

**The Development of Swedish and French Defence Industrial
Companies 1994-1999**
- A Comparative Study

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INTRODUCTION

In the 1990s an extensive process of restructuring of the European defence industry started. Changes in politics, economy, and technology, are all driving forces behind this process. The most important political factor is the end of the Cold War, which has changed the security situation, and consequently the prerequisites for all big defence industrial producers in the world. The European integration process influences both political and economic factors driving the process of restructuring. Two economic factors seem to be especially important: the single European market (which became operational in the beginning of the 1990s), and the recession in the beginning of the 1990s, that made the European states look very carefully at their state expenditures. The fast technical development has resulted in a sharpened competition at the same time as the development of new products has become increasingly expensive.

In addition to these factors, the competitiveness on the world market has increased, partially due to the fact that the US defence industry was restructured in the beginning of the 1990s. In 1993 the US government invited the defence industry for a 'last supper' in which it made clear that the defence industrial groups had to restructure. The companies were paid of state assets to carry out this process of restructuring, which resulted in three big industrial groups of which two are aircraft producers.¹

This study is part of a project where the development of European regulation of defence equipment is studied.² As a complement to the political changes that are studied in the project, this paper investigates the development of the defence industrial companies in the latter part of the 1990s.

The question to be answered here is: *what strategies seem to have been important for Swedish and French defence industrial companies' in the latter part of the 1990s, in the light of the changed political, economic, and technological situation?* A comparison between Swedish and French defence industry will be made. Such a comparison might be interesting since both these states have (had) state owned defence industrial companies and it might show different ways of exercising state ownership. Since the environment is assumed to influence the companies' possibilities to chose their strategies and to influence the development of that environment, an effort will also be made to characterise the economic and political environment of the studied companies.

The study has been carried out in an explorative way. The findings are presented according to three features that seem important for the companies studied: communication with the politicians, co-operation, and competence. After the presentation and analysis of the empirical findings, the findings are discussed in relation to the companies' environment.

Environment, as used here, is a wide concept that includes all actors and phenomena that might affect an organisation's situation. It has been chosen in

¹ Hagelin, 1992.

² Run by Ph D Ulrika Mörth, SCORE, Stockholm University, and in turn part of the project "Transnational regulation and the transformation of the nation state" (TREGO), financed by HSFR (Humanistisk-, samhällsvetenskapliga forskningsrådet).

an effort to include both economic and political changes that affect the defence industrial companies' situation. Defence industrial companies find themselves in a special situation where they, to a varying extent, are steered by both political and economic concerns at the same time. Increasingly, European defence industrial companies are expected to function as any other company with regard to profit and state subsidies, but at the same time they have a special market where the main customers mainly have been their own states. A bit simplified, it could be said that the environment consists of a mixture of a political (including legal) environment, and an economic environment. However, even though these areas to some extent are treated separately, these 'parts' of the environment are interconnected, and influences (economic as well as ideological) travel between them.

The information on which this study is built, is mainly drawn from Swedish, French, and English newspapers, and from some information produced by the studied companies themselves such as press releases and information material. In addition, three interviews with representatives from Swedish defence industrial companies have been made, and three seminars dealing with defence industrial companies, and defence industrial policy have been attended. The information from the interviews and seminars has mainly been used to get a background of the present situation and is not directly referred to in the text. Some primary sources, such as the French *Defence White Paper* from 1994, have also been consulted. The fact that the study to a great extent relies on second hand material could create some difficulties of reliability, and efforts have been made to ameliorate this through the cross checking of information from several sources.

The analysis of Sweden and France is necessarily somewhat uneven, since it has been easier to find information about Swedish companies than it has been to find the same information about French companies. I should also be remembered that the process studied here still is in progress, which means that some of the results presented might be interpreted differently in the light of what has happened after the time-period studied here.

Development in Sweden and France 1994-1999

The most important features found in the development of the Swedish and French defence industry are the importance of the communication between politicians and business leaders, and the strategies used by the defence industrial companies to manage the process of restructuring in their business area. Since the defence industry is a highly politicised business area, it is important what the communication between politicians and business leader look like. It is probable that the communication differs depending on how the politicians of a certain state view this business area. The most prominent strategies used by both Swedish and French companies are co-operation with other companies, and the preservation and development of competence. The companies studied are involved in a number of co-operation projects which varies both with regard to extent and to the other companies involved, national as well as foreign. The preservation and development of competence includes an emphasis on high technology and information technology, explicit efforts to increase the production of dual use and civilian products, as well as expressions of how important it is to keep competent personnel.

Sweden

Background

Sweden is, as opposed to France, a state that has pursued a policy of neutrality and non-alignment. It has pursued a policy of national independence and high self-sufficiency, which was formulated during World War II and strengthened during the cold war. Thus, the security situation in Sweden, and hence the prerequisites for the defence policy, changed a lot when the cold war ended and the Soviet Union broke down. Most conventional weapons and ammunitions have been produced in Sweden. Björn Hagelin³ describes the Swedish defence and security policy as keeping other states 'at an arm's length' which, a policy that also affects the possibilities to handle the dilemma of maintaining a policy of high equipment self-sufficiency and political independence, while at the same time avoiding financial and technical constraints.

One way of solving the dilemma of high equipment self-sufficiency and political independence while avoiding financial and technical constraints, would be through an increase in military expenditure, but this has not been politically acceptable. In the political guidelines from 1991 there was a shift in the military doctrine. The picture of the most likely threat changed from that of an, in before hand advertised, invention; to a variety of threats including that of a surprise attack. The Swedish Government stated that the national military and industrial base must be reduced and become more specialised in order to stay competitive. In a report from 1990 the Supreme Commander stressed the importance of a Swedish capacity to produce ammunition, electronics, torpedoes, and technology that is protected abroad for security reasons⁴. In 1990 the Prime Minister at the time, Ingvar Carlsson, also stated that the transformation of the EC into a

³ 1992: 178-9.

