theoretical framework, eventually answering the research question and thereby fulfilling the objective of the study.

The basic structure of the interview is outlined in Figure 4.



**Figure 3 Research structure**



## 1.4 Key definitions

**Defence industry:** The defence industry produces many goods for the defence sector, some of which have been developed for military purposes, such as combat aircraft, combat ships, armoured vehicles and guns; and others that are produced for military purposes but can also be used for civilian purposes, and vice versa. The latter include certain transport and communications equipment, as well as logistical services. Even equipment specifically developed for military purposes often contains civilian technologies, or technologies developed for civilian applications. (SIPRI 2011)

Companies supplying goods and services for military applications do not form a distinct industrial sector according to such generally accepted codes as the United Nations (UN) International Standard Industrial Classifications (ISIC), but what primarily distinguishes the military industry from the civilian industry is the application of its products and the particular relationship with national governments resulting from this (SIPRI 2011).

While there is no clearly defined defence industry as a distinct industrial sector, it is evident that the production of armaments for use by national defence forces, and related activities, requires special control measures by governments and forms an identifiable cluster of activities which are recognisable globally and to which some specific economic and political processes apply. (NCACC 1999)

For the purposes of this study, the term defence industry as well as its derivatives arms manufacture, arms industry, armaments industry, weapons industry and military industry, are defined as an industry comprising companies whose primary mean of generating income is defence-related products. Companies with military sales of 25 per cent or more of total sales, excluding firms producing dual-use technology, are considered to be a part of the defence industry. Such firms in the civilian industries, which in times of war reconfigure their production to produce goods for military use, are also excluded from the definition for the purposes of this study.

**State-owned enterprises:** The term state-owned enterprise (SOE) is used to describe various stages of companies with alternating levels of government ownership or operation. Three criteria for the term are given by Thomas (1986):

The government is the principal stockholder, i.e. holds 51 per cent or more of the stocks in the enterprise, or has ability to control the board policies and to appoint the enterprise management.

The enterprise is engaged in the production of goods and/or services for sale to the public, or to other private or public enterprises.

As a matter of policy, the revenues of the enterprise bear some relation to its costs. For a state enterprise whose charter calls for maximisation of profits, this criterion is satisfied. It may also, however, be satisfied by SOEs for which profit maximisation is

not the goal, but which instead attempt to pursue profitability subject to social functions set by the government. (Thomas 1986)

**Dual-use:** As the defence industry agencies around the world pursue policies of commercial defence production integration, dual-use technology, and use of commercial standards and practices, the traditional demarcation between defence and non-defence products and services continues to blur (Grover 1999). The European Council (2009) defines dual-use items as any items, including software and technology, which can be used for both civil and military purposes, and shall include all goods which can be used for both non-explosive uses and assisting in any way in the manufacture of nuclear weapons or other nuclear explosive devices.

As stated earlier, this study does not consider firms producing only dual-use products as belonging to the defence industry, for the simple reason that the juridical demarcation between civilian and dual-use products is nearly impossible to make. The limited resources available to the researcher suggest that a simpler definition, where only products used only for military purposes are included, should be adopted.

**Code of Conduct on Defence Procurement (CoC):** The participating Member States of the European Defence Agency (EDA) agreed in 2006 on creating an internationally competitive European Defence Equipment Market, in order to improve the market share of the European Defence Industry over its US counterpart. The CoC was approved by the Defence Ministers in November 2005, and was launched in July 2006.

Most of this procurement uses different market rules from those in use on the EU internal market, which is why a voluntary, non-binding intergovernmental regime aimed at encouraging application of competition in this particular segment of Defence procurement, was established.

The CoC is constantly monitored and reported on, which ensures that each Member State maintains the principles of mutual transparency and accountability, which in turn ensures confidence in the procurement. (EDA 2012)

## 2 INTERNATIONALISING THE DEFENCE INDUSTRY

*“War is the trade of Kings.”*

*- John Dryden (n.d.)*

### 2.1 How companies internationalise

There are various theories on how companies internationalise, as has been proven since the 1970's, when researchers began studying the internationalisation processes of firms. It can be seen simply as an increased activity in markets outside the home country (Johanson – Vahlne 1990), as either inward or outward involvement in international operations (Luostarinen – Welch 1993) or as a the initiative to extend business in foreign countries when the firm seeks to expand its sales to new and more profitable markets (Knight 2000). In light of the above, it seems safe to quote Susman (2007) in his claim that there is no agreed definition of internationalisation or international entrepreneurship, but rather various theories which try to explain why international activity occurs.

There are many internationalisation theories explaining the behaviour of both small and large private companies. The most noted theory is the so-called *Uppsala model* introduced by Johanson and Vahlne in 1977, and elaborated in their later studies. This model builds on the assumption that a firm begins internationalising by gradually increasing its involvement in markets of relatively close physical and psychic distance. Essentially the process of internationalisation consists of the firm's earlier market experience and its market knowledge. Both these factors affect the way a company goes about its internationalisation process, as constant feedback from current actions increases the knowledge and experience of the firm, effectively changing the process. (Johanson – Vahlne 1977)

In response to the criticism of the model's basic assumption that companies automatically strive to expand their operations while minimising risk, the theory was later modified into listing three types of firms that do not need to follow the incremental steps of the establishment chain. The first of these are firms with access to a large pool of resources, making them less vulnerable to the consequences of unfavourable conditions, effectively allowing them to increase their rate of internationalisation. The second type includes firms which acquire relevant market knowledge in ways other than through direct experience when market conditions are stable and homogeneous, whereas the third type refers to companies which generalise acquired knowledge from similar market conditions, and apply it to new target markets. (Johanson – Vahlne 1990)

Two important aspects of the Uppsala model of internationalisation are market commitment and market knowledge. These factors effect decisions regarding commitment of resources to foreign market and the way current activities are performed. (Johanson – Wiedersheim-Paul 1975)

The concept of market commitment contains two factors; the size of investment in the market, and the difficulty of finding an alternative use for the resources and transferring them to the alternative use. Resources located in a particular market can often be considered a commitment to that market. In some cases such resources can be sold and the financial resources could then be used for other purposes, creating a trade-off dilemma for the firm. The more resources a firm integrates with other parts of the firm, the higher the commitment to the market. (Johanson – Vahlne 1977; Johanson – Wiedersheim-Paul 1975)

The importance of market knowledge cannot be overlooked when analysing a firm's strategic decisions for committing to international operations. The knowledge of opportunities or problems is the catalyst of decisions to initiate internationalisation, and the evaluation of alternatives based on knowledge of the market environment. (Johanson – Vahlne 1977) Both general knowledge and market-specific knowledge, gained through experience in the home market, is needed for internationalisation (Johanson – Vahlne 1990).

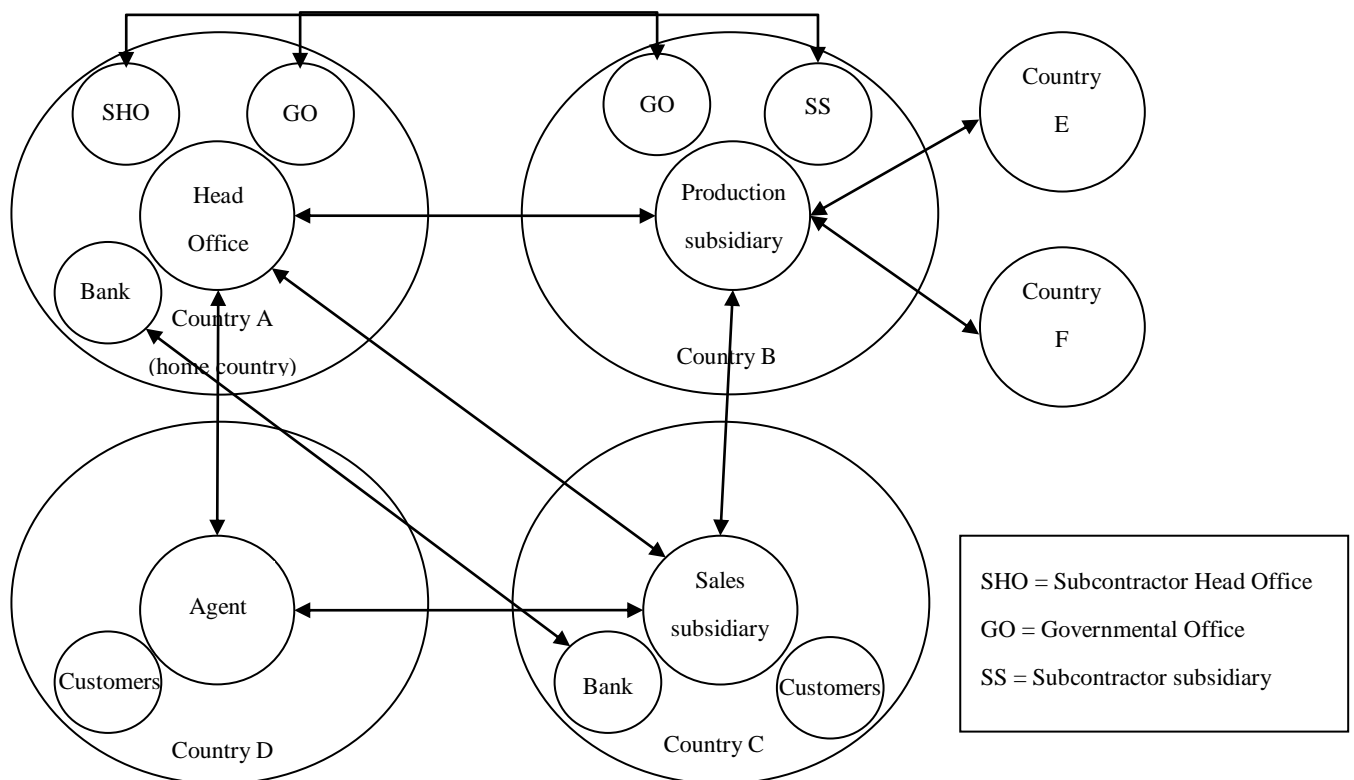
Ultimately the model stresses the importance of having a direct link between market knowledge and market commitment. The better the knowledge a company has of a potential market, the more value they can put on resources, strengthening the company's commitment to the market. (Johanson et al. 1975; 1977; 1990)

The Uppsala model has been criticised for concentrating on the independent firm and its own actions in developing international marketing activity, and not showing the characteristics of the firm and the market in which it operates. The model has also been said to have a one-sided focus on the firm's activities between manufacturers and intermediates. This criticism led to the formation of another model of internationalisation: the *network model*. (Johanson – Mattson 1988)

This theory considers business networks as the driving forces behind the internationalisation process of firms, and claims that internationalisation increases the amount and quality of the relationships between different actors in the business network. As a company internationalises, it forms relationships with similar actors in other countries through international extension, penetration and international integration. In short, the company contacts foreign counterparts in markets that are new to the firm, increases commitment in established foreign networks and integrates positions in various networks. The assumption is made that companies moving into new markets require resources that cannot be obtained without help, hence the need for international networks, which in essence facilitate the acquisition of resources and

reduces the costs of the processes. (Johanson – Mattson 1988)

In some cases the company uses its existing domestic networks in order to form new networks in the foreign country. There are direct or indirect connections existing between firms and country networks which can be used in internationalisation. Figure 4 outlines the bonds between different actors in a network. The home country of the company is Country A, where the firm also has a subcontractor. Both the subcontractor and the firm have established subsidiaries in Country B. It then makes sense to use the existing connection between the parent companies to establish co-operation between the subsidiaries. Similar linkages exist throughout the network, and act as bridges between a company's networks in the home country and the networks of a foreign country. (Hollensen 2007)



**Figure 4 Example of an international network (Hollensen 2007)**

According to Axelsson and Johanson (1992) the network model outlines three ways for a company to internationalise:

- Establish positions in country-based networks that are new to the firm (international extension of foreign market entry)
- Develop existing positions in country-based networks further (penetration)
- Increase co-ordination between positions in different country-based networks (international integration)

The above discussed, while perfectly applicable, still relies on the assumption that each actor has gained experience from the foreign marketplace, which can then be translated into useful knowledge for resolving problems or select alternative options relating to international operations. The problem with this perspective is how a firm that has no existing international operations can acquire the relevant knowledge. (Hadley – Wilson 2003)

Hollensen (2007) replies that the level of internationalisation of a company depends on the firm's current position in a network, and that the way the internationalisation process of the firm develops is dependent on two factors: the firm itself and market influence. In other words, the international experiences and contacts of network members are vital in that inexperienced firms can learn from others in the same industry (Bonaccorsi 1992).

This is important, as a transformation of experiential knowledge into objective knowledge is needed in order to transfer knowledge between entities, although experiential knowledge is considered more important than objective knowledge in terms of informing the firm's decision making (Johanson – Vahlne 1977; 1990).

Against a framework similar to the Uppsala model, where four different situations are presented depending on the degree of internationalisation of the firm and degree of internationalisation of the market, the two factors can be used as the basis for the theory (Hollensen 2007). The mentioned four situations are *the Early Starter*, *the Late Starter*, *the Lonely International* and *the International Among Others*, outlined in table 3. Each case has different aspects of extension, penetration and integration in the firm's internationalisation process. (Johanson – Mattson 1988)

The firms in each stage also differ in terms of experiential knowledge (foreign institutional and foreign business knowledge), which is further enhanced by the differences in size (Hadley – Wilson 2003).

**Table 2 Firm internationalisation matrix (Johanson – Mattson 1988)**

		Degree of internationalisation on the market	
		Low	High
Degree of internationalisation of the firm	Low	Early Starter	Late Starter
	High	Lonely International	International Among Other

The *Early Starter* possesses a low degree of internationalisation, with its network sharing this characteristic (Johanson – Mattson 1988). The greater the commitment to the market, the stronger the information channels (Johanson – Wiedersheim-Paul 1975).

The firm level internationalisation status of the Early Starter suggests that it possesses only weak channels with foreign networks. As internationalisation knowledge permits the firm to understand what foreign business knowledge and foreign institutional knowledge it requires, it can be argued that the Early Starter's lack of international exposure would be reflected by a low level of internationalisation knowledge, which in turn is expected to translate into low levels of foreign business and foreign institutional knowledge. (Hadley – Wilson 2003)

Like the Early Starter, the *Late Starter* has a low degree of internationalisation, but is situated in a more internationalised market. The Late Starter can therefore be said to have a low level of commitment and activity in international markets, low levels of international experience and few direct international relationships (Johanson – Mattson 1988). A highly internationalised position provides an inexperienced firm with greater experiential knowledge levels, relative to an inexperienced firm in an internationally inexperienced network, and therefore the level of experiential knowledge in the Late Starter's network should have a positive influence on the firm's own level of experiential knowledge (Hadley – Wilson 2003).

A company that is highly committed to the process of internationalisation, but is positioned in a market with a low degree of internationalisation, is called a *Lonely International*. The high degree of internationalisation of the firm provides it with greater levels of experiential knowledge than is available to the Early and Late Starters. This situation arises when the firm has internationalised before its competitors, and therefore already has structured nets and an existing market position in the foreign market. (Johanson – Mattson 1988)

When the firm has knowledge and relationships with which to operate in a foreign market, the entrance is more favourable than operating in a domestic country. The reason for internationalisation of the Lonely International is to build up international integration. That is the opposite to the situation of the Early Starter firms. (Hollensen 2007)

However, Hadley and Wilson (2003) argue that the less internationalised macro-position of the Lonely International cancels out its advantages of foreign business knowledge relative to the Late Starter. Given that foreign business knowledge is concerned with the understanding of other firms comprising the international network, it is expected to reflect the influence of the firm's network. (Hadley – Wilson 2003)

The Lonely International is described by Johanson and Mattson (1988) as a firm enjoying a high level of internationalisation, having established positions and resources in international markets. Such a firm has a high diversity of environments in which it

works, providing it with a high level of experiential knowledge compared to the other three types of firms in the matrix. This knowledge is gained from the greater interdependency of the international network. (Hadley – Wilson 2003)

Following the above, it can be argued that there are differences between the knowledge levels of the firms in the matrix and that the experiential knowledge residing in the firm's international network is expected to combine with the experiential knowledge of the firm to create an added knowledge advantage (Bonaccorsi 1992).

In addition, Hadley and Wilson (2003) argue, foreign business knowledge is expected to be the most vital factor of the firm's network given that it is concerned with the understanding of other firms in the international network.

While the above theories are useful overall frameworks, they cannot be directly applied to the context of this paper, where the primary limitation is the focus on the internationalisation of state-owned enterprises (SOEs), rather than private companies, which tend to have special characteristics affecting their strategic decisions.

When discussing theories concerning the internationalisation of the defence industry, it is therefore necessary to look at state-owned enterprises in general. This will, in combination with the above discussed general theories of internationalisation, provide a preliminary framework for the study, which can later be modified to suit the special conditions applying to the defence industry.

While research on the internationalisation of SOEs is less readily available than theories explaining the internationalisation of private companies, the theories that do exist are still as valid as they were when devised. They do, however, display a view of the business world which does not describe today's global context comprehensively. A modifying approach to the established theories is therefore necessary when analysing state-owned enterprises in general and the defence industry in particular.