⁴ Hagelin 1992: 186.

political union would facilitate a Swedish membership.⁵ In 1991 there was a decision that Sweden would apply for membership and the application was submitted on 1 July.

Structure of the Swedish defence industry

After having bought the Celsius group in 1999, Saab AB has become the Swedish defence industrial group. Other important defence industrial companies are LM Eriksson, Volvo AB, and the Nexpo group.⁶

- *Saab AB* is a privately owned subsidiary of the Investment Group. In 1999 its business activities were mainly concentrated to the aerospace sector with JAS 39 Gripen as main product. Saab also includes business units for manufacturing other defence equipment such as missiles, defence and marine electronics, and space systems. In 1998 it had around 7800 employees, and the turnover was... JAS is the first aircraft in the "fourth generation" of aircrafts that is ready for the market. Other aircrafts in this new generation are Rafale, which is French, Eurofighter, which is a co-operation project between the UK, Germany, Italy and Spain, and the F-22, which is an American aircraft.
- *Saab Ericsson Space*, jointly owned by Saab and Ericsson, develops, manufactures and markets spacecraft equipment. Its specialist fields are digital and microwave technologies and mechanics. The company operates both within government financed markets (e.g. the European Space Agency and NASA), and in commercial markets for telecommunications and launchers. It employs about 600 persons.
- *The Celsius Group* was partly privatised in the summer of 1993. From then, the Swedish State owns 24,9 % of the capital and has 62 % of the votes. Foreign owners have 33 % of the capital and 17% of the votes. In 1999 Celsius is a high-tech international industrial group with home markets in the United States and Australia as well as in the Nordic countries. The activities are mainly concentrated to three areas: defence, civilian aircraft maintenance, and business development (material technique, explosives and informatics). As mentioned above, Celsius has not always been a defence industrial company, but started out as a shipbuilding yard. It then expanded in to other areas and in the beginning of the 1990s it started specialising in defence industry. Since then, the expansion has mainly taken place in areas where the technology is close to that in the defence industry. Several companies belong to the group: Bofors Weapon Systems, Bofors Missiles, Bofors Underwater Systems, Bofors Anti Armour Systems, Celsius Tech Systems, Celsius Tech Electronics, Kockums Naval System, Celsius Aerotech, Celsius Aviation Services, Celsius Informatics, Bofors Explosives, Celsius Materials Technology, and some niche companies. Its turnover in 1997 was 12 billion Sek and the number of employees about 11 000.

⁵ Ibid.: 188.

⁶ This presentation mainly draws from Facts about The Swedish Defence Industry 1998-1999, and Ripley, Tim "Western European Aerospace & Defence Industries - The Ownership Jigsaw" in Defence Systems Daily, at <http://defence-data.com/current/pagerip1.htm>, 5 November 1999.

- *Eriksson Microwave Systems'* business areas are defence electronics and microwave communications systems. The company is 100% owned by Ericsson, and it is Ericsson's research and development centre for microwave communications and high-speed electronics. High-frequency technology, signal processing and high-speed electronics are brought together in products and systems within the defence electronics and telecommunications sectors. Its main systems are airborne radar, airborne computers, and missile electronics. EMW design, develop and manufacture advanced defence electronics for army, navy and airforce applications. One big product is the ERIEYE - Airborne Early Warning mission system. Which, in co-operation with Thomson CFS, has become EUROEYE.
- *Ericsson Microwave Systems* owns 50% of Ericsson Saab Avionics AB, which was created in 1996. ESA was created from parts of Ericsson Microwave Systems, Saab Dynamics, and Saab Military Aircraft, to develop the Electronic warfare suite and jammer pod for JAS 39 Gripen, and its business areas are electronic warfare, display, reconnaissance and IFF systems, advanced electronics and mechanics, and electromagnetic technology.
- *Patria Industries*, is to 40% owned by the Nexpo group.

Celsius is one of the cases in a study of how the Swedish State acted as an owner during the 1980s⁷. Four general conclusions are drawn about the Swedish State as a company owner in the 1980s, and some more specific conclusions about the ownership of Celsius were drawn. On a general level, the first conclusion is that Swedish State is not a monolith, and does not act as such. In fact the Swedish State has many exercisers of its ownership. Second, the state, an owner, has been quite reactive and, except in the case of Celsius, it has not been able to help the companies with valuable contacts. There is a difference here between Celsius and other state owned companies that could be due to the fact that contacts that are interesting for the national defence industry have gone through the state, since the defence industry market has been heavily regulated on national levels. Third, the rules for the State ownership have also become clearer. What regards Celsius, the Swedish Ministry of Industry used to be active when it came to the appointment of the group's management, but the board and its president managed to increase its influence during the time studied. The fourth general conclusion is that the goals for the state owned companies have changed over time. Several goals such as social goals, employment, and regional policy goals have become one goal only, that of profitability.

Several specific conclusions are drawn about Celsius. During the 80s the state has acted from many different roles that have to do with the different goals for the group's activities. Long term goals have primarily been made by the group's board and not by the government. The Swedish State has been a reactive owner. Long term influence has been carried out through influencing the board, its president and the vice-director. The board has also managed to defend itself against short term acting and momentary acting from the owner. The initiatives taken have been of a short-term nature. It is also clear that the ownership exercised has changed depending on who has been the Minister of Industry; how the ownership is exercised has been dependant on individuals.

⁷ Anell et al 1992.

This shows a tradition of initiative on action from the group and its industrial leaders to the politicians, rather than from the government to the group's leaders.

The Swedish defence industrial companies are not a homogenous group of companies. The two biggest, until the end of 1999, the Celsius group and Saab, differed in several ways. First, one obvious difference was the fact that Celsius partially was owned by the Swedish State. Second, Celsius has had several business areas whereas Saab's main business has been aircraft. The smaller Swedish defence companies are, with the exception of Hägglunds Vehicle, high tech companies creating different kinds of electronic systems and subsystems. Due to political and economic changes in the companies' environment, both in Sweden and internationally, the defence industrial companies have been under pressure to restructure their businesses.

During the years studied the Celsius group has been in a constant process of reorganising and restructuring its business. The two main strategies have been co-operation with foreign defence industry companies and the development of civilian products mainly done through co-operation with civilian companies (Swedish and foreign). These trends of increased civilian production and co-operation with foreign defence industrial companies become more salient each year. This has also been shown through an increasing emphasis on the development of the industry towards electronics and other high technology. One of the reasons for this concentration could be assumed to be that high technology is vital if products of interest for a civilian market are to be produced. Saab has also undertaken some restructurings, but before their purchase of Celsius, the process was not as turbulent as the one within Celsius.

Communication - the importance of politics

The picture of the communication between Swedish politicians and the Swedish defence industrial companies is a bit ambiguous. On the one hand, Swedish politicians has acted as if the defence industrial companies were just any companies and there have been high demands on them to be profitable and businesslike, even if they were state-owned. On the other hand, it is clear that there have been important connections between state representatives and business leaders, which especially has been the case for Celsius. Some examples of political influence are the areas of priority for the Swedish defence industry, the importance given to export, and the restructuring of the European defence industrial market.

There have been clear connections between the management of Celsius and representatives for the Swedish government. Exactly how these contacts are taken and how the connections look like is more difficult to say from the material used so far. However, Olle Lund, at the time vice director of the Celsius group, stated that he and Anders Sundström "know each other quite well"⁸. The traditional way of selling military equipment has been through politicians and the military authority. In fact, this has been changing when the different parts of Celsius have had to go out on the civilian market and behave like any

⁸ Veckans Affärer 28 February 1994.

ordinary company, exposed to competition. This change might require changes in the business culture as well as more structural changes.

The Swedish government officially decides what defence industrial areas are to be prioritised. The Minister of Defence stated, in 1995, that signal defence and telecommunications were important activities to keep within the country.⁹ In an analysis of the situation in 1998, FMV predicted that Bofors would be the part of Celsius that would suffer the most from the “black hole” in the Swedish national defence budget.¹⁰

The wishes of the Swedish State were also the main reasons of the fact that a very wide range of products has been produced within the Celsius group¹¹. Thus, the Swedish defence and its requirements have had a great influence on the development on the Celsius group and its strategies. This might suggest that the degree to which Celsius has been a ‘State company’ has depended on the fact that its greatest customer has been the Swedish State and not so much on the fact that the biggest owner has been the Swedish State. Consequently, Celsius' strategies and actorness, and how state centred these have been, would change with changed conditions for their possibilities to sell their products. However, this does not mean that the only way for Celsius to change is through changed export regulation. This could, and have, also be done through different joint ventures and co-operation projects. (Or, as became the case in the end of 1999, through being purchased by a company working within slightly different conditions.)

One way for the representatives of the companies to communicate their ideas to the Swedish government is to participate in the public debate about the future of the Swedish defence industry in general. One example of this was when Egon Linderoth (CEO of Celsius Industries at the time) wrote a debate article in a Swedish newspaper, where he emphasised that the Swedish defence industry was a big employer that the Swedish government should be proud of.¹² He also stated the company's view on what the process of restructuring should look like. Civilian production and increased possibilities of export were pointed out as necessary if the Swedish defence industry was to survive; and more Nordic co-operation in the production of defence equipment was described as desirable. It is probable that the reason to write such an article was that the communication about these matters did not work as efficiently as the Celsius group would wish, and that the political process was seen as too slow.

The Swedish government has been active in supporting the export of different products from the Swedish defence industrial companies. Through the Swedish training ship HMS Carlskrona, the Swedish government and a number of Swedish defence companies have co-operated to launch Swedish defence equipment in different parts of the world, especially in South America. The Swedish Prime Minister, Göran Persson, and Bengt Halse, CEO of Saab, met with the President of Chile and his minister of foreign affairs. During this visit a new contract between Sida and its Chilean counterpart was also set up. This

⁹ Veckans Affärer 16 January 1995.

¹⁰ Dagens Industri 25 August 1998.

¹¹ Olle Lund, Veckans Affärer 3 June 1996.

¹² Svenska Dagbladet 23 November 1995.

deal, and the big efforts to sell JAS 39 Gripen aircraft to South Africa, are good examples of how politics and big defence orders are connected.¹³

The Swedish government has not been held outside of what has happened with Saab either, even if Saab has been 100% privately owned. When Saab was to sell parts of its shares to BAe in 1998, the Swedish Minister of Defence, Björn von Sydow, was informed about the negotiations. In the end he welcomed the deal. "The government's position is that the Swedish companies should participate in the restructuring of the European aircraft industry. We think that BAe can contribute to the further development of Saab within the aircraft industry."¹⁴

The political development in other states in Europe has also been of importance for the Swedish companies. The political initiative in 1997, from the governments of Germany, France and the UK, where the European defence and aircraft companies were encouraged to go into transnational mergers and alliances, in order to meet the hardening competition from the US, was welcomed by the Swedish defence industrial companies. For the Swedish companies, this initiative was seen as a possibility that might open new doors to co-operation and export. For the companies in Germany, France and UK, however, this initiative seems to be a confirmation, and a political approval of, a development that had already started.¹⁵ In 1998 BAe, DASA, Aérospatiale, and Casa presented a report on how a competitive European defence industry might to be created. British Aerospace wanted Saab to be one of the partners in a future merger of European aircraft and defence companies. It was assumed that all important European companies must participate in such a merger if it was to be successful.¹⁶