According to Boyd (1986), the general public views SOEs as synonymous with the government, considering the typical management characteristics of governments to be natural features of the SOEs. He goes on to claim that SOEs are seen as inefficient in comparison to their theoretical privately owned counterparts. The difference between privately owned companies (POEs) and SOEs, according to the public, is the distinction between basing decisions on economy, efficiency and rational result, versus basing them on compromise and the greater social good. (Boyd 1986)

Murray (1975) has argued differently, claiming that, while the political process imposes such objectives on SOEs that comparing them to private companies in the same industry is rendered both meaningless and impossible, the process of management is actually similar in both the private and public sector. He claims that management should be viewed as a process for solving such issues that affect any company, be it public or private. (Murray 1975)



Experts also argue that managers of SOEs make both political decisions and business decisions. Understanding this fact is a key to explaining the behaviour of such companies, and provides a basis for the classification of SOEs. (Thomas 1986)

According to a pilot study of some 50 executives from Latin America, an increase in political and external orientation for an enterprise is likely to cause the following behaviour in a firm (Zif 1981):

- Sales rather than profit goals will be emphasised
- Low profits relative to costs will be charged
- Goals will be relatively unstable
- Goals will be stated in unclear and vague terms
- Performance evaluation will be carried out on an irregular basis
- Public support will be sought prior to action
- Top management will be recruited from the public sector

Thomas (1986) also outlines the notion of SOEs, as well as those enterprises that are merely government-controlled (GCEs), in fact being held back in their attempts to internationalise or search for new opportunities, as the policies of the state constrain the strategic processes of the firm. He further argues that in order to have international expansion in a SOE or GCE with a high level of national interest, some external trigger or event is required to disrupt the normal strategic process, allowing internationalisation to become a considered future option. This is not necessarily enough to ensure international expansion, as bureaucratic routines and existing organisational processes tend to follow patterns of decisions that are commonly adopted in handling domestic activities, which often prove insufficient when dealing internationally. (Thomas 1986)

Three separate behavioural clusters can be outlined when discussing the strategic relationship between the state and SOEs (Thomas 1986). When an SOE is created, the relationship is often strongly cooperative, since government policy specifies the company's objectives and targets. A cooperative SOE tends to focus on political goals over profitability. In time, after the SOE has achieved its initial goals, it usually develops an organisational structure of its own, recognising the strategic limitations typical for civil servants and ministers. In the second stage, therefore, the managers of SOEs may strive to separate their strategies from that of the government, in effect becoming less cooperative and even adversarial in their relationship to the state. An adversarial SOE aims to find a balance between political and profitability goals. Ultimately this leads to conflicting interests and views between enterprise and government. The third stage of the relations described by Hafsi (1988) is characterised by autonomy. In this stage the conflict between state and enterprise is decreased and a recognition by the government of the SOE's effective and efficient image.

An autonomous SOE can behave much like a private-sector firm, emphasizing economic efficiency. (Hafsi 1988)

Thomas (1986) also argues that while SOEs with a monopoly in a so-called mature market often have the financial support of the state, the companies are expected to provide high quality products at a relatively low price, while simultaneously maintaining a high level of economic performance.

The early 1980's saw a change in the life-cycle relationships of states and SOEs, especially in countries with so-called mature SOEs coupled with dynamic political shifts. Laws have been passed in such economies to encourage SOEs to become more business-like and commercial, and some of the original social welfare goals have been deemphasised. As a result, the companies have become more profit-oriented and internationally minded. To fully understand the strategic behaviour of SOEs in an international context, it is necessary to look at concepts drawn from industrial and economic analysis. (Thomas 1986)

With reference to the five forces of competition outlined by Porter (1980), certain structural factors underlying them can be outlined, including barriers to entry, product differentiation, investment requirements for R&D, capital and marketing functions. These same factors are present in an international setting, although instability of policies in the target countries, as well as the reduced awareness of the foreign market, makes strategy forming difficult (Thomas 1986).

Wells (1972) argues that an enterprise's timing when entering an industry, as well as the relative costs of production, are vital in determining the strategies of SOEs in an international context. The problems faced by many Western private companies and SOEs alike relate to high production costs as a result of early entry. A solution to the issue would be adopting a long-term strategy which reduces cost through labour capitalisation, such as automation and economies of scale. Alternatively the production location is moved to such, often developing, countries which enter as followers, but boast lower production costs. (Wells 1972)

Originally the concepts for drawing up and managing strategies according to the models of Porter (1980) were designed for closed economies, whose components were all located within the same area of analysis. Exports and additional actions in other countries were considered to be marginal occurrences with hardly any significance to the company's strategy. Those paradigms have since been extended to include global competition and multinational trade. (Thomas 1986)

Wells (1972) stresses the importance of timing when entering foreign markets, and argues that all international trade must follow the generalised characteristics of the so-called industry life-cycle concept.

The fact remains that SOEs from developing countries tend to promote applied innovation, combining low-cost production with technological advances, thus providing medium-term competition for Western enterprises. Western private companies, in turn, often face the issue of being early entrants with high production costs. (Thomas 1986)

When discussing SOEs and their international operations, it should be stressed that such companies tend to operate in newer high-risk, high-tech industries, and in industries that have strategic importance for national economies (Thomas 1986). The enterprises tend to face several barriers which may hinder, or even inhibit, multinational strategies; such as bureaucratic and political pressures, lack of organisational flexibility, and insufficient skills for operating in highly competitive markets. In addition, the “national” mind-set of the SOEs may be a significant barrier to their internationalisation. (Mazzolini 1980)

Aharoni (1980), on the other hand, points out that SOEs often receive more funding at better terms than do private companies, which facilitates their scaling of the above mentioned barriers. He does, however, go on to agree that organisational inflexibilities may still cause the downfall of even a well-funded SOE. (Aharoni 1980)

According to Walters and Monshen (1979), this trend of subsidising SOEs creates unfair competition and disrupts the free market. While SOEs in declining or marginal industries may indeed have important government backing because of their role as employers or because they generate high earnings from exports, private companies are just as likely to get subsidised, especially if they have similar effects on the country’s economy (Thomas 1986). In fact, states Thomas (1986), internationalised SOEs are increasingly subject to rivalry from multinational corporations for the subsidies of the target country.

## **2.2 Why companies internationalise**

As noted earlier, the special characteristics of defence business and the market in which it operates, make the industry international almost by default. While the primary client may be the national government, there is rarely enough demand to satisfy the supply needed to sustain an entire industry. This will be elaborated later in the study. It is therefore logical to compare companies in the defence business to early internationalising firms (EIF), such as are outlined by, among others, Zucchella et al. (2007). According to Madsen and Servais (1997), EIFs are companies that become international within three years of their life, and the definition referenced by Zucchella et al. (2007) includes born-global companies and international new ventures (INV). Therefore the theories behind the drivers applying to the internationalisation of such firms can also be applied to the type of companies outlined in this study.

Unlike the research on the internationalisation of SOEs, as discussed earlier, there has, since the 1990's, been a notable increase in academic research on early international firms (Oviatt – McDougall 1994). Zucchella et al. (2007) identify the key concept associated with EIFs in general and born global firms in particular as time; both when considering internationalisation strategy and time span, as well as the speed of the process itself. They go on to outline three fields of analysis, which experts consider most important in the field of early internationalisation; namely time intensity, firm age at entry and the pace of internationalisation.

Ultimately Zucchella et al. (2007) identify some preliminary considerations for the research on drivers for internationalisation. Firstly, there appears to be an increased focus on analysing how much time the process of internationalisation takes for each company. Secondly, they address the issue of defining what experts mean by this so-called temporal dimension of international expansion. Early start of international activities, rapid international growth and the overall pace of international activities are all valid meanings of the concept. They go on to say that these three dimensions may, to some extent, be guided by different drivers.

This special focus on the time-related dimensions of the drivers behind internationalisation has become more popular following the increased globalisation of the markets and growing number of born global companies in those markets. Early start of activities and the speed of growth are the two dimensions chosen by experts exploring born-globals. (Ancona – Goodman – Lawrence – Tushman 2001)

While the aim of Ancona et al. (2001) is primarily to describe the importance of considering the temporal dimension when researching organisational changes, they to convey a fresh point of view to researching the drivers of internationalisation. Applying temporal parameters to the internationalisation process provides a new approach to the issue. The temporal aspect involves organisational change to key technology and competitive cycles. (Ancona et al. 2001)

Zucchella et al. (2007) recognise that some authors consider industry-specific issues as key drivers for early internationalisation, but dismiss these assumptions as marginal.

With reference to the subject of this study, industry- and, more notably, technology-specific issues are among the three most important drivers behind the internationalisation of defence business, as noted by Dunne (2006).

Others, claim Zucchella et al. (2007), consider changes in macro-economic conditions, use of information and communications technology (ICT), and the effect of certain home base conditions as prerequisites or causes for the internationalisation process. In the case of home based conditions he references Enright (1998), in saying that small open economies on one hand, and local clusters on the other often feel the effects due to their nature, where shared access to international markets and imitation phenomena favour early internationalisation. (Zucchella et al. 2007)

Another aspect referenced by Zucchella et al. (2007) is the concept of firm-specific or entrepreneur-specific drivers, which in turn seem to have little to do with the mostly state-owned or state-controlled firms of the defence business. The approach is based on the entry into foreign markets through the internal assets of the firm itself. For larger firms these assets include knowledge accumulation, organisational capabilities, financial resources and equipment. (Oviatt – McDougall 1994)

It appears that most of the research on the drivers of internationalisation focuses heavily on the importance of the above mentioned entrepreneurial aspect for the process of internationalisation. A common denominator is the positive relationship between the entrepreneurs' personal characteristics and positive international development. As mentioned, the entrepreneurial aspect does not correspond entirely with the special characteristics of the defence industry, but as most of the recent research on the drivers of internationalisation is based on this premise, it cannot be completely ignored.

On that note, Zucchella et al. (2007) establish that the characteristics of the entrepreneur, such as experience, education and language proficiency may well be important drivers for the early internationalisation process. This in turn mirrors the earlier described views outlined by Johanson and Vahlne (1977) in their models for internationalisation, specifically the network model, later elaborated by Hollensen (2007).

While the role of these entrepreneur-related drivers is undisputed for early internationalising private firms in the network model (Zucchella et al. 2007), their relevance for this study is marginal, as the companies studied here are state-owned, and therefore lack the entrepreneurial aspect associated with small private firms.

In addition to entrepreneurial factors, location-specific factors are also recognised as an important driver behind the internationalisation of a company (Maccarini – Scabini – Zucchella 2003). For a company located in a cluster, quick internationalisation is a way of exploiting the advantages of the cluster to their full extent. Access to so-called collective international knowledge, skilled labour and other positive factors improve the firm's possibilities of a rapid internationalisation process. (Zucchella et al. 2007) Whether these aspects apply to firms in the defence business remains to be seen.

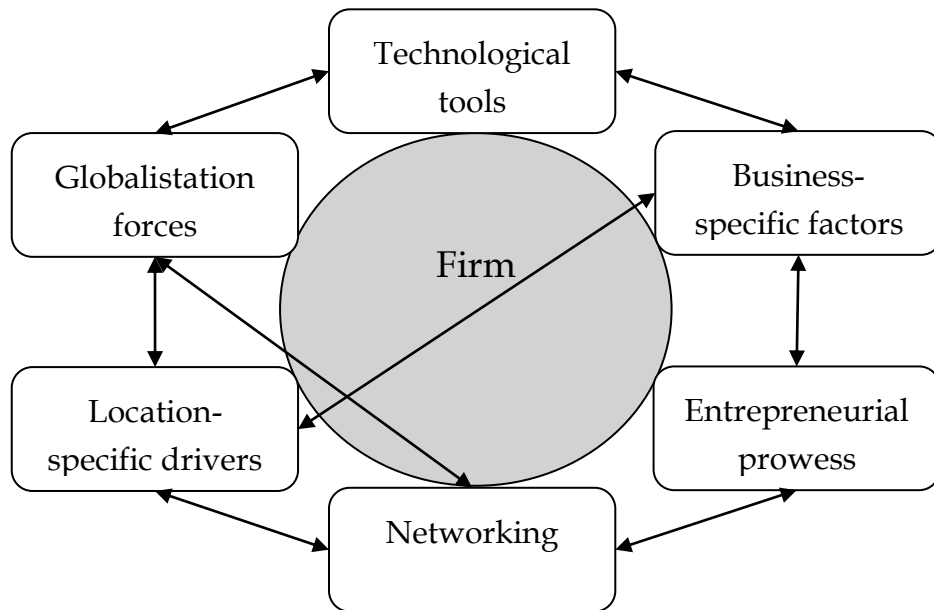
Zucchella et al. (2007) combine the above discussed to form a specific framework as prerequisite for internationalisation, and outline five factors in the global environment which together form this framework. These factors are:

- Lower costs for transportation and communication
- Increased availability of knowledge, and the improved ability to create it
- Improved information technology
- Increased creation and management of international value
- Enhanced growth and improved processes

These globalisation forces refer to the extent to which firms exploit the forces behind the globalisation of markets, such as convergence in buyer preferences, and the trend to place production activities in low-cost locations around the world. The trend of globalisation is advanced by decreasing barriers to trade and technological innovations, and is in essence giving firms a cheaper and faster option to move products, assets and personnel around the globe. (Osarenkhoe 2009)

Osarenkhoe (2009) goes on to outline four types of drivers for the early internationalisation process. These are the *business-specific drivers*, *networking*, *technological tools* and *entrepreneurial prowess*. Zucchella et al. (2007) also mention *location-specific drivers* as important for the internationalisation process.

These factors, including the globalisation forces, relate to each other as shown in Figure 5.



**Figure 5 Integrated framework of internationalisation drivers (modified from Osarenkhoe 2009)**

*Business-specific drivers* include the fact that knowledge intensive and high tech industries (such as the defence business) act as a natural arena for so-called born global behaviour, that is, enhance the conditions for the company to internationalise. In addition, there is increased focus on niche orientation in businesses, as well as the creation of clusters to enhance the co-operation of firms. (Zucchella et al. 2007)

Business-specific drivers emphasise the importance of the firm's characteristics, as well as those of the product or service offered, on the internationalisation process (Osarenkhoe 2009). It is a characteristic of the globalising world of business that companies are either born global, or internationalise relatively soon after their birth. Some industries, claims Osarenkhoe (2009), are at a point where globalisation shapes

the business itself, leading to an intense internationalisation of the entire industry. As with the physical clusters discussed above, the technological advances in the digital economy have created so-called virtual clusters, which reduce barriers between industries, as well as intra-industrial barriers between different markets. (Osarenkhoe 2009; Overby – Min 2001)

Zucchella (2004) notes that niche orientation, following a micro-segmentation process of the potential world markets, appears to be an important factor for the early and rapid internationalisation of a firm. Overby and Min (2001) argue that the vast global economy allows for smaller firms with specific markets to dominate those niches. Nummela (2004) agrees, claiming that, despite their small size, so-called deep niche firms can control a significant global segment of the market. This in turn leads to internationalisation being a natural outcome of niche focus, as mentioned earlier.

Hollensen (2007) claims that this new type of global digital economy has led to problems for larger firms in terms of replication of their products, systems or services, which reduces the differentiation value of the businesses. With a simultaneous shortening of the product life cycle, unpredictable markets and the ever progressing technologies, large companies are beginning to suffer strategically. Again small niche firms seem to have an advantage, in that they can more easily differentiate their products and business, which facilitates entry into new markets.

Osarenkhoe (2009) concludes that while business- or industry-specific factors are important for the internationalisation process of a firm, they are surpassed by the role of executive management and firm-level factors.

In the case of *networking*, Johanson and Mattsson (1988) define internationalisation as a process where a company builds business relationships in foreign markets through international extension, penetration or international integration. The network approach is considered particularly important in turbulent, high-technology industries (Johanson – Vahlne, 1990), such as the defence industry.

Zucchella et al. (2007) mention the importance of personal and inter-organisational networking, informal and formal agreements and shared knowledge between organisations. Osarenkhoe (2009) defines networks as interconnected business relationships, where every inter-organisational exchange is seen as part of a collective, much like what is described by Hollensen (2007). Osarenkhoe (2009) goes on to say that the creation and maintenance of long-term business relations are essential for the improved performance of an internationalising firm. Put into the global context described earlier, the networking related drivers affect the extent to which the company uses its international and domestic relationships as means of obtaining necessary resources and knowledge. In other words, firms use networks to gain access to resources, to improve their strategic positions, to learn new skills, or to gain legitimacy. (Osarenkhoe 2009)

Both kinds of relations can be used as bridges to other networks, which in turn may facilitate the internationalisation process through improving the entry into new markets, as mentioned earlier (Johansson – Vahlne 1990).

In addition, Osarenkhoe (2009) elaborates on the thoughts of Zucchella et al. (2007) in describing a business relationship as a sum of resource control and activity implementation. No firm acts alone in a market, but rather all actors are connected and co-dependent, which in turn leads to improved possibilities for internationalisation. In essence a firm in such a network can be international without being explicitly present in any specific international market. (Osarenkhoe 2009)

The above described approach sees every network as a process, where the market is depicted as a relationship structure between various actors sharing strategic action. The strategic decisions made by internationalising firms are influenced by inter-firm networks, leading to a form of collective internationalisation. (Coviello – Munro 1997)

Firms operating in such global networks benefit from so-called learning advantage, which facilitates the transition into foreign markets and improves the level of internationalisation. Various experts have shown the effect international networks have on the internationalisation process of firms, claiming that the key to successful development of international trade often lies in personal and organisational business relationships. (Mattson – Johanson 2006, cited in Osarenkhoe 2009; Havila et al. 2004)

In the case of born global firms, entry into foreign markets is accomplished through the use of networks and contacts to distribute products or services. Networks are vital for born global firms, as they lack the intra-firm knowledge and resources gained from experience, and must initially conduct sales through networks in order to establish partnerships that add to their knowledge base. (Osarenkhoe 2009)

Companies' internationalisation processes will accelerate when they are part of a network; for example when distributing new technologies, entering new markets or bypassing government regulations. In essence, well-managed strategic co-operation allows companies to create value which would otherwise have been lost to them. (Hollensen 2007)

As mentioned earlier, the *technological tools* available to companies are ever increasing, while at the same time the need to stay aware of said tools is ever greater. It is commonly understood that internationalisation of the type described earlier in this chapter is only applicable to high-tech firms. Osarenkhoe (2009) claims the contrary, saying that so-called non-sequential internationalisation is present in all industries, albeit it is most noted in the IT sector.

Osarenkhoe (2009) bases his analysis of the importance of technological drivers on the assumption that ICT is readily available and facilitates both the globalisation and internationalisation of a company. Again, when put into the global context, the technological drivers explain how firms utilise technological innovation to improve



their internationalisation process. Just as discussed earlier, ICT lowers costs and improves a company's access to its potential customers. (Osarenkhoe 2009)

Overby and Min (2001) mention the Internet, various intranets and extranets as well as private networks, as examples of technological innovations used by firms to improve their production, sales and overall internationalisation process. In addition to these, transport techniques are improving as a result of improved technology, which essentially is making the shipping of goods more efficient and dependable. Other savings include cheaper market research, reduced transaction costs and simplified order processing. A key benefit of the above is, therefore, simply that the continuous development of internet technology is lowering the cost of internationalisation. (Osarenkhoe 2009; Overby – Min 2001)

Osarenkhoe (2009) describes a clear link between the increased number of born global firms, faster internationalisation processes, wide-spread global growth and improved knowledge acquisition. The development of the internet facilitates the capitalisation of niche opportunities, again increasing the possibility for firms to internationalise quickly (Hollensen 2007). Ultimately the changing technological environment has caused firms to globalise their operations, transforming organisational processes and creating new opportunities for companies. In essence, technology is making it easier for companies to connect with each other and with the customers (Overby – Min 2001).

The role of entrepreneurs has been discussed in depth earlier in this chapter, and has to some extent been deemed irrelevant to this study. It is nevertheless worth mentioning that the *entrepreneurial prowess* as described by, among others, Osarenkhoe (2009) leads to the individuals in charge of the internationalisation seeking a global mindset, which improves the desire and capability of the firm to do business in foreign markets.

The basic state of the entrepreneur is one of dynamic uncertainty, where he constantly identifies and makes use of any business opportunities presented to him. It is clear from many studies that managers of born globals or rapidly internationalising companies are innovative risk-takers with a global view of the business environment, rather than a distinct classification of domestic and foreign markets. (Osarenkhoe 2009) Firms led by such individuals tend to be flexible in their decision-making, quick to adapt and perform as if the entire world were a single market (Nummela 2004).

Hollensen (2007) argues that successful international business is made easier through partnerships and co-operation with other international companies, including suppliers and distributors. Taking time to build long-term and mutually beneficial relationships and alliances will allow all actors in a supply chain to grow and succeed.

The *location-specific drivers* are closely linked to the clusters mentioned before, and comprise the role of local networks, co-operation factors stemming from clusters, and industrial districts as natural arenas for international operations (Zucchella et al. 2007).

Despite all the cost reducing factors outlined earlier in this chapter, it is clear that internationalisation is expensive for companies. Not only does the high cost impede a company's international operations, it also serves to limit export supply responses. While it therefore can be argued that entry costs are a major obstacle for any firms attempting a quick internationalisation, Osarenkhoe (2009) goes on to state that the extent to which those costs cause problems is in inverse correlation to the company's ability to take advantage of the drivers and enablers of internationalisation discussed above. All the above described drivers facilitate the a firm's internationalisation process, usually by reducing costs. By analysing these drivers a valid theoretical framework for both sequential internationalisation, such as is described in the Uppsala model, as well as non-sequential internationalisation, such as outlined by the network model, can be formed. (Osarenkhoe 2009)

In conclusion, Osarenkhoe (2009) outlines three models with which the drivers behind the internationalisation process of a firm can be explained; *the firm*, *the transaction cost analysis* and *the network model*.

When considering *the firm*, the assumptions about the firm's behaviour indicate that internationalisation is closely linked to managerial learning, which is a prerequisite for developing the firm from one stage to another. Internationalisation is a step-by-step process which begins with export and ends with physical manufacturing operations in the target country. The variables affecting the process development are based on cycles in the market environment. While market commitment is mainly increased through small steps, firms with surplus resources can internationalise more rapidly, and in homogenous market conditions, experience can be gained in alternative ways. As normative implications of this model, Osarenkhoe (2009) mentions that additional market commitment should made in small incremental steps, through minimum-risk entry modes.

The *transaction cost analysis* focuses on the cost of entering into transactions, and considers a clear organisational structure as vital for reducing those costs. Transaction costs can be divided into costs of searching for information, negotiation costs, and monitoring costs. In uncertain market conditions with opportunistic operators, however, the role of transactional difficulties increases, leading to increased costs. It is important for a firm to find an optimal organisational structure, where the transaction costs are at their lowest. The basic assumption is that companies will only grow internally until external sources can be deemed cheaper than internal ones. (Osarenkhoe 2009)

The *network model* is based on the notion that the personal ties a manager or company creates with actors in various networks form the basis for strong commitment and, eventually, mutual benefit. As discussed earlier, the ultimate enabler of the firm's internationalisation is the network in which it operates. In essence, firms are interdependent, and therefore internationalising firms depend on each others' resources,

such as suppliers and customers, for success. The importance of networks cannot be stressed enough, as they enable the company to acquire resources and knowledge which would otherwise have been unobtainable. It is also clear that domestic relationships can be used as connections to foreign markets. (Osarenkhoe 2009)

### 2.3 How and why the defence industry internationalises

In Section 2.1. the researcher established a theoretical framework for what modes of internationalisation companies utilise, and in Section 2.2. the researcher outlined various drivers and enablers of the internationalisation process. In layman's terms, the sections discussed the *how* and *why* of internationalisation in general. This section focuses on the defence industry in particular, and will combine the theories described in the previous sections to create a framework for how and why the internationalisation process of the defence industry takes place.

While the internationalisation of SOEs, such as the defence companies discussed in this study, has been studied since as far back as the 1960's, that area of research has been neglected in the last two decades. The drivers behind the internationalisation of such companies follow the guidelines set by traditional internationalisation research, outlined by experts such as Zucchella et al. (2007), but require various modifications due to the distinct nature of state-owned defence industry enterprises. The original theories, which concentrate on explaining the drivers behind the internationalisation of private companies, seemingly fail to take into account any special conditions applying to government-owned or -controlled enterprises.

As mentioned in the introductory chapter, Dunne (2006) has divided the trends of change in the defence industry into four sections. The drivers behind those changes are also causing the internationalisation of said industry. Due to the specific nature of the defence industry and the purposes of this study, only the economic, technological and political drivers will be discussed.

***Economic drivers:*** Merged US defence companies, which not only control their domestic market, but also compete with European companies in essential markets, create new economic challenges for their European counterparts. These new conglomerates are the main cause behind the changes in the industry's structure, and create a need for European companies to restructure further across borders, and begin networking and considering partnerships with the US companies. (Bitzinger 2009)

Closely linked to these changes in the nature of the industry is the way governments are beginning to allow the private sector to provide defence-related services, previously provided by the military, including security and bodyguard services. While defence companies continue to rely on national support for exports, there is a clear need to

continue to internationalise, particularly in relation to the supply chains. (Dunne 2006)

An aspect to consider is the fact that defence industry contracts are subject to a high degree of lobbying on behalf of potential suppliers, which is why the credibility of any defence company has to relate to a company's financial stability, its ability to handle sensitive data, and its ability to deliver quality products and services on schedule (Trim 1999). In relation to the lobbying, Bitzinger (2009) and Dunne (2006) agree that the EU Code of Conduct on Defence Procurement (see Section 1.4.), adopted in 2006 as an effort to inject transparency and competition into the defence procurement, if taken seriously, will be an important driver of change in the industry.

Dunne (2006) argues that barriers to entry, as discussed in Section 2.2., are likely to remain present in the defence industry, due to the marketing of military products being based mainly on networking and personal contacts, rather than general advertising. Compatibility requirements cause a certain brand-loyalty in governments, who limit market demand, which in turn responds slowly to fluctuations in the market. New entrants cannot count on a market expansion, but must instead succeed in replacing current suppliers. (Dunne 2006)

The cyclical nature of the market favours long-term commitments, which makes it worth staying on board even in lean times. There is a clear trend of governments bailing out major contractors, providing subsidiaries for foreign trade. Barriers to exit are therefore likely to remain, while their significance may diminish in the future. (Bitzinger 2009; Dunne 2006) A concrete example of this is outlined by Svenska Dagbladet (2010) with news of continued arms trade between Sweden and Saudi-Arabia, despite heated discussions in Sweden on the morality of such deals. The politicians seem to have forgotten that, claims Svenska Dagbladet (2010), they discussed and passed the petition in early 2000.

Demand for products is likely to decrease, as the military spending of countries will remain static or decrease over time. There is currently a lot of potential for cuts in many European countries. (Dunne 2006) The nature of warfare is changing towards asymmetric conflict, and many of today's high-maintenance weapons systems are becoming obsolete, claims Bitzinger (2009). This also leads to a change in the nature of demand, where there is an ever-growing need for high-tech weapons platforms, combined with an increased degree of outsourcing of services. In conjunction with the above discussed reluctance to spend money on defence, this implies continuing decline in governments' independent capabilities (Hayward 2008).

The historical military conservatism will not disappear from the world of defence, but the new security environment will lead to resources being allocated away from legacy weapons systems, such as fighter aircraft (Dunne 2006). The nature of military missions will change, as the role of EU and NATO troops increases in crisis management and peacekeeping operations. This leads to new requirements for the co-

operational characteristics of armed forces and weapons systems, essentially creating a need for compatibility between nations. (Bitzinger 2009)

Some purely macro-economic factors affecting the defence industry internationalisation are: global exchange rates; the slow short and medium term economic growth in Europe; and policy changes caused by privatisation (Dunne 2006).

While companies will remain dependent on their home markets, argues Dunne (2006), the increase of globalisation will result in internationalisation becoming an increasingly important force in the defence sector, affecting supply chain expansion and the rise of joint ventures. This is closely linked to the increasing use of private companies to undertake formerly military tasks (Bitzinger 2009).

Linkage between sectors is an additional factor, reducing the industry specialisation of all but the major contractors, which in turn will lead to increased influence of financial capital (Dunne 2006).

**Technological drivers:** Technology is extremely important for the defence sector, influencing the sector's development in several crucial ways (Dunne 2006). The fact that a defence product might take longer than expected to develop and may therefore need to be redesigned or scrapped entirely due to the technology itself or an aspect of the technology becoming obsolete, is important when considering public acceptance and government accountability (Dunne 2006; Trim 1999). An example of the current revolution of the defence sector, combined with the growth of technology and costs, increases the likelihood of contractors turning to outsourcing, co-operation and joint ventures, thereby stimulating further internationalisation of the industry. The European defence industry will need to restructure to remain internationally competitive. (Bitzinger 2009; Dunne 2006)

Previously the transition of technology from the defence sector into civilian use has been an important argument for the importance of military production. Today the focus has been on using civilian technology for military purposes, such as heavy radios with personal mobile phones. (Dunne 2006)

Technological barriers to entry into the international defence market will always remain for the major contracts. The nature of the defence market makes technological characteristics a vital prerequisite for any product. In addition, buyers consider proven capability a must, which can be difficult for a new entrant to establish. All new products require long lead times, many development stages and expensive, specialised and highly skilled workforce to produce. (Dunne 2006)

The globalisation process of the industry has been further stimulated by the transition of civilian or commercial technology into defence systems (Hayward 2008). While the initial reason for dual-use technologies was to enable the defence industry to utilise the civilian markets without losing weapons procurement capabilities, only a few areas exist today where the technological initiative comes from the defence industry (Dunne

2006). There is a clear interest towards cost reduction through commercialising the production and reducing development time of weapons systems. This leads to national defence buyers becoming increasingly dependent on global suppliers with less control over their supply chains, either commercially or politically. (Hayward 2008) There is a clear risk that dual-use technology will increase the governmental restrictions on defence companies, making them less competitive on the civilian market (Dunne 2006).

Both domestic and international co-operation increases its importance within the defence sector, mainly due to companies needing to maintain technological capabilities in the ever changing technological environment (Dunne 2006). Before the 1990's the co-operation was a highly politicised, mainly government-to-government, and often resulted in uncertainty and high overheads. Today, both Europe and the USA are home to highly developed defence equipment collaboration, consisting of complicated networks of alliances. (Hayward 2008)

Licensing, collaboration and joint ventures are becoming increasingly important for the production of major weapons systems, especially for so-called first-tier producers. Another factor with increasing influence is the rise of network-centred warfare, which, in conjunction with rapid changes in the nature of operations, is effectively changing the nature of demand. (Dunne 2006)

**Political drivers:** Political factors and security concerns have always been at the forefront of the defence industry and will remain dominant, even though there have been a number of developments (Dunne 2006). An important aspect to consider when discussing the political drivers behind the defence sector's change is that defence contracts are subject to a high degree of lobbying on behalf of potential suppliers, which is why the credibility of any defence company has to relate to a company's financial stability, its ability to handle sensitive data, and its ability to deliver quality products and services on schedule (Trim 1999). In relation to the lobbying, Bitzinger (2009) and Dunne (2006) agree that the CoC, adopted in 2006 as an effort to inject transparency and competition into the defence procurement, if taken seriously, will be an important driver of change in the industry.

Because of the dominant political and security factors associated with the defence sector, there are various political considerations, which tend to influence the attainment of major contracts, despite attempts to introduce competition on the market. Personal contacts built up over time are extremely important, which is why new entrants tend to find it hard to operate without knowledge of the particular practices employed in the sector, claims Dunne (2006). Once a contractor has become successful at handling these complexities, there is little desire to give up such an advantage, he argues. Hayward (2008), on the other hand, suggests that subcontractors in some cases may prefer to trade long-term design and development contracts with a specific nation for an international supply base offering commitments to reduce costs. He states that

companies constantly search globally for added value in both products and processes, which automatically increases the industry's degree of internationalisation, but reduces the stronghold governments have on their defence companies.

On the subject of particular practises, Dunne (2006) notes a tendency in large contractors to bend the rules; buying in with low bids at the beginning of a contract, expecting to make more money later, often through winning future contracts. It seems that this tendency to bend rules sometimes results in breakage, as in the June 2011 case, where four employees of a Finnish defence industry SOE were charged for industrial espionage, further adding to the immorality of the industry (MTV3 2011).

As stated before, the demand for defence products is dictated mainly by governments and their spending, which allows nations to directly determine the way the industry is structured (Dunne 2006). Currently there is a falling trend in government spending, which causes a decrease in overall demand for the industry as a whole (Bitzinger 2009). Governments are currently short on funds, which leads to an increased willingness to improve the efficiency of contracts, usually through encouraging international competition. On the other hand, governments need to consider the consequences of losing control over their key industries and core technologies. (Hayward 2008) In relation to this, there has, in recent years, been a clear policy towards increasing privatisation and tolerance of foreign ownership and non-domestic production. Following this trend, there is also a clear rise in private companies taking on the support roles previously held by armed forces. (Dunne 2006) It seems that the traditional setting where defence business was nationally owned and operated is changing, and foreign direct investments (FDI) into national defence firms is no longer confined to a few marginal examples (Hayward 2008).

An example of overlapping production and its effects on the international politics is in a recent report by Taloussanomati (2011) of the French defence industry's consideration of selling military vessels at zero interest to the debt-ridden Greece. This deal is currently chafing the Franco-German political relations, as the Germans are said to have had their eye on this particular deal for decades.

Currently governments are globally discussing the signing of an international arms trade treaty. The aim of such an agreement is to increase the control over the flow of defence related products. What impact this initiative will have on international arms trade is currently unclear. (Dunne 2006)

### 3 CARRYING OUT THE RESEARCH

*“The basic problems facing the world today are not susceptible to a military solution.”*

*-John F. Kennedy (n.d.)*

This research was carried out as a qualitative study, which means the focus was on analysing the knowledge of experts and the reasons behind those, rather than on numbers and averages. The material used is based on analytic interviews rather than surveys, and on critical analysis of literature and media rather than a review of accepted theories. Qualitative research is by nature descriptive, diagnostic and creative, and gives answers to why and how the world works as it does. While qualitative research can be used together with quantitative research to improve or fortify findings, this research concentrates on the qualitative aspect only. The main reason for this is the confidential nature of the transactions in the business world in general and the defence sector in particular. In effect this means that the amount of people actually aware of what the firm's decisions are based on and how they conduct their business is limited. In addition, all employees of state-owned defence enterprises have signed non-disclosure obligation, meaning that virtually no information about the company itself or its operations can be given out to non-employees.

Due to the sensitive nature of the industry, a certain lack of willingness to cooperate and freely distribute information was expected on the part of firms operating in the defence sector. The research therefore had to include literature and media reviews, as only a few insights from interviews with representatives from firms in the defence industry, or politicians working in the field, were obtained. The lack or scarcity of primary sources effectively means that the secondary sources used need to be comprehensive, up-to-date and relevant. Special attention must be paid to the reliability and validity of those sources. It is important to keep in mind that the study is a general study on the internationalisation of the arms industry, rather than a case study of any given company. This was emphasised when conducting the interviews. Interviews are also used as expert insights on what to pay attention to during research. No interview describes the current situation in any particular enterprise.