It is also interesting to notice that the Swedish defence industry's business representatives have had quite clear ideas of what role Sweden should have in the political frameworks for defence industrial questions. In 1996, Olle Lund expressed his satisfaction over the fact that Sweden was getting closer to WEAG, since it would give a possibility to see what happened in the European procurement process, and also would make it possible to leave offers.¹⁷ In 1997, Lars G Josefsson (new CEO of Celsius) said that it would be good for Celsius if Sweden was a member of NATO, since the procurement process, and consequently also the market, only was open to suppliers within NATO countries.¹⁸ The executives of the Celsius group thus commented publicly what they thought of different political organisations and what contacts that the Swedish State should have with these.

The importance of communication between politicians and the industry, for the restructuring of the European defence industrial market, including the restructuring of the national markets has quite clearly been shown here.

¹³ Dagens Industri 15 January 1997, Dagens Industri, 5 January 1998.

¹⁴ Svenska Dagbladet 2 May 1998, "Regeringens inriktning är att svenska företag bör delta i en omstrukturering av flygindustrin i Europa. Vi anser att British Aerospace kan bidra till att Saab kan fortsätta att utvecklas som flygindustri." (Author's translation.)

¹⁵ Agence France Press 8 December 1997, Financial Times 9 December 1997, Dagens Industri 11 December 1997.

¹⁶ Svenska Dagbladet 28 March 1998, Defense News 30 March - 5 April 1998.

¹⁷ Dagens Industri 25 October 1996.

¹⁸ Svenska Dagbladet 21 March 1997.

Co-operation

Co-operation is here discussed in a wide sense and could be anything from coordinated marketing of a product to a merger of two or more companies into one. Many different kinds of co-operation projects have taken place in the time period studied. One is the co-operation between Swedish companies in order to increase their competitiveness with regard to possible orders from the Swedish State. Another is the co-operation between Swedish and foreign companies to develop products and to market these products in an efficient way to broaden the market for Swedish companies. Yet another, the co-operation between foreign companies, which also affects the Swedish companies, even if these are not directly involved, due to the imbeddedness of the different companies and their activities. This is especially clear in the case of the European aircraft companies.

At the same time there are different goals for co-operation, and the goal of a project does of course influence the way in which it is carried out. The goal could be to reduce the costs of developing new products, reach new markets, reach political goals, and/or increase the companies' competence. At many occasions these goals are combined. Co-operation is seen to have several advantages. One is that the development and production become more and more expensive, and through co-operation the risks are spread. Another advantage is that it is possible to use the parts of the companies where they are really in the front line and through that combine the best parts of two companies. An obvious advantage for Swedish defence industrial companies is that they, through co-operation with foreign companies get the opportunity to sell their products on markets that are closed to Swedish defence industrial companies due to the Swedish regulations.

An example of co-operation between Swedish companies in order to get Swedish orders was when Kockums realised that the Swedish defence was interested in warfare with missiles, and used its co-operation with Saab Dynamics to get a contract on submarines. Thanks to this co-operation, Kockums could offer submarines that would be sold with missiles already installed, with Saab manufacturing the missiles and Kockums making the construction to hold the weapons.¹⁹

Co-operation with foreign defence industrial companies has been extensive. In 1996 Bofors was the part of the Celsius group that had the most well developed contacts abroad, and they stated that co-operation within concrete projects and alliances were preferred to joint ownerships, a statement that obviously has been re-estimated since then.²⁰ The efforts to expand have been made mainly towards France but also towards Australia, Germany and the Nordic countries.

Especially the co-operation between Sweden and France, through Bofors and Giat, and Kockums and DCN, has increased in intensity. Bofors and Giat were to extend their co-operation and to start co-operating about a new artillery system. They also co-operated about a new weapon system, the anti-tank

¹⁹ *Finanstidningen* 31 July 1997.

²⁰ *Dagens Industri* 15 January 1996.

grenade Bonus, the third Swedish-French co-operation project. The Swedish government had knowledge of this co-operation project, which started in 1993. A fact that caused some debate, since France can export Bonus to countries that are not allowed for Swedish exports. On top of this, Celsius would also receive royalties on all export made. This is also a good example of how interwoven the actions taken by the state and the Swedish defence companies are. Politicians from each state sign an agreement on more general co-operation between the two states' defence industries, and then the Swedish under-secretary of state went to Paris to approve of the new commercial deal.²¹

Kockums has actively been seeking a foreign partner for the development of a new generation of submarines. A development towards new large orders from abroad was seen as important. Kockums and French DCN have developed a quite extensive co-operation project. DCN was interested in the Swedish technical knowledge, but had no need of help with the production. A special company was created, owned to 50% by Kockums and DCN International respectively. Australia has shown to be an important market to Kockums thorough which it has got access to the Asian market. It seems possible that the Asian market will be quite important to Kockums in the future since submarines seem to be more attractive as military equipment in that area than in Europe.²²

In order to expand and get in to the German market Celsius put a bid on Hägglunds together with a German partner. Hägglunds was later sold to the British company Alvis. Another important international co-operation project for Bofors was the co-operation with German DASA about the Taurus robot. In 1998 Celsius was part of the creation of several companies with foreign defence companies: Taurus System (German DASA-LFK), Nordic Explosives, Nexplo (Finnish Patria), Nammo Group (Patria and Rauforss). In October the same year Lars Josefsson predicted that 10% of the number of employees would have to go in the future, the activities abroad would increase while the activities in Sweden would decrease.²³