Due to the linguistic limitations of the researcher and the unreliable or biased reputations of many national media, the media review was conducted using only globally recognised sources in English, Finnish and Swedish. Considering the above outlined limitations and restrictions, the study was ultimately carried out as qualitative research in the European market for defence industry companies with expert interviews and some elements of desk research.



### 3.1 Qualitative research

Qualitative data collection is used in many academic fields, and is a method for investigating why and how something happens, rather than merely describing a process. Instead of large samples, smaller but more focused samples are needed. (Denzin – Lincoln 2005)

Traditionally qualitative methods have been seen to produce information only on the particular cases studied, making all generalisations mere propositions. Flyvbjerg (2006) disputes this view, claiming that qualitative techniques are utilised by researchers when testing particular theories, as well as when outlining general frameworks that also apply outside the studied cases.

The approach used in qualitative research is referred to as naturalistic, i.e. seeking to understand phenomena in context-specific settings, such as a real world setting, where the researcher does not attempt to manipulate the phenomenon of interest (Patton 2001). A major area of interest of this research approach is to understand a reality which is interpreted and constructed socially through cultural meanings (Eriksson – Kovalainen 2008). Qualitative analysis gives the researcher a different form of knowledge than does quantitative research, as qualitative research outlines the philosophical nature of each hypothesis through detailed interviewing, while quantitative research focuses on compatibility of research methods (Glesne – Peshkin 1992). Qualitative research therefore often focuses on interpretation and comprehension, as opposed to quantitative research, which concentrates on explaining and analysing statistics, and testing hypotheses (Denzin – Lincoln 1998).

In the qualitative approach the researcher collects open-ended, emerging data with the objective of developing patterns from that data (Creswell 2003). A qualitative researcher also collects data in a context-sensitive way, attempting to find a holistic understanding of the data, whereas a quantitative researcher is more prone to structured and standardised modes of collecting and analysing empirical data. (Eriksson – Kovalainen 2008) In this study the researcher analyses the special characteristics of the defence industry in an attempt to interpret and understand how the defence industry internationalises. The ultimate goal is to find a model which can later be applied to companies in the defence industry.

Qualitative research also includes the notion that reality is versatile, with incidents affecting each other, leading to a variety of possible inter-relations (Hirsjärvi – Remes – Sajavaara 2009). A major challenge of the qualitative research approach is dealing with complexity, i.e. managing the nature and quality of the data while acknowledging its limitations (Zalan – Lewis 2004). In this study, the major challenge was to find relevant data on a very secretive industry, and on a subject which has not been extensively studied.

Hirsjärvi et al. (2009) have outlined typical characteristics of the qualitative research approach. They consider the research a comprehensive procurement of information, where material is collected in real situations, i.e. discussions. Furthermore, they argue, the medium for collecting the data should be a human being rather than a computer or other form of technology.

Inductive analysis should be the basis of the research, as the researcher, rather than testing a theory or hypothesis, attempts to uncover something unexpected. A complex and detailed analysis of the information gathered is therefore the key to success. (Creswell 2009)

The target group is selected purposefully and on the basis of their knowledge on the subject, rather than randomly, and the research plan is formed as the research progresses. All data is handled as a unique piece of information, which may lead to the research problem changing in the process. (Hirsjärvi et al. 2009)

This study addressed the above characteristics by collecting the data in real situations and through a human medium, i.e. personal interviews. In addition the analysis of the data was inductive, interviewees were selected based on their knowledge, and each interview was processed uniquely. All research is given a purpose, which guides the strategic choices of the research. This purpose can be divided into four categories: descriptive, exploratory, explanatory, or predictive. (Hirsjärvi et al. 2009) In this research, the purpose of the research is to describe and explore the research problem.

Descriptive research deals with data that can be calculated, revised and analysed (Babbie 1989). The aim of descriptive research is to document central and interesting features of a certain phenomenon and moreover, to present precise descriptions on individuals, events, or situations (Hirsjärvi et al. 2009). In descriptive research, the researcher typically proceeds through a series of analysis stages which compress data into a more coherent understanding of 'what, how and why' (Miles – Huberman 1994).

Exploratory research in turn is used when problems are in a preliminary stage, or when the topic or issue is new and when data is difficult to collect (Babbie 1989). It often relies on secondary material, such as literature or data reviews, or qualitative approaches such as informal discussions with employees or experts. More formal approaches, such as in-depth interviews and case studies are also used. While the results of exploratory research rarely can be sufficiently reliable by themselves, they can provide significant insight into a certain area. While qualitative research can give the researcher clues as to the why, how and when something happens, it cannot explain how often. Exploratory research is also seen as an attempt to create a hypothesis from the data itself rather than from a previously outlined or explained theory. (Shields – Tajalli 2006) The purpose of this particular research is to describe and explore the process that leads to and aids the internationalisation of a defence industry enterprise.

## 3.2 Desk research

Desk research is in essence the review, analysis and synthesis of existing research, rather than research where data is collected from interviewees or experiments (Crouch – Housden 2003). As a method desk research is often seen as a very unglamorous way of conducting research, and while it is definitely not frowned upon, few famous researchers have made it big through expertly conducted desk research. (Jackson 1994)

Desk research is an area of research on which there is very little written, which in turn makes it difficult for the researcher to base this methodology chapter on multiple sources with different viewpoints. On the other hand, most recent desk researches reviewed quote Jackson (1994) as their primary source for methodology, which increases the reliability and validity of the views expressed in this chapter. Furthermore, desk research is by nature a method which depends heavily on the results obtained from the reviews and often evolves during the process of writing (Paavilainen-Mäntymäki 2011). This makes it close to impossible to define and pin down the final methodology beforehand.

The primary method in desk research is the so-called systematic review. Other methodologies, such as meta-narrative reviews, have been developed in recent years. Secondary research such as this employs existing primary research in the form of publications, articles and reports. In a specifically market-oriented research context, desk research is taken to include the re-use by a second party of any data collected by a first party or parties. (Crouch – Housden 2003)

The desk research method is most commonly used in so-called in-house research, when the resources available are scarce or limited by factors outside the control of the researcher or agency. The type of data collection associated with desk research requires few, if any, additional resources and can effectively be carried out by one single researcher. (Jackson 1994)

This was also the case in this study, where the researcher's movements were limited to one country and means of contacting experts abroad are restricted to email and, in some cases, telephone. In addition to the above discussed issues relating to the difficulty of collecting relevant data from enterprises in the defence industry, the reliability of the interviews decreases if contact cannot be made face-to-face. Telephone interviews are reliable to some extent, but when interviews are conducted over email, many problems occur. Those include long response times, the shift-delete -effect meaning interviewees finding it easy to delete emails, and inability to convey emotion and linguistic subtleties. (Paavilainen-Mäntymäki 2011) The researcher was further restricted by the lack of funding for the project, which means that any monetary resources used must come from the researcher's own pocket.

When conducting desk research, focus is often on library sources and online databases. In the case of library sources, the books used have already undergone partial source criticism from the library, making such sources more reliable than the random information found on the internet. Without sufficient comprehension of major sources available online, the researcher may fail to understand the enormous potential of the existing information or, in the worst case, use completely erroneous sources which have little to do with any reliable information. (Jackson 1994)

The challenge for the researcher in this study and desk studies in general is whether the information obtained from secondary sources is enough to create a valid analysis of the subject at hand without primary sources such as interviews to back up the information (Paavilainen-Mäntymäki 2011). In studies where both primary and secondary sources are used to meet the objectives of the research, it is often best to carry out the desk research before planning any primary research. Primary data collection is almost by default more expensive than secondary source analysis, which is why primary research should mainly be used to collect information which is not readily available from published sources. (Jackson 1994)

Not many governments provide inclusive information about their defence sector in a way that serves the general public. Legitimate information provided directly and voluntarily by the defence industry itself is, if possible, even more limited. Typically, information is given out informally, and is often in a format which is seldom comprehensible to the public, and rarely facilitates an international comparison between defence industries, or allows similarity with civilian industrial activities to be observed. On the other hand, the quick improvements in information and communication technologies over the last few years facilitates a swift and wide distribution of the limited information that is available. (SIPRI 2011)

In this research primary sources were mainly used for expert analyses on the viewpoints already available to professionals and, to give the researcher an idea about which sources could benefit the research most. Therefore the primary research in this study, that is expert interviews, was carried out before the secondary resources are chosen. This also supports the suggestion that only data not available from secondary sources was collected through primary research.

While the resources required for carrying out primary research often are extensive, very little is required for desk research. Database searching requires a computer with internet connection, but other than that, no special equipment is needed. Interviews in turn require not only special equipment, but also careful planning to succeed. (Jackson 1994)

Ultimately desk research is a process in which the researcher accesses published secondary data, meaning books and journals, databases and reports, as well as continuous surveys. In addition, sources for desk research may include newspapers,

directories, statistics, company accounts and websites. The first stage of desk research is often to decide which of these sources are relevant for the project at hand. (Jackson 1994)

The problems often associated with desk research include the fact that the data reviewed is usually collected for another purpose entirely, and may be either biased or lacking in scientific validity (Paavilainen-Mäntymäki 2011). It is also worth noting the fact that just because information is printed or in a database, it is not automatically reliable, and all that is published is not necessarily accurate. Information obtained online or through media review may even be quite untrue. Therefore it is very important that all results of the literature and media review are thoroughly evaluated before they are used in the research. This is not always easy, as all information must be arbitrated on its own merits. (Jackson 1994)

Jackson (1994) outlines the following three general principles:

- Finding the original source
- Evaluating the original data collection method
- Cross-checking with other sources.

The researcher must always be prepared to evaluate the reliability of all information obtained and to discard any unreliable data. This may mean that hours spent tracking down some elusive statistics may have been in vain. With a restricted timetable the evaluation of every piece of information can be difficult, but checking the reliability of each source as it is obtained makes for a less time-consuming after-treatment and a valid study. (Jackson 1994)

In this study most of the desk research was done simultaneously with the theoretical framework and the analysis of the empirical data, which gave the researcher a better insight into what information was required, ultimately reducing the need for time-consuming after-treatment. The reliability was ensured through only using globally or nationally recognised sources and experts.

### **3.3 Data collection**

The key to empiric research is in the methods, the choice of which is generally directed by what kind of information is desired (Hirsjärvi et al. 2009). The research method should be relevant to the research questions (Eriksson – Kovalainen 2008).

There are various methods available to researchers collecting qualitative information, including *grounded theory*, *narratology*, *ethnographic research*, and *shadowing*. Qualitative research is also connected to other empiric methods, including *action*

*research* or the *actor-network theory*. The data can be collected in many ways, including interviewing and discussing in groups, monitoring and reflecting on different field materials. *Participant* and *non-participant observation*; *unstructured*, *semi-structured* and *structured interviews*; as well as *field notes*, *articles*, and the analysis of documents are classic examples of methods used by researchers when collecting qualitative data. (Marshall – Rossman 1998)

When conducting a study of a certain industry, one of the most important sources is the interview (Yin 2009). This specific research concentrated on interviews as a way of complementing the data collected through desk research. The researcher therefore does not explain all the above-mentioned methods of gathering information, but instead focuses on those relevant for this study.

Interview-based research is defined as a method where the data is based on findings from direct conversations between the researcher and a respondent (Daniels – Cannice 2004). Interviews are, in essence, guided conversations rather than structured queries and they are usually targeted, focusing directly on a certain topic or theme (Yin 2009).

A ***structured interview*** is most commonly used in quantitative research as a method for survey research. The method attempts to guarantee that all questions are used in the same order for all interviews. This, in turn, guarantees a reliable combination of responses, as well as valid comparisons between various participant groups or even various time periods of the study. Although primarily a method in quantitative research, structured interviews can also be used as a qualitative research methodology. (Kvale – Brinkman 2008)

Interviews of the kind described above are often best suited for answering research questions by comparing focus group responses (Lindlöf – Taylor 2002). For structured interviews in a qualitative context, the creation of an interview schedule is typically required of the researcher, in order to outline the questions themselves and their sequence (Patton 2001). Interview schedules increase the dependability and trustworthiness of the collected data (Lindlöf – Taylor 2002). For this particular research, there are no available focus groups, and no need for comparing the respondents' answers, so the structured interview was not seen as the most useful approach.

***Unstructured interviews*** represent a way of interviewing which allows the interviewer to alter the questions to suit the situation, which may change according to the interviewees intellect, comprehension or conviction. The unstructured interview differs from the structured interview in that it avoids a restricted and fixed structure of questions to which the interviewee replies, but rather adapts the questions to each individual respondent and his or her reactions. This method requires a certain environment or setting to work, as interviews over the phone and often also in person typically follow a structured pattern, thus simplifying the work-load of the researcher

and improving the comparability of answers. Researchers agree that the method is of little use when researching anything other than sociology. (Lindlöf – Taylor 2002; Cicourel – Kitsuse 1963)

While a structured interview has a formalised and limited set of questions, allowing the researcher to ask each respondent the same exact questions, a *semi-structured interview* is flexible, allowing new questions to be brought up during the interview depending on the interviewee's responses. In comparison to an unstructured interview, it lacks the ability to fully adapt the questions and topics to the respondent's intelligence. When using a semi-structured method of interviewing, the researcher typically utilises a pre-set framework of themes, which he or she investigates through the interviewees responses. (Lindlöf – Taylor 2002)

A typical feature for a semi-structured interview is that the themes are pre-meditated, but lack exact order or form. The questions are open, and the interviews are conducted by personally interviewing one expert at a time, which is the most common form of interview. (Hirsjärvi – Hurme 2008; Hirsjärvi et al. 2007)

With a less closed framework, the communication between researcher and respondent is more focused and conversational (The UN Food & Agriculture Organization 2011). The framework should be outlined well before the beginning of the interview, and the set of themes should be organised into informal groups of areas and questions. This type of theme-set facilitates the focus of the researcher on the discussed topics, and removes the need to restrain the questions to a certain format. Such a lack of restraint increases the possibility of tailored questions, so each question suits both the context and the person interviewed. (Lindlöf – Taylor 2002)

However, not all questions are designed and phrased ahead of time, as the majority of questions may be created during the interview, allowing both the interviewer and the person being interviewed the flexibility to probe for details or discuss topics (The UN Food & Agriculture Organization 2011). For the purposes of this particular study, a semi-structured interview with pre-meditated themes given to the interviewees, and a possibility to form new questions during the interview, should the need arise, was decided upon to give the most relevant results.

A variety of factors needs to be considered when conducting an interview. The interviewer needs to know what kind of information he needs, who he wants to receive the information from, and how many responses he needs in order to produce reliable answers. In addition to this the researcher needs to be aware of time limitations in the amount of interviews he or she will be able to conduct. (Daniels & Cannice 2004)

When conducting semi-structured interviews, the most common duration is from one hour to 120 minutes (Hirsjärvi et al. 2009). The researcher requested an hour from each expert and was generally granted 30-45 minutes, which made for uncharacteristically short but, in hindsight, sufficient interviews. All interviewees seemed to be experienced

at speaking on the subject, which reduced the so-called 'dead air' in the interviews. There are five transcribed interviews in this study, in addition to two unrecorded ones.

The five interviewed experts were Colonel Erik Erroll, former Chief Officer of the Department of Strategic and Defence Studies at the Finnish National Defence University; Defence Counsellor Erkki Aalto, Finland's permanent representative at the European Defence Agency; Axel Hagelstam, Political Advisor to MEP Carl Haglund; Olli Ruutu, Principal Officer at the European Defence Agency; and Lt. Col. Markku Viitasaari, former Aide-de-Camp to the Finnish Minister of Defence Stefan Wallin. Pilot interviews with selected key participants are an essential part of semi-structured interviews, and can assist the researcher in a number of ways. The purpose of the pilot interview is to test the structure of the interview, the order of the themes, and the design of the hypothetical questions, which can be altered based on results from the pilot interviews. Pilot interviews also guide the researcher in finding areas that may previously have been unclear. Furthermore, they enable the researcher to establish effective patterns for communication. (Hirsjärvi – Hurme 2008; Janesick 1998)

In this research one unrecorded pilot interview was conducted with the suggested themes, after which they were altered to take in a broader view of the industry discussed. The interviewed expert was former Finnish MEP Henrik Lax. The initial interview focused on the correct subject, but the researcher found that the interviewee required more detailed themes in order to be able to give his or her opinion on the subject. These more detailed instructions were incorporated in the final interview structure.

There are challenges to using interviews as data sources, a major one being the risk of bias, which is present in any personal responses. In in-depth interviews the researcher's presence, poorly articulated questions or a certain level of personal connection between interviewer and interviewee may result in skewed answers. The risk for bias increases further as participants rarely display equal ability to articulate or perceive. Ultimately the researcher must keep in mind that all responses represent indirect information, since the answers given by the interviewees always characterise their personal opinions, rather than those of the organisation they represent. (Creswell 2009; Yin 2009)

Having outlined the problems faced by a researcher when choosing interviews as his or her primary source of data, it must be articulated that there are several more reasons favouring the interview as research method, than there are against it. An interview is always preferred over a questionnaire when the emphasis is on an individual as a creator of meanings, and if it is known in advance that the data collected will produce multiple and complex answers (Hirsjärvi et al. 2009), as was the case in this study. In addition, the interview allows the researcher to control the flow of questions, allowing the interviewees to provide such information outside the set questions that they deem



necessary or historically important, ultimately helping the interviewer to identify additional potentially important sources (Creswell 2009; Yin 2009). In this study the experts interviewed provided the researcher with several additional sources, both as literature and further interviewees. This fact is demonstrated by the amount of potential interviews which grew from three in the beginning of the research to as many as twelve by the end of the first round of interviews. Sufficed to say the researcher had to narrow down the amount of interviews due to time constraints.

As a research method the interview is unique in that it requires a direct linguistic interaction between researcher and interviewee (Hirsjärvi et al. 2009; Hirsjärvi – Hurme 2008), which is one of the reasons for why this research was narrowed from a global perspective to a European one, allowing the researcher to conduct his interviews in the languages native to him. Maintaining a working communication with each interviewee is equally vital, even if the participants are unable to communicate with each other (Scapens 2004).

Arguably the most important reason for choosing interviews over other methods of data collection is the flexibility this method offers. The order of interviewees can easily be managed, and the possibilities of response interpretation are much wider than in, for example, postal enquiries. (Hirsjärvi et al. 2009)

As a result of the pilot interview and an analysis of the theoretical aspect of the study, the following research thematic chart was created. The interview was conducted around the seven themes shown below (table 3).

**Table 3 Interview thematic structure**

Sub-questions	Themes
<b>Background</b>	1. How do you define the defence sector / industry?
<b>Economic drivers</b>	2. National actors vs. private companies? 3. Special characteristics of the defence market?
<b>Technological drivers</b>	4. What happens when defence-related products are sold for other purposes? 5. How does the defence industry differ from other state-owned enterprises?
<b>Political drivers</b>	6. Selling peace, i.e. participation in joint operations? 7. Politics vs. business in defence industry?

### 3.4 Data analysis

The basis of any research is always analysing and interpreting data, in addition to drawing conclusions (Hirsjärvi et al. 2009). It is important for the researcher to understand that any qualitative data can be interpreted in a multitude of ways. The chosen research strategy, the types of data collected, the method for collecting that data, and the methods of interpretation should all be closely linked. (Andersen – Skaates 2004)

When using interviews for data collection, the most popular approach is to treat the data as descriptive of an external reality, such as facts or events; or internal experience, such as feelings or meanings (Silverman 2005).

Experts agree that analysis and interpretation of data is often the most difficult task in qualitative research (Yin 2009; Ghauri 2004). What makes the analysis difficult is the apparent multitude of choices, coupled with a lack of strict guidelines (Hirsjärvi et al. 2009). Poorly developed and ill-defined techniques do not make matters any easier (Yin 2009).

It is essential to always choose the method of analysis which is most suitable for the particular research question, and which provides the best answers for the given questions (Eriksson – Koistinen 2005). In addition, it is vital to begin analysing the data as soon as it is collected (Hirsjärvi et al. 2009). In the best case scenario the analysis is closely connected to the data collection process, which allows the theory to develop alongside the data, in turn allowing the research problem to be formulated or even reformulated simultaneously (Ghauri 2004).

All research analysis should follow a general analytic strategy (Yin 2009), and the analysis should involve some separate stages, even if it never forms an isolated process (Ghauri 2004). In this particular study this was executed by carefully transcribing each interview.

The following step is where irrelevant data is filtered from relevant data. The process rearranges the collected data into conceptual categories, rather than chronological ones, through an interpretive technique that both organises the data and provides a means to introduce the interpretations of it into certain quantitative methods. This process is called coding. Coding typically requires the researcher to study the data and isolate certain parts of it. It also includes finding common or conflicting theories and themes in the figures, analysing the themes presented in the research questions. Finally, the researcher must sort the data into various concepts and themes. Coding allows the researcher to identify relationships between different themes and research questions and to detect gaps in the data. (Ghauri 2004; Creswell 2003; Miles – Huberman 1994)

In this particular research, coding was used to find similar themes and to group them together, according to common patterns and characteristics, though a process called

clustering. Clustering helps the researcher to interpret the data and relate the information to the framework of the study (Creswell 2003).

In addition to the above processes, the analysing process can be facilitated by using matrices to explain the inter-relationship between identified factors (Ghauri 2004). Striving to outline data in order to discover the interactions between two or more main dimensions or factors, matrices can be used to investigate these relations (Miles – Huberman 1994).

For a successful data analysis, a combination of the above mentioned processed should be applied, but the precise method of research depends on the subject, research and data at hand (Ghauri 2004). Regardless of what strategy the researcher chooses, the analysis should always be of as high a quality as possible. Ultimately this means that the researcher must focus on presenting all collected evidence thoroughly, and exploring alternative explanations. (Yin 2009)

Once the data has been analysed, the results obtained are explained and interpreted. This stage includes discussions and conclusions based in the analysed data. This in turn reflects the validity of the research. (Hirsjärvi et al. 2009)

### **3.5 Research assessment**

Adopting the classic criteria of good-quality research is important when conducting any study (Eriksson – Kovalainen 2008). These criteria are commonly defined as validity, reliability and generalisation. The overall quality of all research should always be carefully assessed in order to avoid any failings in these criteria. The terms validity and reliability are defined in various ways by experts on qualitative research, but the basic formula is the same and these criteria should always guide the steps of a researcher. (Hirsjärvi – Remes – Sajavaara 2009)

Golafshani (2003) argues that while the use of reliability and validity are typical in quantitative research, it has only recently been reconsidered in the qualitative research hypothesis. Just as reliability and validity, as used in quantitative research, are improving the researchers abilities to examine what these two terms mean in the qualitative research paradigm, triangulation, as used in quantitative research to test the reliability and validity, can also outline some ways to test the validity and reliability of a qualitative study. Therefore, reliability, validity and triangulation, if they are relevant research concepts, particularly from a qualitative point of view, have to be redefined in order to reflect the various methods of establishing truth. (Golafshani 2003)

Silverman (2005) elaborates on these criteria, outlining five characteristics of high quality research; theoretical thinking, empirically sound development, reliable and valid findings, using methods appropriate to the research questions, and contribution to

practice and policy. In this study, the researcher has adhered to the classic criteria of good-quality research.

**Reliability** is defined as the extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable (Joppe 2000). Although the term is used for testing or evaluating quantitative research, the idea is most often used in all kinds of research. If the idea of testing is seen as a way of information elicitation then the most important test of any qualitative study is its quality. A reliable qualitative study can help the researcher understand circumstances that would otherwise be unfathomable or confusing. (Golafshani 2003)

As a concept in qualitative research, reliability refers to the degree of consistency with which instances are assigned to the same category by different researchers or by the same researcher in different occasions, argues Silverman (2005). The reliability of findings can therefore be said to equal the ability of other researchers to repeat the operations of a study, such as the data collection procedures, with similar results (Hirsjärvi et al. 2009; Yin 2009; Hirsjärvi – Hurme 2008). The objective is to ensure that anyone using the same procedures in the future should arrive at the same conclusions as earlier researchers. The goal of reliability is, therefore, to minimise errors in the study. (Yin 2009)

In order to calculate the reliability of a study, it is vital that the researcher carefully describes and documents the entire process, and demonstrates the consistent use of various categories in all stages of the study, including the conditions in producing the data, the time used in the interviews, explanation for classifications made, and the analysis of the data (Hirsjärvi et al. 2009; Silverman 2005).

In this study the description and documentation was made by thoroughly explaining each decision and classification made, in addition to documenting the progress through saving all written correspondence relating to it. All interviews, save the two that were unrecorded, were recorded and transcribed. Every piece of empirical data was carefully analysed using the above-explained criteria of good-quality research, including the transcripts of each interview being sent to each interviewee respectively.

**Validity** has no universally concurred definition, but is typically seen as the extent to which a notion, conclusion or quantity is justifiable and corresponds correctly to the real world. The word is derived from the Latin *validus*, meaning strong, and is a synonym of truth. The validity of a tool for description is considered to be the extent to which it describes what it is supposed to describe. (Hirsjärvi et al. 2009; Yin 2009; Silverman 2005) The results of a research are valid only when several correct sources of data are reported, when the criteria for including those particular sources of data are provided, and the original form of the material is available (Silverman 2005).

The validity of interviews generally depends on the interpretative skills of the interviewer, meaning that as the amount of data in the form of interview responses increases, so does the responsibility of the interviewer and his interpretation of the data (Dowling 2001).

Most experts agree that there is no universal way of validating qualitative data, which effectively means that there are several ways in which to demonstrate validity. For this reason validity issues are rarely discussed when conducting qualitative research. (Andersen – Skaates 2004) While the above may be true, Yin (2009) argues that any research dealing with a specific type or area of industry must maximise four conditions related to the quality of the research: construct validity, internal validity, external validity and reliability.

Internal validity refers to an inductive estimate of the degree to which conclusions about connecting relations can be made. Valid experimental methods, such as are achieved by analysing the effects of independent variables on dependent ones under decidedly guarded conditions, tend to allow for higher levels of internal validity than single-case designs. (Yin 2009) As internal validity generally only concerns explanatory or causal studies rather than descriptive studies, it is not examined in this study.

Construct validity refers to the extent to which operationalisations of a construct – practical tests developed from a theory, for example – do actually measure what the theory says they do. The evidence for construct validity includes both empirical and theoretical proof of the validity of any given construct. This type of evidence includes numerical examination of the internal test construction, including the relations between answers to various test items. There are three extremely important principles to any data collection when conducting descriptive studies and the incorporation of these principles into the research will increase its quality substantially. The first principle states that the researcher should always retrieve evidence from multiple sources, while attempting to reach the same conclusions. The most important advantage of the above is the development of converging lines of inquiry or triangulation. (Yin 2009)

**Triangulation** is data collection through various methods, or different kinds of data on the same phenomenon (Hirsjärvi et al. 2009; Yin 2009; Ghauri 2004) and thereby to the attempt to get a truthful understanding of a situation (Silverman 2005). The main advantage of triangulation is that it can produce a more accurate contextual description of the subject researched, leading to a reduction in the likelihood of misinterpretation (Ghauri 2004). The four types of triangulation methods include research data triangulation, researcher triangulation, theory triangulation, and methodological triangulation (Hirsjärvi et al. 2009; Yin 2009; Eriksson – Koistinen 2005). In this particular research, the data triangulation was ensured through interviewing experts from various organisations with different relationships to the defence industry and triangulating the research data.

The second principle of construct validity, the use of a research database, requires collecting and storing all evidence in a separate appendix from the final research report. Every research project should strive to develop a formal, presentable database, to help other researchers to review the evidence directly, rather than being limited to the published report. (Yin 2009) In order to develop a clear database for this study, all the interviews were recorded and transcribed.

The third principle of data collection is the chain of evidence. This effectively means that the questions, collected data and conclusions drawn should all be linked. This allows an external observer of the research to follow the sources, ranging from initial research questions to final case study conclusions. No original evidence should have been lost through carelessness or bias. (Yin 2009)

External validity examines the extent to which the internally valid results of any research can be held to be true for other cases. In other words, external validity indicates whether findings can be validly generalised. This is most apparent in single-case studies, where the researcher creates a theoretical framework through which he or she strives to generalise a particular set of results to some broader theory. (Yin 2009)

In this particular research, the researcher attempted to create a framework for how and why the defence industry internationalises, in order to see the results of the empirical study in the light of the previous theoretical discussion.

## 4 PERSPECTIVE OF FINNISH EXPERTS

*“You can't say civilization doesn't advance –  
in every war they kill you in a new way.”*

*-Will Rogers (1929)*

### 4.1 Economic drivers

When discussing the economic characteristics of the defence industry, Col. Erik Erroll describes the defence market as a very complicated market, with a number of problems which make it different from other industries. The main one of these issues is the fact that the buyers almost exclusively represent national states, whose primary concern is their budget, and who therefore prefer planning ahead. This means that doing business with states requires long-term commitment, as well as a strong financial base with which to uphold the company until the deal can be made. This can often take up to five or ten years. (Erroll)

Principal Officer Olli Ruutu of the EDA argues that long-term commitments also mean that the buyers, in this case the national states, need to make their decisions based on what they need in the future. Being able to develop products as the life-cycle of the existing ones reaches its end requires commitment from both sides. Erroll also notes that the same long-term solutions are present with the buyers. As the acquisitions are large-scale, it is vital to carefully calculate how long each product will serve the buyer.

The above discussed leads to a situation where the barriers of entry to the defence industry are a lot higher than those of virtually any other industry, and any company wanting to enter a market needs to have a lot of financial backing, as well as the ability to commit to the project for a long time (Erroll).

Another special economic characteristic adding to the desire to internationalise recognised by both Erroll and Defence Counsellor Erkki Aalto is the fact that the industry is so overrun with producers that there is an oversupply of nearly every product on the European market. Aalto uses the European military vehicle market as an example, stating that with 20 programmes in an internal market with less than 30 buyers there is a disturbance in the market equilibrium, which can only be solved through fusions or mergers, or finding new markets. Ruutu outlines a scenario where the decrease in demand, combined with an increasing number of suppliers competing for that demand, leads to a greater effort to specialise and perform. This eventually decreases the number of suppliers due to cost reasons, which is in direct conflict with the governments' wishes to maintain their own industry. Combined with a nearly

saturated market, this makes it nearly impossible for any new actors to enter. A similar excess supply could never exist in any other industry, as the market forces would soon eliminate any overproduction. (Ruutu)

Political Advisor Axel Hagelstam combines the above discussed, and argues that there in essence is no real competition in the defence industry. In a free market the problem of excess supply would soon be eliminated, as low-quality or high-price products would simply fail to create a demand. In the defence industry, however, governments make decisions based on national well-being and under the influence of lobbyists representing the national defence industry.

Then there is the question of how and why the costs of the defence industry appear to rise the way they do, increasing so much faster than the costs of any other industry. It is unclear how much of this development is a myth, and how much is just cunning businessmen seeing an opportunity and taking it. Whatever the reason, says Erroll, there is an incentive for any state to maintain its own industry, in order to ensure an adequate level of supply at a reasonable cost. In the case of Finnish firms, such as Tampella and later Patria, there is the added difficulty of the internal market being so small that sales must be extended to other markets in order to maintain a healthy balance sheet. In short, there is a clear need to export.

Aalto agrees, and adds that the above causes a dilemma for companies in the defence sector. On the one hand the firms appreciate their monopoly of supplying governments at a reasonable price; on the other hand most governments, especially in Europe, are running low on funds and require the best possible price-quality ratio. This leads to tendering or added competition, which no longer necessarily favours the national industry.

Furthermore, says Aalto, an increasing number of previously entirely state-owned defence companies today have a very complex ownership structure, where parts of the SOEs are owned by listed companies aiming to secure a profit. Most of these of course maintain their direct or indirect links to the national governments, but so-called court-appointed suppliers, who serve only one government, no longer exist. Erroll claims that the existing actors on the European market are the few large American multinationals, or the relatively small and numerous European actors. Many companies in one country are owned by actors in another, and numerous different forms of co-operation exist between companies and states (Erroll). In essence, the difference between SOEs in the defence industry and so-called normal SOEs is constantly fading, even though the classic differences between SOEs and privately owned companies tend to persist (Aalto).

Ruutu argues that completely national production can no longer exist, as there is not enough national demand to sustain an entire industry, and it is no longer possible to nationally produce everything a credible defence force requires. In order to gain



multinational orders, firms need to create more diverse product packages, something a large international company can easily do. Due to a global redistribution of the industrial production, all companies, and therefore states, need to be able to compete outside their home market. (Ruutu)

Adding to the issues of barriers to entry, oversupply, abnormal cost development and cross-ownership, Aide-de-Camp Lt. Col. Markku Viitasaari argues that the internationalisation development of the Finnish defence industry has in fact reached its peak; in that firms in the industry today function in the same way as other Finnish companies. He goes on to admit that the sales are still heavily regulated, but that this is counteracted by having more solvent customers. The fact that the industry currently is as international as it can be is, according to Viitasaari, evident from the way all the sales, in terms of the defence material as defined by this study, are carried out. Any large orders where the products are bulky and the costs high are regulated by industrial co-operation contracts. These contracts obligate the Finnish defence industry to integrate with the basic industry of the buyer country, building the material on location, creating synergy benefits. The above described also works in reverse, as demonstrated by the large fighter plane deals in the 1990's, where industrial contracts with American defence industry multinationals gave Finland potential opportunities for future defence co-operation. (Viitasaari)

## **4.2 Technological drivers**

The cost of a defence product is always more than just its purchase price, meaning that maintenance costs across the product's life-cycle need to be considered when buying a defence industry product. On the one hand, argues Erroll, there are products, such as cannons for example, which follow a traditional cost structure, where the purchase price is around 90% of the total. On the other hand, in more sophisticated technology, the cost structure is the complete opposite; high maintenance costs versus a relatively low purchase price. So when defence products are acquired, the buyer commits to maintenance costs for the entire product life-cycle, which in the case of the defence industry can be decades. (Erroll)

As discussed in Section 4.1., there is an increase in inter-dependence between actors in the international defence market, where a certain endeavour for self-sufficiency is combined with reliance upon others. All actors strive to create material that can be used, and therefore sold, in multinational operations, which in turn enable operators to present their materials. No actor will attempt operations on their own, but will instead find allies with compatible defence materials. (Ruutu)

This, argues Erroll, often leads to an operator having to reconfigure their entire mode

of operation depending on what materials will be used either now or in the future. Aalto adds that joint operations are often used to showcase products, in order to increase demand. As with any industry, practical usage of a product in operations is a good marketing method. The earlier discussed phenomenon of nations supporting their defence industry ties into this notion of using and displaying products. The more users a product has, argues Aalto, the more reliable it can be said to be.