An example of co-operation projects where several companies, both Swedish and foreign were involved, is a project that started in 1997, when Saab Combitech and Celsius Tech, together with a Danish company, created Transponder Tech. Transponder Tech was created in order to develop and sell a system of aircraft surveillance, created from satellite based positioning.²⁴

The JAS 39 Gripen is the biggest "Swedish" co-operation project. The different parts of the aircraft are to one third Swedish, to one third American, and to one third from other European states. This means that it is not only Saab that will benefit from export orders but also Swedish subcontractors, as well as other European and American companies. In June 1995, Saab and British Aerospace started co-operating about the marketing of the JAS 39 Gripen. BAe worked to

²¹ Svenska Dagbladet 11 June 1995, Göteborgsposten 23 December 1995, Dagens Industri 16 October 1996, Finanstidningen 22 May 1997, Tidningarnas Telegrambyrå 2 March 1998.

²² Dagens Industri 15 January 1996, Dagens Industri 16 October 1996, Finanstidningen 5 July 1997.

²³ Dagens Industri 25 October 1996, Nerikes Allehanda 31 December 1997, Finanstidningen 14 October 1998.

²⁴ Finanstidningen 14 April 1997.

adjust the aircraft to the demands of foreign customers, and was also to participate in the manufacture of the export versions. This co-operation project was seen as necessary for Saab, if the company is to survive in the future when the Swedish orders are delivered. For BAe, JAS was seen as an aircraft that could fulfil the gap between their two other aircrafts, Eurofighter 2000 and the Hawk. BAe has also helped to adjust the aircraft to NATO's aircraft standard. An important job if the JAS 39 Gripen in the future is to be sold to a member of the NATO.²⁵

In 1998 this co-operation extended and BAe bought 35% of Saab. Saab had been discussing with a number of potential partners, as a reaction to the structural changes taking place among all European aircraft manufacturers. The future for the production of civilian aircrafts has become darker in the 1990s due to an over capacity in regional aircraft production in Europe. This over capacity was partly due to great state subsidies in the civilian aircraft production in some states.²⁶

In order to get other states to buy the JAS 39 Gripen, Saab and BAe offer a huge offset programme, which focus on both direct offset, relating to customer involvement in the Gripen programme; and indirect offset covering a variety of projects of which some may be defence or aerospace related. An example of this is that Saab and BAe offered the Czech republic to produce parts of ordered aircrafts in the republic itself, e.g. the production of engines. BAe also stated that it could place some of its production of Airbus in the republic if a deal was agreed upon. This would mean a transmission of technology, which would further increase the congruence within the European defence industry.²⁷

An example of the connections between politics and international defence industrial co-operation, is an offer to the Polish aeroplane industry of which Saab was a part. BAe, DASA and Saab were offering a modernisation of the Polish aircraft industry and airforce. The British wanted to lease or sell the Hawk, the Germans wanted to upgrade the Russian plane Mig-29 to NATO standard, and the Swedes wanted to sell the JAS 39 Gripen. The Swedish government offered the Polish pilots and the staff on the ground education in Sweden. This offer was thought to be extra attractive since it came from three EU member states and Poland is aspiring to become a member. (A kind of foreign policy tied to the selling of armaments.) BAe's offer to buy Denel aviation, a state owned South African aircraft technology company, could be interpreted as a door opener for the export of JAS, because if Denel would be bought the door would be opened for South Africa to become integrated in the Gripen programme and into the rest of the European aircraft industry.²⁸

It could also be assumed that mergers and co-operation projects between different foreign companies affect the Swedish companies since these co-operation projects affect the environment in which the Swedish companies find them-

²⁵ Affärsvärlden No 7 1995.

²⁶ Svenska Dagbladet 2 May 1998, analysis by Göran Sjöblom Finanstidningen 16 December 1997.

²⁷ Dagens Industri 5 September 1998, Dagens Nyheter 21 November 1998, Finanstidningen 9 August 1997.

²⁸ Dagens Nyheter 25 November 1998, Dagens Industri 10 December 1998.

selves. Especially if Swedish companies are co-operating with one or several foreign companies that are part of the co-operation project. One example is the co-operation between BAe and Lockheed Martin started in 1997 to develop a Joint Strike Fighter for the American Ministry of Defence. This project could also show to be good for Saab due to their relations to BAe. Another example is the merger between the American companies McDonnell Douglas and Boeing in 1997. This merger is not estimated to affect Saab at the time being, but it might affect Saab in the future since Saab is one of Boeing's subcontractors.²⁹

There have been talks about a big merger of the European aircraft industry, and negotiations involving governments and companies in France, Italy, Sweden, Spain, the UK and Germany have taken place. However, a big-bang merger between BAe, DASA and Aérospatiale-Matra was not possible, partially because the French state was very resistant to privatise Aérospatiale-Matra, a prerequisite from both DASA and BAe. They did not want to have the French government as a shareholder in a new super-company. BAe and DASA were negotiating on their own, and were close to a merger deal where the next step probably should have been to include Saab in the new consortia. These negotiations came to a quick end though, in the beginning of 1999, when BAe and GEC Marconi announced a merger deal. The new BAe/Marconi became the third largest defence and aerospace group in the world.³⁰

The companies have clearly stated that the strategy of increased co-operation has been good. Bengt Halse stated that the six nation's initiative of 6 July 1998, and the Common position produced by the ministers of industry on 9 July the same year, are two political events which, together with BAe's ownership in Saab, and the joint-venture about the JAS export, are the events that have made Saab's breakthrough.³¹

Saab's purchase of Celsius in the end of 1999 should be seen in the light of these changes on the European arena, the mergers that took place in other European states in 1999. This will be discussed more thoroughly in the end of the section about Sweden.