The governmental support of national production will be outlined in Section 4.3., but a technological aspect of said phenomenon is argued by Hagelstam, when he states that arctic warfare, for example, has completely different requirements for products than warfare on the Balkan or in the Mediterranean. There are certain obvious distinctions which create niches for national producers to fill, and international producers may lack the technological know-how or financial interest to undertake the production of such materials. In the case of Finnish APCs, a producer specializing in arctic warfare has the Nordic market cornered. Such a niche concentration can be a long-term saviour of many national firms, when again domestic is preferred to foreign. Ruutu also discusses the technological characteristics of a product as a reason to choose a certain producer, but goes on to say that the domestic aspect of a product often outweighs its price-quality ratio. He also stresses the apparent desire of governments to maintain a domestic industry at virtually any cost, but also argues that specialisation into niches is possible only as long as the state does support the industry. Now that virtually all European economies are struggling for funds and the amount of orders has decreased, the industry must expand its market share and product portfolio.

Finns, of course, buy the Pasi armoured personnel carriers (APCs) because they are the best APCs on the market, as well as being perfectly adapted to the special conditions present in the country, but generally the fact is that governments buy domestic products because they are domestic, not because they are the best (Hagelstam). Viitasaari disagrees, claiming that the mentioned APC deal was a financial setback. More on that matter in Section 4.3.

Aalto agrees with Ruutu and Hagelstam, stating that since the end of the regulation the Finnish defence industry has found certain niche areas, such as the APCs, in which it has a good reputation as one of the top producers in the world.

As discussed earlier, the long-term aspect of the industry, market and operators means that planning ahead is a vital part of the entire sector. Erroll agrees that co-operation exists, but stresses the fact that no decisions of this magnitude can be made by companies or authorities, but require strong political support and a comprehensive long-term analysis. The Swedes are extremely adept at such analyses, beginning with the political will of the state, and producing a clear picture of what troops and materials are needed. In order to then utilise economies of scale, a certain basic unit is needed for all actors taking part in the co-operation. The Nordic countries have often discussed such a

cooperative force, but the decision cannot be made without a strong political will. Every actor is primarily watching their own back. (Erroll)

Ruutu argues that as the long-term planning is developed in co-operation with other countries it is no longer a matter of when old material is replaced with new material, but rather what will replace the current material. This poses a challenge for the industry, which should adapt to future needs of not only the home market, but of the entire international market. In essence the predictability of the industry has been reduced. He goes on to discuss the implications of reduced resources versus increased involvement in various markets and operations, stating that reduced amount of military personnel directly affects the material used and produced. The military faces the challenge of finding personnel to train in the use of new products, which eventually leads to the industry itself taking charge of training. This, in turn, has a profound effect on the difference between public and private employment. (Ruutu)

Hagelstam also discusses the fact that despite the joint operations and co-operation, there is still a lot of overlapping production that is similar material being produced in different countries, which in essence stems from the protectionism of national governments, which brings us neatly to the subject of the next section.

### **4.3 Political drivers**

Finnish industries were, until the early 1980's, heavily regulated by the government, says Viitasaari. In essence the government controlled the internationalisation development of all Finnish industries up to its entry into the European Community. Because of this heavy government regulation the internationalisation of Finnish defence business has always been highly political. The state has, in other words, regulated all efforts of the defence industry to seek international co-operation or market directly abroad.

Furthermore, the direct marketing and selling that was allowed, was directed exclusively at neutral countries. This had a limiting effect on the international sales, as the neutral countries in Finland's framework, namely Sweden, Austria and Switzerland, all have large defence sectors within their national industries, and therefore require very little by way of imports. The limitations set by the government policies have in essence meant that Finland has had no real opportunity to compete on the markets where other defence industries of a similar size have thrived, such as developing countries and new democracies. In essence the Finnish defence industry has had no practical opportunities to internationalise before joining the European Union. (Viitasaari)

Aalto argues that while the markets today are far larger than they were in the 1980's, some of the historical limitations still exist, and the Finnish industry still cannot sell to just anybody outside the EU, for example.

From a purely Finnish perspective the defence industry has, with the entry into the European Union and the EDA, become equal to its European counterparts and is now able to compete on the European internal market. The EU directives and practices on defence exports define the policies adopted by Finland. This effectively means that the old limitations on the internationalisation are practically lifted. (Viitasaari)

Erroll comments on a country's need to consider the political implications of each sale, and to weigh them against potential tension in the international relations. This aspect combined with the characteristic long-term quality of each deal creates a scenario where a country looking to sell a particular item of defence material to a particular country, is required to conduct a wide-scale political analysis. This analysis will eventually provide the answer to whether the deal is approved or not, and for which reasons. The Finnish defence industry to this day retains the desire to only sell to neutral nations, taking care to consider end users and human rights of the buyer. However, Finland has itself during the most recent world war been considered an undesirable partner for defence trade, which shows the difficulty of mixing political relations with business. (Erroll)

Aalto argues that business tends to prevail when these two are pitted against each other, and cites the recent example of the French defence industry selling Mistral-missiles to Russia, an action frowned upon by the Baltic States. Currently the competition is most fierce in South America, India and the Middle East. Every government tries to lobby their own industry.

According to Viitasaari, Finland's strategy has traditionally been that the state will continue to support the national defence industry in order to ensure its ability to produce critical material. This may lead to situations where some of the acquisitions are not exactly ideal for the military's requirements, but which in the long run are cost effective and support the national economy. This has been the strategy so far, but in the future Finland may have to give this plan up for cost reasons, despite the persisting political affect. (Viitasaari)

He adds that while the Finnish defence industry in general has not been forced to take on domestic material which they would not otherwise have acquired, the purchase of the APCs from Sisu Defence were purely about the government rescuing an integral actor of the Finnish automobile industry from bankruptcy. The political decision to order the vehicles from the domestic producer had a number of negative repercussions, ranging from quality issues to contractual problems, most of which have today been resolved. He goes on to say, however, that the Finnish government's tendency to buy domestic has lead the national industry to direct its production into, and to improve its

expertise in, such areas where there is a pronounced national demand. (Viitasaari)

Erroll supports the argument that the Finns have been comparatively conservative in their export of defence industry materials, only employing partial solutions. The aim has been to maintain and support a state-owned and state-operated defence industry. This, claims Aalto, is an issue that previously has characterised the defence industry in many European countries, including Finland. There is a clear motivation for governments to maintain a certain national control over the industry, in order to be able to dictate what is produced and where. While very few of today's defence industry companies are entirely state owned, most governments still mistrust foreign producers, which leads to the above discussed desire to maintain control, argues Ruutu. International cross-ownership is increasingly common, as are foreign risk investments in the defence industry. Aalto also outlines the difficulty of tracking which state or organisation ultimately owns a particular enterprise. He argues that many trails lead to the United States, and comments on the impossibility of knowing who decides what decisions a company takes and to what extent. Sweden, claims Erroll, has taken this clearly international route, in that not much of their industry is Swedish-owned. Of course, despite the owners residing elsewhere, the industry's location means that the engineers and know-how is Swedish, which is why the state approves of the foreign ownership. (Erroll) The above statements are supported by Ruutu, who finds that governments secure employment by favouring domestically based manufacturing plants. There is, however, a difference between states who prefer to have a nationally-owned defence industry, and those who only desire the production to be carried out on-location.

A dilemma affects those national governments that prefer to support their own industry, but who, due to the rapid cost development of the industry, in the long run cannot afford to do so if they want to maintain a functioning military at a reasonable cost (Aalto). The European Commission has been very active in this sector. It has comprised several directives to open up the defence market, including ones on the acquisition and internal transfers of defence materials. These directives have played an important role in opening up the market to competition. (Ruutu; Aalto)

Viitasaari claims the Swedish defence procurement to be operating in a virtually free market with pure competition. An example given by him is the recent acquisition of some of Finnish-owned Patria's AMV-type APCs by the Swedish military, despite the Swedish-owned Hägglunds taking part in the tender. Sweden is in that sense quite an exceptional economy, in that while the Swedish politicians are indeed assumed to promote their domestic industries and thus market Swedish defence products, this assumption does not hinder their own ventures. (Viitasaari)

Currently all of Europe is experiencing a shortage of funds, which has lead to considerations on co-operation. For example, whether each country needs its own air defence or navy, or what the minimum level of military required for each nation is. In

the European context NATO, the EDA, and the EU affect the industrial policies of their member or partner nations. Defence is a strong actor in the industrial sector of the EU, which makes the Union's policies on internal market regulation and competition interesting from the perspective of companies in the defence sector in general, and this research in particular. (Aalto)

Viitasaari agrees that once the protectionism and regulation are relaxed, the defence industries of each country, particularly in the Nordic countries, can develop their distinct areas of expertise, allowing other countries to benefit from the know-how. He does not, however, see that a future redistribution of resources would allow a country to be the sole producer of made-to-order packages. Such an arrangement would go against the entire competitive framework of the European Union.

However, he continues, the Nordic countries have in fact together identified certain strengths of each area. Finland has been assigned the responsibility for the so-called Land Systems, which eventually will lead to a reconfiguration of our defence industry towards specialised land entities. The cutting of the military resources in the following four years has far-reaching consequences, which will create risks in the defence sector. (Viitasaari)

Hagelstam identifies the collective planning of the security and defence policies of the European Union as truly international co-operation. The operations are planned through operation concepts outlining the perceived issue, the aim and what material is needed for the execution. This stage is followed by an operation plan created by the EU Military Committee and its subjugated planning headquarters (HQ). These headquarters are national HQs that have been made available to the Union by member states. Whenever these HQs are used, national augmentees from each member state are sent to participate in the operation. These augmentees plan the required troop entities, which are then filled by national military forces. (Hagelstam)

Aalto mentions the concept of pooling and sharing, which in essence is the joint operation and allocation of executive functions, which is becoming increasingly topical with the current economic crisis. Many countries are having to make tough decisions about their military and which parts of it they consider vital. Air defence tends to be the first to go, for the simple reason that the cost structure is high even by defence industry standards. The cost factor is then weighed against the national pride and the trust issues mentioned earlier, that whether another country can be trusted to take action when needed if the responsibility of air defence is given to them. (Aalto)

Aalto goes on to argue that apart from the bulk-like APCs and the specialised high-tech systems as produced by companies such as Vaisala, the Finnish defence industry has not been all that successful in exporting its products, what with bribery scandals and end user ambiguity. (Aalto)

On the subject of rule bending described in Section 2.3., Erroll discusses the

apparent difficulty of a firm in the defence industry to act ethically due to the exceptionally tough competition caused by the ever growing oversupply discussed earlier. There being nearly as many suppliers as there are buyers, leads to a culture where an edge over the competition is sought by all means necessary. The long-term implications of the deals only adds to this morally questionable culture, but despite the size of the deals, opening a sales office in a country for a single project is rarely cost-effective, which means local agents are used for the negotiations. (Erroll) Aalto adds that the trade practises tend to vary in different countries, which can be explained by cultural backgrounds *inter alia*. These differences sometimes pose a challenge to the modes of operation of European companies. Defence companies operate within the limits of national laws and according to their own codes of conduct. However, from public debates one can detect that in some cases this has not always been the case. (Aalto)

On a more morally and legally acceptable note, the industry has also traditionally been characterised by counter purchases, the use of which is also being reduced in the new EU directives, despite their relative popularity elsewhere in the world (Aalto). Counter purchase, as seen from a purely market economic perspective, is a way of limiting competition and the workings of the free market. From the perspective of governments, however, it is a way of securing supply and the upkeep of imported products. Counter purchase, or counter trade, is an illustrative example of combining business and politics. (Aalto) Erroll notes that counter trade is used as an alternative to the bribes mentioned earlier.

As mentioned above, an inherent political characteristic of the defence industry is the matter of security. Security and a certain level of secrecy are still constantly present in the industry and the market, despite both becoming increasingly global, and the clear block segregation of the Cold War no longer officially existing. In essence it boils down to what an operator can do and what it is allowed to do. In the background of this secrecy is the ever present notion that a country boasting a French-made air defence system will have difficulty dealing with a French fighter plane, and a Russian anti-aircraft missile will not be able to destroy Russian aircraft. (Erroll)

Aalto, in turn, argues that issues concerning national security and security of supply apply to any industry producing goods or services that are vital to the functioning of a society, such as the energy industry and infrastructure. Ruutu adds that the today security is constantly jeopardised by the governments' lack of funds. There is a continuous incentive to cut resources, which makes justifying new acquisitions and additional security investments increasingly difficult. Cutting funds from security is always a risk despite the recent political developments, or even due to them.

#### 4.4 Summary of empirical findings

The main empirical findings include high barriers to entry, the exceptional cost structure, and the delicate balance between co-operating for cost reasons and inability to agree politically.

The decidedly complex market in which defence businesses operate creates challenges for existing actors, but, more importantly, keeps out new entrants. A constantly decreasing demand combined with governments wanting to maintain a national industry make for an almost monopolistic setting, which currently seems to be crumbling due to the need to specialise and policy changes within the EU.

Ever developing technology is rendering current products obsolete faster than before, requiring both governments and producers to plan far ahead. This combined with the increased co-operation seems to lead some nations to re-think their entire mode of operation. Niche production appears to be the long-term survival recipe for smaller countries which today have to compete with not only other small actors, but also with large American-lead multinationals.

International relations play an important role in the defence business, but when the ethical high-road is pitted against profit, the money tends to win.

The empirical findings of Sections 4.1, 4.2 and 4.3 are summarised in Table 4.

**Table 4 Summary of empirical findings**

<b>ECONOMIC</b>	
<b>Barriers to entry</b>	<ul style="list-style-type: none"> <li>- Complex market</li> <li>- Buyers require long-term commitments</li> <li>- Strong financial base needed</li> <li>- Products need to be developed in advance</li> </ul>
<b>Market saturation</b>	<ul style="list-style-type: none"> <li>- Oversupply of most products</li> <li>- Equilibrium can only be restored through new markets</li> <li>- Cost reasons restrain the entry of new actors</li> </ul>
<b>Changes in demand</b>	<ul style="list-style-type: none"> <li>- Demand decrease leads to specialisation</li> <li>- No real competition</li> <li>- Decisions are based on national needs</li> <li>- Lobbyists influence decision-makers</li> </ul>
<b>Cost structure</b>	<ul style="list-style-type: none"> <li>- Costs and prices rise faster than for other industries</li> <li>- Incentive for states to maintain national industry</li> <li>- Attempts to ensure adequate supply at reasonable price</li> <li>- Small internat market creates need to export</li> <li>- Tendering reduces the benefits of a national industry</li> </ul>



<b>Ownership structure</b>	<ul style="list-style-type: none"> <li>- Many SOEs today partially privately owned</li> <li>- Suppliers to one government have disappeared</li> <li>- More American multinationals enter the European market</li> </ul>
<b>Co-operation</b>	<ul style="list-style-type: none"> <li>- No longer possible to nationally produce everything</li> <li>- International orders require more diverse product ranges</li> <li>- Contracts with foreign companies ensure future supply</li> <li>- Integration of industry with potential buyers increases</li> </ul>
<b>TECHNOLOGICAL</b>	
<b>Cost structure</b>	<ul style="list-style-type: none"> <li>- Maintenance costs can increase the price tenfold</li> <li>- Buyers may commit to maintenance for decades</li> </ul>
<b>Co-operation</b>	<ul style="list-style-type: none"> <li>- Actors strive to create universally usable products</li> <li>- Operators may have to reconfigure entire mode of operation</li> <li>- Joint operations are used to showcase products</li> </ul>
<b>Product-specific</b>	<ul style="list-style-type: none"> <li>- Geographical differences in product requirements</li> <li>- Enables national producers to find niches</li> <li>- Niche concentration may save national firms</li> <li>- Finnish defence industry has a niche in APCs</li> </ul>
<b>Long-term planning</b>	<ul style="list-style-type: none"> <li>- Constantly renewed technology</li> <li>- Current products become obsolete quickly</li> </ul>
<b>POLITICAL</b>	
<b>Regulation</b>	<ul style="list-style-type: none"> <li>- Government-controlled internationalisation development</li> <li>- Internationalisation has been highly political</li> <li>- International co-operation highly regulated</li> <li>- Sales exclusively to neutral countries</li> <li>- No real opportunity to compete on open markets</li> </ul>
<b>European Union</b>	<ul style="list-style-type: none"> <li>- Finnish industry today equal to its European counterparts</li> <li>- Old limitations on internationalisation lifted</li> <li>- Considerations of co-operation aided by EU policy changes</li> <li>- Distinct areas of expertise can develop</li> </ul>
<b>Political implications</b>	<ul style="list-style-type: none"> <li>- International relations affect international sales</li> <li>- Finnish industry still strives to sell only to neutral nations</li> <li>- Business tends to prevail over politics</li> <li>- Tendency to buy domestic directs expertise of the industry</li> <li>- Nationally-owned vs. production on location</li> </ul>
<b>Rule bending</b>	<ul style="list-style-type: none"> <li>- Difficult to remain ethical in tough competition</li> <li>- Edge over competitors sought by all necessary means</li> <li>- Local agents difficult to control</li> <li>- Various cultures understand morale differently</li> </ul>

## 5 CONCLUSIONS

*"War may sometimes be a necessary evil. But no matter how necessary, it is always an evil, never a good. We will not learn how to live together in peace by killing each other's children."*

*- Jimmy Carter (2002)*

The following chapter outlines the essential conclusions drawn from the research and answers the research questions. This is achieved by creating a dialogue between the theoretical framework and the empirical findings. Suggestions for further research will be discussed at the end of the chapter.

This research aimed at the reflection of the existing literature and theories on the employer brand and the empirical results provided by different target groups of employees. In general, the empirical part of the study supported quite thoroughly the existing theoretical arguments. The dimensions of the employer brand had a noticeable role in every detailed research question. The particular dimensions which the researcher chose to use in this particular study were well represented in the empirical results. In the following, the essential conclusions are examined by reflecting the theoretical arguments with the empirical findings, and thereby answering the three detailed research questions of the study. Also, the central results of the study are applied to the framework of the formation of the employer brand, developed by the researcher. Finally, the possibilities for future studies as well as the limitations of this research are discussed.

### 5.1 Economic drivers

The first of the three sub-questions in this study attempted to outline, from a Finnish perspective, the economic drivers behind the internationalisation of the defence industry. The theoretical framework gave good indication of what factors are present on a European level, and the empirical chapter supported the theory quite well.

The main finding supported by most of the experts was that the defence market is relatively complicated when compared to most other markets. Specific emphasis was put on the high barriers to entry, such as the high production costs. It was argued that due to the tendency for orders to be large, complex, and usually containing the very latest in technology, substantial financial backing is needed to enter the defence market. In addition, it was noted that with large-scale acquisitions, it is important to know how long each product will serve the buyer.

The above view is mirrored in the theoretical argument made by Bitzinger (2009) that the high degree of supplier lobbying combined with the specific requirements for products that governments have for their defence sector dictate that any actors attempting market entry will require significant financial stability in order to succeed. The theory put forward by Dunne (2006) also states that there is a certain brand-loyalty in governments, which will limit the possibility of new entrants to utilise market expansion.

Financial backing was therefore also considered important in conjunction with the main customers being mainly concerned with their budgets and national security. This leads to a requirement of long-term commitment from the industry's side, and a need for stable cash flow until the buying decision can be made. There is a clear need for the industry to develop products in advance, so that once the deal is closed, there is a product available that meets the current need of the buyer, rather than the need they had when they began discussions.

The theoretical framework (Dunne 2006) adds to the above discussed by considering how the cyclical nature of the market favours these long-term deals, and how governments tend to not only prefer long-term personal contacts and networks over newcomers, but also to bail out major collaborators in lean times.

Furthermore, the interviewed experts agreed that there is clearly excess supply on the European defence market. Macro-economically there is a disequilibrium, which can only be solved through radically increasing demand. As Dunne (2006) states, the current buyers are unlikely to require more products, quite the opposite, as governments across Europe are being forced to cut their defence budgets. Simultaneously, argues Bitzinger (2009), many of today's high-maintenance products are becoming outdated. This leaves only the option of expanding the market, i.e. internationalising. A consequence of this is the increase of specialisation among suppliers, and an increase of co-operation and collaboration between all actors. This, in turn, will decrease the amount of all-around suppliers, which will jeopardise governmental wishes to keep a national defence industry.

It was agreed that a similar oversupply could never exist in any non-subsidised market, as products of inferior quality would simply fail to find a demand. The defence industry, however, depends heavily on the decisions made by governments which, as noted, tend to base their choices on national well-being rather than market forces.

Speaking of market forces, the issue of cost development in the defence sector puzzled the experts. They pondered whether the cost structure where prices of everything from basic components to finished products and services rises significantly faster than mere inflation would suggest, especially when there is evident oversupply. If anything, the costs should decrease.

It is interesting to note that none of the researchers quoted in the theoretical framework mentioned this particularity, even though nearly all interviewed experts referred to the matter as if it were a universal truth. Government regulation, subsidies and the desire to maintain a national industry may explain the phenomenon to some extent. Some of it may, indeed, be a myth. This does not, however, explain why the cost structure is the same even in those nations where the defence market is considered free, such as Sweden. In essence this would mean that the notion put forth by the interviewees about the internationalisation of the defence industry having reached its peak is true. In that case the seeming free market in one country would be outweighed by the fact that they, too, operate in a larger market which is, in fact, global. There is an old Finnish saying that it is not he who asks a high price who is dumb, but rather he who pays it. If the above analysis is true, this saying fits the defence industry nicely.

Having said that, the researcher feels compelled to remind the reader of the barriers to entry discussed earlier in this section. A skewed cost structure seems to be the starting point for the industry, which leads the researcher to believe that the phenomenon is simply inherent in the nature of the defence industry itself.

This notion is supported by both the experts and the theory. Bitzinger (2009) notes that there are a small number of multi-national conglomerates, which control a lot of the international defence business. He claims that these merged companies are the main reason for the industry's structure. Dunne (2006) continues to outline the trend of defence companies to rely on national subsidies, which is becoming more difficult due to the budgetary constraints discussed earlier.

The interviewed experts see continued interest with governments to maintain their own industry, in order to combat the rising prices. This causes a dilemma for companies in the defence sector, as they are caught between the benefits of state-subsidised monopoly and better prices on international markets.

Adding to this dilemma is the recognised fact that the ownership structures of defence companies are becoming increasingly difficult to follow. The fact that most of the actors on the European market are either large American multinationals or small but numerous European SOEs is supported by theory and empiria alike.

It can even be argued that no truly national defence business can exist, partially due to the ever diminishing demand making it difficult to sustain an entire industry. The complex ownership structures also tend to obscure the definition of a national industry, in addition to changing the motives for what governments use their defence products for.

## 5.2 Technological drivers

As the theoretical framework shows, the technological drivers for the internationalisation of the defence industry differ greatly from those of other industries. There is a consensus in that technological options available to companies are increasing, but when high-tech non-defence companies are discussed, those tools tend to focus on means of distributing and marketing products and services, rather than the increased technology level of the products themselves. It is true, however, that the technological developments in products today affect all industries, leading to specialisation and international supply chains to secure the most advanced components.

The increased incentive to internationalise within the defence industry is, of course, also benefiting from the improving transport techniques, cheaper research methods and improved knowledge acquisition, but the main focus on the incentive to internationalise is still on the products themselves.

The empirical findings indicate that the technological developments are increasing the inter-dependence of operators in the defence sector, as businesses strive to create products that can be used by as many potential buyers as possible.

It has been established that technology plays an important role in defence business. The current cost development in the field will lead to increased outsourcing, co-operation and joint ventures, requiring a restructuring of the entire industry, argues Bitzinger (2009). The interviewed experts agree that this development may lead to governments having to rethink entire operations depending on what products they or their collaborators will use in the future.

There is also a trend depicting how new technology is showcased in joint operations, where politics may take a temporal backseat to attempted demand increase. This, coupled with the niche potential created by the development in technology, increases both the incentive and possibilities for firms to internationalise, as described by Hollensen (2007).

This niche potential is described by all interviewees as an important prerequisite for the internationalisation of the Finnish defence business. Due to Finland's geographical location, arctic warfare is an area where the Finnish defence industry prevails, mainly due to lack of technological know-how from international actors. This disinterest from larger actors allows niche producers to corner certain smaller markets, from where it is easier to diversify into other, similar niches. This type of strategy may improve the chances of survival for smaller businesses, despite the expert argument that niche specialisation is possible only when heavily subsidised by the local government. In today's setting, where government funding and international demand is diminishing, expanding market share and a more diverse product portfolio were perceived as important prerequisites for success. This despite the cost structure making it close to

impossible to survive without funding and specialisation.

Other technological barriers to entry described by Dunne (2006) in the theoretical framework of the study mention the importance of new entrants proving the technological capability of their product, which can be difficult to achieve due to long development times and the preference of governments to do business with long-established operators.

This is supported by the empirical findings, which state that most major defence industry related procurement decisions taken by governments require a strong political will, which can often only be gained through long-term analysis. In order to produce such an analysis for both the domestic and the potential global need, a long-term commitment to producers is needed. Furthermore, the newer the technology, the more by-products and services are required to operate the products. This in turn has an impact on production and maintenance costs.

Finally, experts agreed that the overlapping production and manufacture on virtually every market is wreaking havoc with the cost structure.

### **5.3 Political drivers**

The theoretical framework argues that politics is an issue that, while clearly associated with any type of industry, has a more profound effect on the defence industry in particular. Dunne (2006) suggests that political and security issues will continue to dominate the industry. The empirical findings, on the other hand, consider politics a vital part of any industry that plays an important role in the normal workings of a nation, such as electricity, foodstuffs and infrastructure.

This political aspect led to heavy government regulation, as demonstrated in the empirical section, which in turn led to limitations in the internationalisation of the Finnish industries until the nation joined the European Union. Therefore there has always been a strong political note to the internationalisation process of the Finnish defence industry. This tends to be the case in most defence industries around the world, and as the experts suggested, governments need to consider the political implementations of their trade, rather than just focusing on getting as beneficial a deal as possible. It is worth noting that Finland has in the past been considered an undesirable business partner for defence businesses.

This state regulation has since diminished, opening up many possibilities of collaboration and joint ventures for the sector. The interviewed experts did, however, remind us that the government still to some extent dictates what countries the domestic defence businesses may sell to. While the situation has improved, the regulations still mean that the competitiveness of the Finnish industry is limited.

Dunne (2006) supports this notion, saying that dominant political factors tend to influence the acquisition of major contracts, especially since personal contacts and particular practices employed in the sector, tend to steer the mode of operation in the industry. There are, however, theoretical arguments that support a tendency for smaller defence businesses to trade the benefits of a national monopoly for lower cost advantages internationally, especially as there is evidence of a certain discrimination against smaller contractors (Hayward 2008). The empiric findings seemed to suggest that when business is pitted against politics in this way, it is usually the money that wins.

The matter of bending rules was outlined in both the theoretical framework (Bitzinger 2009; Dunne 2006) and by the interviewed experts. Again, it is clear that misbehaviour of this kind is more prominent in so-called vital industries, such as the defence industry. There appears to be an inherent lack of ethics in industries where high-priced deals are being closed for several years at a time, where the success of one company may mean the literal downfall of another. The blatant disregard of excess supply on the market discussed in Section 5.1. leads to a culture where competitive edge can be bought, should the need arise. The fact that this seems to be common practice globally, does not improve the matter. The increased complexity of the supply chains only add to the problem, as it is becoming increasingly difficult to accurately control how each link in the chain operates.

The above does not mean that governments have not tried, however. The issue is merely that while the demand for defence related materials is mainly controlled by governments, who may control the industry's structure, there is an increasing trend towards outsourcing and encouragement of international competition. This essentially decreases the governments' control over their industries, as stated by Hayward (2008) and Bitzinger (2009).

The strategy of Finland, as shown in the empiria, has always been strong state control over the defence sector, mainly in order to keep the industry domestic. It has been suggested that this has caused the odd defence deal made to be in favour of domestic alternatives over more cost-effective foreign deals. It has also been suggested that while this strategy allows the Finnish government to direct production and improve the expertise of the national industry, it may not be a very sustainable strategy for the already discussed reason that domestic demand is falling.

While it is clear that similar strategies have characterised the majority of the European defence industries in the past decades, it is equally clear that the acceptance of international cross-ownership is increasing, as are foreign direct investments. It is important to note the difference between nations that prefer to own their defence industry, and nations that only require the production to be carried out domestically, thus ensuring the continuity of employment.

Maintaining an diminishing industry with subsidies in order to maintain a functioning defence may in the long run be impossible, especially since there seem to be alternatives. At the forefront of those alternatives are the responsibility areas identified among the Nordic countries, which in essence is a step towards a joint defence force. In addition, the European Commission has comprised several directives to open up the defence market between Member States. Even though these measures will not lead to a complete merger of military forces, it will improve the cost structure and demand issues facing nearly every actor on the European defence market.

#### **5.4 The internationalisation of defence business**

It is clear that the rise of globalisation is having a profound effect on the nature of the market setting in which companies in the defence business are operating today. There is a clear increase in multinational defence companies, and the importance of international supply chains is becoming more prominent, just as is the case in other industries.

This does not mean, however, that the defence industry can be likened to other, 'normal' forms of industry. There is still an abundance of government involvement in most operations, although the historical acceptance by citizens to blindly fund a high-cost high-tech industry just to keep it within the states control is evidently diminishing. This, and the fact that demand is constantly falling, makes it difficult for nationally based defence business to remain competitive.

Sub-contractors may find it easier to operate due mainly to their broader customer base and ability to take advantage of dual-use opportunities. This, of course, only if they are able to achieve the funds and technological prowess necessary to match global standards for the industry. This, in turn, can be harder to achieve as government funding diminishes, leading to a need for international expansion in order to stay cost-effective.

It is rarely easy for small companies to make it big in the globalised defence sector, which is why the Finnish defence business companies are constantly looking for ways to remain competitive and thus validate their existence. Currently their best bet seems to be niche orientation. On the other hand, the recent developments toward a more open technological market increase the opportunities for civilian companies to exploit the defence market, as well as co-operation between actors in dual-use products.

The recently approved Code of Conduct and the planned Arms Treaty may bring interesting new developments in the defence sector and will, if they continue as planned, create new drivers for the internationalisation processes of the defence business.



It is relatively clear that increased co-operation between European actors is vital for the future of a credible defence sector. The threat of merging with US multinationals is constant, and a collective research effort combined with collaboration on the defence market seem to be the only way forward. There is already a risk of migration of successful European companies towards their American counterparts, further reducing the control states have over their defence industries.

The decrease of demand on every market favours concentrated operators and fewer actors, but this development is hindered by the government's desire to keep their industries national for security reasons and in order to support domestic trade. While the supply of raw materials will most likely remain scattered across nations, the internal competition is causing European, and therein Finnish, companies to lose their competitiveness globally.

## **5.5 Suggestions for further research**

While this study succeeded in its aim to analyse the drivers behind the internationalisation of the Finnish defence market, there are various issues which the researcher was unable to discuss, due to budget restrictions, time limits and the fact that employees of the planned case SOE were accused of business espionage.

Firstly, the research did not include a case company, for the simple reason that the nature of the industry, combined with espionage and bribery accusations in the largest Finnish defence industry SOE, left little room for interviews with employees or managers of that firm, *inter alia*. A case study would improve the reliability and accountability of the research, as well as giving it concrete examples of how a firm operates on the market. Provided, of course, that the information received is accurate and not confidential.

The research would have benefitted from views by actors from the private sector, but the researcher again recognises the limitations caused by the nature of the industry versus the requirement on openness posed by the publishers of the study. Whether a similar study could be made in agreement with a company, either POE or SOE, so that the confidential information could be gathered in a separate study, remains to be seen.

In addition to the above, a comparison between other defence industries would give a larger picture of how different nations have gone about internationalising their defence sectors. This study includes some empiric data on Sweden, and some theoretical findings on the USA, UK and European defence markets but essentially only scratched the surface of a full-blown comparison, as the aim was to analyse the drivers of internationalisation from a Finnish perspective.

## REFERENCES

- Aharoni, Yair (1980) The State Owned Enterprise as a Competitor in International Markets. *Columbia Journal of World Business*, Vol. 15 (1), 14-22.
- Ancona, Deborah – Goodman, Paul – Lawrence, Barbara – Tushman, Michael (2001) Time: A new research lens. *The Academy of Management Review*, Vol. 26(4), 645-663.
- Andersen, Poul H. – Skaates, Maria A. (2004) Ensuring validity in qualitative international business research. In *Handbook of qualitative research methods for international business*, ed. by Marschan-Piekkari, Rebecca – Welch, Catherine. Edward Elgar Publishing: Cheltenham.
- Axelsson, Björn – Johanson, Jan (1992) Foreign market entry: the textbook vs. the network view. *Industrial Networks: A New View of Reality*, Routledge: London.
- Babbie, Earl (1989) *The Practice of Social Research*. 5<sup>th</sup> ed. Belmont CA: Wadsworth.
- Bitzinger, Richard A. (2009) European Defence Industry in the 21<sup>st</sup> Century: Challenges and Responses. *The Modern Defence Industry: political, economic and technological issues*, ABC-CLIO.
- Bonaccorsi, Andrea (1992) On the relationship between firm size and export intensity. *Journal of International Business Studies*, Vol. 23(4), 605-635.
- Boyd, Colin W. (1986) The Comparative Efficiency of State-Owned Enterprises. In *International Business and International Relations*, ed. by Negandhi, Anant R. Volume 1. JAI Press Inc.: London, England.
- Bräuning, Michael – Pannenberg, Markus (2000) Unemployment and Productivity Growth: An Empirical Analysis within the Augmented Solow Model. *Economic Modelling*, Vol. 19(1), 105-120.
- Carter, Jimmy (2002) Nobel lecture, Dec. 10, 2002. *EveryAuthor.com*. <[http://www.everyauthor.com/writing/blogs/kathy\\_paysen/finger\\_painting\\_war](http://www.everyauthor.com/writing/blogs/kathy_paysen/finger_painting_war)>, retrieved 20.12.2012.
- Coviello, Nicole, Munro, Hugh (1997) Network relationships and the internationalisation of small software firms. *International Business Review*, Vol. 6(4), 361-86.
- CIA World Factbook (2010) <<https://www.cia.gov/library/publications/the-world-factbook/index.html>>, retrieved 13.11.2010.
- Cicourel, Aaron – Kitsuse, John (1963) *The Educational Decision-Makers*, The Bobbs-Merrill Company: Indianapolis, IN.