However, all efforts to expand through co-operation and the purchase of companies have not succeeded, neither has co-operation been sought for without distinction. The attempt by Celsius to buy Hägglunds Vehicle, together with a German partner, failed in favour of a British company, Alvis, which bought Hägglunds in 1997. No Swedish preference existed in that case, a fact that caused some debate after the deal with British Alvis became official. Since Saab did not find a partner for its civilian aircraft production it is decided that it would stop manufacturing civilian aircrafts, only keeping the service parts in order to serve old customers. Bamse and YS 2000 are examples of projects where Kockums has stated that it wants to go on by itself, without any partners. One possible explanation for this is that Kockums, in these two projects, has special technical competence that it is of interest for them to keep within the company. An explanation that leads on to the next important feature of the

²⁹ Dagens Industri 24 June 1997, *Finanstidningen* 26 July 1997.

³⁰ *Finanstidningen* 26 July 1997, *Financial Times* 20 January, 25 January, 29 January 1999.

³¹ *Svenska Dagbladet* 12 augusti 1998.

defence industrial companies' strategies to manage the process of restructuring in their business area - the preservation and development of competence.³²

Competence

Preserving and developing competence within the company is very important for the defence industrial companies, especially in times of change. In the time period studied different company representatives have at several occasions emphasised the importance of skilled personnel and other factors that could increase the competence of the industry. The three main company strategies to keep a high level of competence or increase the competence, have been: structural changes (including strategic co-operation projects), an increasing emphasis on high technology and information technology, and an increased emphasis on the production of civilian and dual use products.

Competence and 'know-how' are of great importance and it is at several occasions pointed out by the Celsius management that these are difficult to keep, and get back, once the orders have decreased. Skilled personnel (constructors, innovators, engineers etc) are difficult to keep within the group when orders decrease. Celsius Tech is an example of a company within the group that has been highly dependent on skilled personnel, it has been described as a world leading company dealing with (among other things) real time systems and command systems that require skilled personnel. A reduction in orders would mean that the personnel would find other jobs, which has not been very difficult for personnel with this kind of competence in the late 1990s. With the loss of skilled personnel there is also a loss of innovating and developing power, which means that it becomes even more difficult to get new orders.³³

There is a tension between general (wide) competence and specific competence. In a sense, Celsius has had too wide a competence in the 1990s, its product portfolio was being described as too wide by vice director Lars G Josefsson. Artillery, anti-aircraft defence and anti-tank weapons were not seen as products to be prioritised in the future. Submarines, aircrafts, telewar and controlling systems were to be prioritised, as already discussed, due to political priorities. This means that Bofors is worse off than other parts of Celsius, since the not prioritised areas are their main products. FMV predicted that the business area Anti Armour Systems and the subsidiary company Carl Gustaf would have to be liquidated in the future.³⁴

Electronic warfare in a wide sense was, according to Bengt Halse, a prioritised area within the Swedish defence industry, something that was supported by political decisions. Hans Ahlinder pointed out that this has been the case because the knowledge needed for the development and production of this technology is difficult to buy abroad. This is actually also a further reason to concentrate on these products, since it is easier to get something out of co-operation projects with foreign companies if you have attractive knowledge to offer.³⁵

³² Veckans Affärer 15 January 1996.

³³ Affärsvärlden No 6 1995.

³⁴ Dagens Industri 28 August 1998, Dagens Industri 25 August 1998.

³⁵ Göteborgs Posten, 13 September 1996.

Celsius has undergone quite turbulent structural changes in the time period studied, changes that ended up in the company being purchased by Saab in the end of 1999. Celsius started off by increasing its activities in the area of high tech, and as a part of the expansion towards IT, it bought the computer and information technology company Enator in 1994, a deal that also put Celsius on the civilian market. Later on the companies BMT, Icons and Dialog were also bought. Through these acquisitions Celsius became the third or fourth biggest IT company in Sweden, as big as IBM at the time. In the end of 1994 all IT companies were brought together in Celsius Information Systems, a change of strategy since company executives argued earlier the same year that these companies were to be kept separate.³⁶

Early in 1995 the Celsius group was organised into three separate parts: defence industry (Celsius Industrier), information technology (Celsius Information Systems) and other industrial activities (Celsius Invest). CIS was by some analysts seen as a potential own company, when the profits would not be needed to balance the military production in CI any longer. Already in March 1996, CIS was sold out. Some journalists assumed that this was due to the fact that the group needed cash to make the structural changes and cuts that became necessary after the new defence decision.³⁷

In 1995 Saab-Scania was divided into two separate parts with the manufacturing of lorries concentrated in Scania and the manufacturing of aircrafts concentrated in Saab AB. Other changes within the group occurred as well. Saab Combitech was developed from a technique company in the shade of the defence industry, into a competitive IT company. However, it was not the crisis in the defence industry that made Combitech concentrate more on IT, at the time of the changes it had already been on the civilian market for about ten years.³⁸

Co-operation is one of the means to use competence in an efficient way. Companies change parts, buy each other, and create new companies in order to collect the spearhead technology, and become more efficient and more competitive. One example of this is the creation of Ericsson Saab Avionics in 1996, where defence related competence and power from different companies were brought together in one single company, which resulted in a concentration of the production of military aircraft high-tech products.³⁹

The deal to sell 35% of Saab to BAe is closely connected to the strategy of increasing and keeping competence, some journalists assumed that this move saved Saab's military aircraft production, since the JAS 39 Gripen now became part of the BAe aircraft family. BAe was seen as a good partner that would be able to give Saab stability. BAe made a list of areas where there were synergies between the two companies. Different high-tech products were among those estimated to be a good future business. The importance of competence was again pointed out. The engineers at Saab were said to be part of an elite, but

³⁶ DATA Världen 11 March 1994, DATA Världen 9 December 1994.