- Creswell, John W. (2003) *Research design: qualitative, quantitative, and mixed methods approaches*, 2<sup>nd</sup> ed. Sage Publications: Thousands Oaks, CA.
- Creswell, John W. (2009) *Research design: qualitative, quantitative, and mixed methods approaches*, 3<sup>rd</sup> ed. Sage Publications: Thousands Oaks, CA.
- Crouch, Sunny – Housden Matthew (2003) Marketing research for managers. *The Marketing Series; Chartered Institute of Marketing*. Butterworth-Heinemann.
- Daniels, John D. – Cannice, Mark V. (2004) Interview studies in international business research. In *Handbook of qualitative research methods for international business*, ed. by Marschan-Piekkari, Rebecca – Welch, Catherine. Edward Elgar Publishing: Cheltenham.
- Denzin, Norman K. – Lincoln, Yvonna S. (1998) Introduction: Entering the field of qualitative research. In *Strategies of qualitative inquiry*, ed. by Denzin, Norman K. – Lincoln, Yvonna S. Sage Publications: Thousand Oaks, CA.
- Denzin, Norman K. – Lincoln, Yvonna S. (2005) *The Sage Handbook of Qualitative Research*, 3rd ed. Sage Publications: Thousand Oaks, CA.
- Dowling, Grahame (2001) *Creating corporate reputations identity, image and performance*, Oxford University Press: Oxford.
- Dryden, John (n.d.) King Arthur. *EveryAuthor.com*.  
<[http://www.everyauthor.com/writing/blogs/kathy\\_paysen/finger\\_painting\\_war](http://www.everyauthor.com/writing/blogs/kathy_paysen/finger_painting_war)>, retrieved 20.12.2012.
- Dunne, Paul (2006) *Defence Industry – Visions of the Future*. European Monitoring Centre on Change, European Foundation for the Improvement of Living and Working Conditions.  
<<http://www.eurofound.europa.eu/emcc/content/source/eu06020a.htm>>, retrieved 13.10.2011.
- Dunne, Paul (2006) *European defence industry – what future?* European Monitoring Centre on Change, European Foundation for the Improvement of Living and Working Conditions.  
<<http://www.eurofound.europa.eu/emcc/content/source/eu06019a.htm>>, retrieved 14.10.2011.
- Dunning, John H. (1981) *International production and the multinational enterprise*, Allen & Unwin: London.
- Dunning, John H. (1997) *Alliance capitalism in international business and the world economy*, Routledge: London.
- European Council (2009) Regulation for setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items. *Council Regulation (EC) No 428/2009*.

- European Defence Agency (2012) *Code of Conduct on Defence Procurement*. <<http://www.eda.europa.eu/Otheractivities/Intergovernmentalregimedefenceprocurement/CoC>>, retrieved 01.02.2012.
- Eriksson, Päivi – Koistinen, Katri (2005) *Monenlainen tapaustutkimus*. National Consumer Research Centre, publications 4/2005: Helsinki.
- Eriksson, Päivi – Kovalainen, Anne (2008) *Qualitative methods in business research*. Sage Publications: London.
- Finnish Ministry of Defence (2011) *Co-operation with NATO's Partnership for Peace Programme*. <<http://www.defmin.fi/?l=en&s=105>>, retrieved 14.10.2011.
- Finnish Ministry of Finance (2012) *Valtion talousarvioesitykset*. <[http://193.208.71.163/indox/tae/aiemmat\\_talousarviot/frame\\_aiemmat.html](http://193.208.71.163/indox/tae/aiemmat_talousarviot/frame_aiemmat.html)>, retrieved 8.2.2012.
- Flyvbjerg, Bent (2011) Case Study. *The Sage Handbook of Qualitative Research*. 4th ed. Sage Publications: Thousand Oaks, CA.
- Ghauri, Pervez (2004) Designing and conducting case studies in international business research. In *Handbook of qualitative research methods for international business*, ed. by Marschan-Piekkari, Rebecca – Welch, Catherine, 109–124. Edward Elgar Publishing: Cheltenham.
- Glesne, Corrine – Peshkin, Alan (1992) *Becoming qualitative researchers: An introduction*. New York, NY: Longman.
- Golafshani, Nahid (2003) Understanding Reliability and Validity in Qualitative Research. *The Qualitative Report*, Vol. 8(4), 597-607.
- Grover, Bernie (1999) *Canadian Defence Industry 1999: A Statistical Overview of the Canadian Defence Industry*. Canadian Defence Industries Association.
- Hadley, Richard D. – Wilson, Heather (2003) The network model of internationalization and experiential knowledge. *International Business Review*, Vol. 12(6), 697-71.
- Hafsi, Taieb – Thomas, Howard (1988) *Understanding the International Competitive behaviour of State-owned Enterprise*.
- Hayward, Keith (2008) *The Globalisation of Defence Industries*. Royal Aeronautical Society.
- Hirsjärvi, Sirkka – Remes, Pirkko – Sajavaara, Paula (2009) *Tutki ja kirjoita*. 15<sup>th</sup> ed. Kariston Kirjapaino Oy: Hämeenlinna.
- Hirsjärvi, Sirkka – Hurme, Helena (2008) *Tutkimushaastattelu: Teemahaastattelun teoria ja käytäntö*. Yliopistopaino: Helsinki.

- Hollensen, Svend (2007) *Global Marketing: a decision-oriented approach*. 3rd ed. Pearson Education Limited: Harlow.
- Holmes, Richard (2001) *The Oxford Companion to Military History*. Oxford University Press: London.
- Jackson, Peter (1994) *Desk Research*. Kogan Page Limited, London.
- Janesick, Valerie J. (1998) The dance of qualitative research design: metaphor, methodolatry, and meaning. In *Strategies of qualitative inquiry*, ed. by Denzin, Norman K. – Lincoln, Yvonna S., 35–55. Sage Publications: Thousand Oaks, CA.
- Johanson, Jan – Vahlne, Jan-Erik (1990) The mechanism of internationalisation. *International Marketing Review*, Vol. 7(4), 11-24.
- Johanson, Jan – Mattsson, L. (1988) Internationalisation in industrial systems — a network approach. In: *The internationalization of the firm: a reader*, ed. by Buckley, P.J. – Ghauri, P.N. 1988. Academic Press, London.
- Johanson, Jan – Vahlne, Jan-Erik (1977) The internationalization process of the firm – a model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies*, Vol. 8, 23–32.
- Johanson, Jan – Wiedersheim-Paul, Finn (1975) The internationalization of the firm: Four Swedish cases. *Journal of Management Studies*, Vol. 12(3), 305-322.
- Joppe, Marion (2000) *The Research Process*. Ryerson Polytechnic University: Toronto.
- Kaldor, Mary (1981) *The Baroque Arsenal*. Hill and Wang: New York.
- Kennedy, John F. (n.d.). BrainyQuote.com.  
<<http://www.brainyquote.com/quotes/quotes/j/johnfkenn108430.html>>, retrieved 20.12.2012.
- Keynes, John Maynard (2007) [1936] *The General Theory of Employment, Interest and Money*. Palgrave Macmillan: Basingstoke, Hampshire.
- Knight, G. 2000. Entrepreneurship and marketing strategy: the SME under Globalization. *Journal of International Marketing*, Vol. 8(2), 12-32.
- Kvale, Steinar – Brinkman, Svein (2008) *InterViews*. 2<sup>nd</sup> ed. Sage Publications: Thousand Oaks, CA.
- Lindlöf, T. – Taylor, B. (2002) *Qualitative Communication Research Methods*. 2<sup>nd</sup> ed. Sage Publications: Thousand Oaks, CA.
- Lumpe, Laura (1997) Global Black-Market Arms Trade Should Be Next Target of NGOs. *Journal of the Federation of American Scientists*, Vol. 50(4), 9–10.

- Maccarini, Maurizio Ettore – Scabini, Paolo – Zucchella, Antonella (2003) Internationalisation strategies in Italian district-based firms: Theoretical modelling and empirical evidence. *Università degli Studi dell'Insubria, Varese, Italy*.
- Madsen, Tage Koed – Servais, Per (1997) The internationalization of Born Globals: An evolutionary process? *International Business Review*, Vol. 6(6), 561-583.
- Marshall, Catherine – Rossman, Gretchen B. (1998) *Designing Qualitative Research*, Sage Publications: Thousand Oaks, CA.
- Mazzolini, Renato (1980) European Government-Controlled Enterprises: An Organisational Politics View. *Journal of International Business Studies*, Vol. 11(1), 48-58.
- Miles, Matthew B. – Huberman, A. Michael (1994) *Qualitative data analysis: an expanded sourcebook*. 2<sup>nd</sup> ed. Sage Publications: Thousand Oaks, CA.
- MTV3 – STT (2011) *Puheloinen: Ei teknoarmeijaa Suomeen*. <<http://www.mtv3.fi/uutiset/kotimaa.shtml/2011/11/1428941/puheloinen-ei-teknoarmeijaa-suomeen>>, retrieved 07.11.2011.
- MTV3 – STT (2011) *KRP epäilee kuutta yritysvakoilusta Patria-jutussa*. <<http://www.mtv3.fi/uutiset/rikos.shtml/2011/11/1424881/krp-epailee-kuutta-yritysvakoilusta-patria-jutussa>>, retrieved 01.11.2011.
- Murray, Michael A. (1975) Comparing Public and Private Management: An Exploratory Essay. *Public Administration Review*, Vol. 35(4) 364-371.
- NCACC (1999) *White Paper on the South African Defence Related Industries*. National Conventional Arms Control Committee.
- North Atlantic Treaty Organisation (2011) *The Partnership for Peace programme*. NATO. <[http://www.nato.int/cps/en/natolive/topics\\_50349.htm](http://www.nato.int/cps/en/natolive/topics_50349.htm)>, retrieved 14.10.2011.
- Nummela, Niina (2004) Global mindset: a prerequisite for successful international? *Canadian Journal of Administrative Sciences*, Vol. 21(1), 51-64.
- Overby, Jeffrey W. – Min, Soonhong (2001), International supply chain management in an internet environment: a network-oriented approach to internationalisation. *International Marketing Review*, Vol. 18(4), 392-420.
- Oviatt, Benjamin M. – McDougall, Patricia Phillips (1994) Toward a theory of international new ventures. *Journal of International Business Studies*, Vol. 25(1), 45-64.

- Osarenkhoe, Aihie (2009) An integrated framework for understanding the driving forces behind non-sequential process of internationalisation among firms. *Business Process Management Journal*, Vol. 15(2), 286-316.
- Paavilainen-Mäntymäki, Eriikka (2011) YSM-course at TSE 2011 (Also unrecorded interview 2.2.2011).
- Palmberg, Christopher – Pajarinen, Mika (2005) *Alliance Capitalism and the Internationalisation of Finnish Firms*. ETLA, Elinkeinoelämän Tutkimuslaitos: Helsinki.
- Patton, Michael (2001) *Qualitative Research and Evaluation Methods*. 3<sup>rd</sup> ed. Sage Publications: Thousand Oaks, CA.
- Porter, Michael E. (1980) *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. The free Press: New York, NY.
- Rogers, Will (1929) New York Times. Dec. 23, 1929. *EveryAuthor.com*.  
<[http://www.everyauthor.com/writing/blogs/kathy\\_paysen/finger\\_painting\\_war](http://www.everyauthor.com/writing/blogs/kathy_paysen/finger_painting_war)>, retrieved 20.12.2012.
- Scapens, Robert W. (2004) The many skills of the case researcher. In: *Handbook of qualitative research methods for international business*, ed. by Marschan-Piekkari, Rebecca – Welch, Catherine. Edward Elgar Publishing: Cheltenham.
- Schroeder, Matt (2008) *The Illicit Arms Trade*, Federation of American Scientists.  
<<http://www.fas.org/asmp/campaigns/smallarms/IssueBrief3ArmsTrafficking.html>>, retrieved 14.10.2011.
- Shields, Patricia – Tajalli, Hassan (2006) Intermediate Theory: The Missing Link in Successful Student Scholarship. *Journal of Public Affairs Education*, Vol. 12(3), 313-334.
- Silverman, David (2005) *Doing qualitative research: a practical handbook*. 2<sup>nd</sup> ed. Sage Publications: London.
- SIPRI website (2011) <<http://www.sipri.org/>>, retrieved 8.2.2012.
- Sköns, Elisabeth – Wulf, Herbert (1994) The internationalization of the Arms Industry. *Annals of the American Academy of Political and Social Science*, Vol. 535(1), 43-57.
- Svenska Dagbladet (2010) *Mer vapenexport till Saudiarabien*.  
<[http://www.svd.se/naringsliv/mer-vapenexport-till-saudiarabien\\_5488547.svd#after-ad](http://www.svd.se/naringsliv/mer-vapenexport-till-saudiarabien_5488547.svd#after-ad)>, retrieved 15.10.2010.
- Susman, Gerald I. (2007). *Small and Medium-sized Enterprises and the Global Economy*. Bell & Young, 1998. Edward Elgar Publishing.

- Taloussanommat (2011) *Ranska myy sotalaivoja Kreikalle: Saatte korotonta maksuaikaa*. <<http://www.taloussanommat.fi/ulkomaat/2011/10/17/ranska-myy-sotalaivoja-kreikalle-saatte-korotonta-maksuaikaa/201114917/12>>, retrieved 17.10.2011.
- The Mission of Finland to NATO website (2010) <<http://www.finlandnato.org/public/default.aspx?nodeid=31554&contentan=2&culture=en-US>>, retrieved 29.10.2010.
- The UN Food & Agriculture Organization's website (2011) *Tutorial on semi-structured interviews*. <<http://www.fao.org/docrep/x5307e/x5307e08.htm>>, retrieved 19.10.2011.
- Thomas, Howard (1986) Strategic management and state-owned enterprises. In *International Business and International Relations*, ed. by Negandhi, Anant R. Volume 1. JAI Press Inc.: London, England.
- Trim, Peter R. J. (1999) The Corporate Intelligence and National Security Model: a new era in defence management. *Strategic Change*, Vol. 8, 163–171.
- Vihottula, Markus (2010) *Ase- ja puolustusteollisuuden maine ja eettinen työnantajaimago*. Master of Science Thesis, Tampere University of Technology.
- Visual Economics website (2010) <<http://www.visualeconomics.com/military-spending-worldwide/>>, retrieved 29.10.2010.
- Walters, Kenneth D. – Monsen, R. Joseph (1979) State-Owned Business Abroad: New Competitive Threat. *Harvard Business Review*, March–April 1979.
- Wells, Louis T. (1972) *The Product Life Cycle and International Trade*, Division of Research, Harvard Business School.
- Wulf, Herbert (2005) *Internationalising and Privatizing War and Peace: The Bumpy Ride to Peace Building*. Palgrave Macmillan.
- Yin, Robert K. (2009) *Case study research: design and methods*. 4<sup>th</sup> ed. Sage Publications: Thousand Oaks, CA.
- Zalan, Tatiana – Lewis, Geoffrey (2004) Writing about methods in qualitative research: towards a more transparent approach. In *Handbook of qualitative research methods for international business*, ed. by Marschan-Piekkari, Rebecca – Welch, Catherine. Edward Elgar Publishing: Cheltenham.
- Zif, Jehiel (1981) Managerial Strategic Behaviour in State-Owned Enterprises—Business and Political Orientations. *Management Science*, November 1981, Vol. 27(11), 1326-1339.



- Zucchella, Antonella – Palamara, G. – Denicolai, S. (2007) The drivers of the early internationalization of the firm. *Journal of World Business*, Vol. 42(3), 268–280.
- Zucchella, Antonella (2005) Non-sequential internationalization processes between competition and co-operation – a tentative re-conciliation of alternative approaches. *International Business in an enlarging Europe*, Palgrave Macmillan, Basingstoke, 2005.

**APPENDICES**

## APPENDIX 1 LIST OF INTERVIEWEES

Erik Erroll  
Col., Former Chief Officer  
Department of Strategic and Defence Studies  
National Defence University  
Interview 15.8.2011

Erkki Aalto  
Defence Counsellor  
European Defence Agency (NADREP)  
Permanent Representation of Finland to the European Union  
Interview 12.9.2011

Axel Hagelstam  
Political Advisor  
Office of MEP Carl Haglund  
Interview 16.9.2011

Olli Ruutu  
Policy and Planning  
Principal Officer  
European Defence Agency  
Interview 19.9.2011

Markku Viitasaari  
Lt. Col., Aide-de-Camp  
Finnish Ministry of Defence  
Interview 26.9.2011

Henrik Lax  
Former MEP  
European Parliament  
Unrecorded pilot interview 12.3.2011

## APPENDIX 2 EARLIER RESEARCH ON DEFENCE INDUSTRY INTERNATIONALISATION

Author(s)	Published	Name	Conclusions
<b>Bitzinger, Richard A.</b>	2009	The European defence industry in the 21 <sup>st</sup> century: Challenges and responses	<ul style="list-style-type: none"> <li>- new challenges for European defence industry</li> <li>- merged US defence companies control domestic market</li> <li>- also compete with European companies in essential markets</li> <li>- new technologies researched by US mega-companies</li> <li>- a further challenge to the scattered European defence sector</li> </ul>
<b>Wulf, Herbert</b>	2005	Internationalizing and privatising war and peace.	<ul style="list-style-type: none"> <li>- privatisation began in the 1980's and has continued to this day</li> <li>- resulted in company policies of expanding markets abroad</li> <li>- budget constraints and a need to improve the output changed the principles</li> <li>- private military companies specialising in certain areas of defence</li> <li>- no longer one firm trying to have as broad a spectrum of competence as possible</li> </ul>
<b>Trim, Peter R. J.</b>	1999	The Corporate Intelligence and National Security Model: a new era in defence management	<ul style="list-style-type: none"> <li>- process of international defence sales from company and government viewpoints</li> <li>- divided into three stages:</li> <li>- marketing oriented strategic characteristics from interaction between different actors</li> <li>- the issue of knowledge transfer and the problem of keeping secret information secret</li> <li>- the strategic direction of the firm and its relations to domestic and foreign actors</li> </ul>
<b>Sköns, Elisabeth</b> – <b>Wulf, Herbert</b>	1994	Internationalizing the arms industry	<ul style="list-style-type: none"> <li>- post-Cold War governments</li> <li>- relaxed attitudes towards international trade in defence sector</li> <li>- allowed companies to search for cost benefits in foreign markets.</li> </ul>