³⁷ Svenska Dagbladet 17 May 1995, Dagens Industri 1 March 1996.

³⁸ DATA Världen 15 December 1995.

³⁹ Göteborgs Posten 13 September 1996.

there were also worries that the older generation's knowledge would not be enough, because their knowledge of computers and electronics was not advanced enough. There has been a development in technique, which means that the technological focus has shifted from mechanics to electronics.⁴⁰

Celsius has made quite extensive efforts to expand in different directions of the civilian sector in the time period studied. The first effort in the new expansion towards civilian products was through the purchase of IT companies. However, this strategy did not, as mentioned above, prove to be very successful. Companies bought in 94 were sold out again in 96, probably due to the decision on the Swedish national defence. A sell out of these companies was predicted, but not until the other parts of the group had become profitable.⁴¹

Other civilian drives, such as the usage of military technique in civilian products, have proven to be more successful, and a number of new civilian products have been developed (e.g. Movis, the bomb-smelling robot dog, and distance radar for cars). The organisation of this development has been different from that of the efforts to expand in the IT sector. Civilian employments of military technology are commercialised in co-operation with other companies in order not to split the knowledge within the defence area. Celsius has been quite successful in the reorientation towards civilian products. The civilian activities increased their part of the turnover from 15% in 1996 to 40% in 1998.⁴²

Some Comparisons

Celsius and Saab have both been under pressure to restructure their businesses and their strategies to carry out these changes, through sell-outs and different co-operation projects, have in part been quite similar. It is clear though, that the structural changes that have taken place within the Celsius group have been more turbulent than those that Saab has undertaken, Celsius has restructured its business organisation twice in the years studied. For Celsius, the restructuring towards production for the civilian market has been a big part of the turbulence. This is not a problem that Saab has had to struggle with to the same extent, since Saab has always had a place in the civilian market. Celsius has had to establish new structures and contacts with civilian companies, foreign as well as Swedish, in order to carry out the change towards civilian production.

Celsius' venture on IT seems to have been less successful than Saab's venture in the same area. The reasons for this difference could be many. One possible reason is the fact that Saab Combitech had been on the civilian market for several years. Another that Celsius had to sell off Celsius Information Systems earlier than what would have been optimal from a business point of view, due to political decisions taken.

Celsius and Saab have extended their co-operation with both foreign and Swedish companies. Kockums has especially developed its contacts and co-

⁴⁰ Dagens Nyheter 5 May 1998, Finanstidningen 1 May 1998.

⁴¹ DATA Världen 11 March 1994, DATA Världen 26 August 1994, DATA Världen 9 December 1994, Dagens Industri 1 March 1996.

⁴² Dagens Industri 28 August 1997, Veckans Affärer 15 January 1996, Finanstidningen 14 August 1998.

operation projects with the French company DCN. This is a strategy that has had open political support and has been helped along by the Swedish government. In 1999, Kockums extended its co-operation with foreign companies to include a merger, with joint ownership, with German HDW.⁴³ Co-operation projects have been the main part of Saab's structural changes, especially that with BAe. This development has also had open political support. However, it seems like Saab's co-operation with BAe has more directly been a result of structural changes in the European defence market, and especially the structural changes in the aircraft (civilian and military) manufacturing. The restructuring process that Celsius has undertaken (until it was purchased by Saab) is more indirectly a result of this process. Until now its production has almost completely been steered by the demands of the Swedish State.

There are close connections between communication, co-operation, and competence in the structural changes described and discussed above. Companies have to co-operate in order to use their competence efficiently, so as to be competitive. Well-developed communication between states and companies is needed in order to agree on what knowledge/competence is of interest. However, it seems like the communication between Saab and the Swedish government has been carried out through a more general discussion, partly maintained on a European level, than the communication between Celsius and the Swedish government.

Increased Competition?

As stated above, it seems like the 'stateness' of Celsius has been more determined by the fact that its greatest customer has been the Swedish State rather than the fact that the Swedish State is the strongest owner. In a comparison with Saab this means that Saab and Celsius partially have had different markets. Celsius' market has been steered by the Swedish State while Saab has acted on a different market. It could be assumed that the Swedish State has been one of the actors on Saab's market as well, but not the dominant one, as in the case of Saab. When the Swedish State changed its role, it also means that the market conditions for Celsius' changed. It might be that the similarities and differences in the two companies' strategies that have been presented here have depended on the differences in their respective markets. Both Celsius' and Saab's markets have changed in the years studied, but in slightly different ways, and therefore these companies have perceived and dealt with the changes differently.

Seen in this light it is not surprising that Saab seems to have been more successful in its process of restructuring. It seems like the reasons behind the changes in Celsius' and Saab's markets are the same, a changed competitive situation in Europe and world wide, combined with political changes with regard to defence industrial policy and foreign policy in Europe. What emerges here, is a picture of two companies that increasingly find themselves on the same market. Saab finds itself on a changing Swedish-European defence industrial market. Celsius has acted on a Swedish defence market but, due to the changed role of the Swedish State, it increasingly finds itself on the same Swedish-European market as Saab. A market which is in itself in transition, and where the main focus seems to be shifted from Swedish towards European.

⁴³ Dagens Nyheter 17 November 1999.

If this analysis is credible, Saab and Celsius should perceive each other more and more as competitors, and another category of important concepts, competition, might be added to the three others: co-operation, communication and competence. To what extent Saab and Celsius do find that they act on the same market, is the result of many factors that partially depend on the two companies' different histories. Factors that also affect how they perceive the difficulties that the structural changes of this Swedish-European market bring forth.

However, this is an empirical question. It might also be the case that these companies specify in different products to the extent that they will not belong to the same market even though they act in the same circumstances, i.e. if the factors determining the environment in which they act are the same. It might also be the case that they, due to their different histories and perceptions of the world will not perceive each others as competitors even if they by some measures could be considered as actors on the same markets with the same kind of products to offer. This will be discussed more in after the study of the French companies has been presented.

An example of increased competition between Celsius and Saab might be the fact that they competed about which company was to place the robots on the JAS 39 Gripen.⁴⁴ A newly developed robot from Saab is competed with Bofors' Taurus robot. Two conclusions can be drawn from this competition. The first is that Saab does not decide what equipment the JAS aircrafts will have, but that the buyer takes this decision. The second belong to the discussion above, two Swedish companies (which both have foreign partners) compete with each other about orders from the Swedish defence. If the line of thought in the discussion above is followed it could be assumed that this kind of competition would be the normal case in the future when even more structural changes have taken place.

As already mentioned, Saab bought Celsius in the end of 1999. This deal was partially a result of the Swedish Defence Minister's and High Commander's urges that the companies should merge their competing missiles producers Bofors Missiles and Saab Dynamics. None of the two companies wanted to sell its own missiles activities to the other, and a merger came up as a solution. A solution that also made it possible to meet with, Ove Wiktorin's, the Supreme Commander, demands of the creation of a strong Swedish defence industry that can be an interesting partner for foreign defence industrial companies. Through the deal the Swedish state let go of its shares in Celsius. A foreign ownership, however, was not seen as probable development by the Swedish Defence Minister who said that the Swedish state would continue to regulate the defence industry. This is to be done through the permission of changes in the owner structure and by putting demands on how the industry will have to be there for defence needs. The new group will have around 18.000 employees in the beginning, but since some synergetic effects are expected that number will probably decrease. The turnover is estimated to be 22,5 billion Swedish kronor.⁴⁵

⁴⁴ Finanstidningen 4 September 1997.

⁴⁵ Dagens Nyheter 17 November 1999.

⁴⁵ Finanstidningen 16 November 1999, 17 November 1999.

In the light of the discussion above, this deal could be analysed as follows. The changes in defence industrial policy carried out in the late 1990s, in combination with the process of restructuring the European defence industrial companies, has resulted in increased competition for the Swedish defence industrial companies. The increase in competition has not only been on the European market, but also on the national market. The Swedish defence industrial companies (mainly Saab and Celsius) have increasingly come to compete with each other. Two possibilities to deal with this increased competition emerge. One is for each company to increase the co-operation with foreign companies so as to get the competence and means to compete with each other. Another is to reach some kind of merger, where the synergetic effects are used to increase the competitive power on the European market. Since the development in 1998-1999 on the European market mainly consisted of national consolidations in France and UK, the most appealing logic for Saab and Celsius was to merge on a national level, rather than being swallowed one company on its own by a foreign, consolidated, national giant.

France

Background

France is the European state most affected by the profound changes that begun to take place in the international arms market in the 1980s. Three international developments have been of particular importance to France. Firstly, the reshaping of the US military expenditure and production patterns that occurred in the 1980s (a raise in the military R&D expenditures created by the Reagan Administration). Secondly, a decline in the arms sales to the third world due to economic crises in these states. Thirdly, the spread of local low intensity conflicts, which created a market for cheap, less sophisticated weapons systems, which also resulted in that the Third World producers of arms entered the market. These developments outside Europe were already under way when the iron curtain fell in 1989-1990.⁴⁶ The French defence industry had its prime time in the middle of the 1980s. Since then, it has reduced its activities mainly because of reduced defence budgets.⁴⁷

The general model since the time of Charles de Gaulle for French defence policy and French defence industrial policy, came towards the late 1980s and the beginning of the 1990s to be marked by disfunctionality. A disfunctionality that was provoked by the tensions between two different strands in French policy: the push for increased European defence co-operation, and the emphasis on national independence and self-reliance.⁴⁸ This general model had three principal elements of which the first was national control over armed forces. The second was priority to French nuclear weapons in the defence budget; the development of a tactical nuclear force which could deliver a warning shot against any aggression towards the French territory. And the third was reliance on French-made military equipment produced by a national arms industry;

⁴⁶ Serfati 1992.

⁴⁷ Knutsson and Oxelius 1994.

⁴⁸ Menon 1995

with an aggressive policy of arms sales in order to make up for the small scale of French arms requirements).⁴⁹

The military policy that had provided political and military benefits in the past was increasingly unable to do so. Some of the big nuclear weapons programmes were not suitable after the shattering of the Soviet Union, and more generally differing forms of military capabilities were increasingly required to preserve security. A changed security situation and economic constraints made France's military strength, in political terms, increasingly redundant. When the symmetrical superpower hostility had faded, France's policy of defiant independence in military matters appeared redundant. It was the Cold War that gave France the conditions necessary to exercise its politics of interdependence. With the end of the Cold War came also a change of the position of NATO, and of the European security institutions. This came to marginalise Paris and its influence over the future of the European security institutions.⁵⁰

The continuity of French military and defence policy in the 1980s, in spite of its inefficiency, is explained through the 'consensus' on French defence policy. Even though clear signs of profound disagreements over virtually every aspect of defence policy appeared during the Mitterand Presidency the prevailing idea was that there was a consensus on what the French defence policy should look like. By the 80s it was forbidden to question the consensus. This consensus affected the way in which French policy was presented, as well as the specific policy choices.⁵¹

The French State was in 1990 the only western state to increase its military expenditure. Despite this increase cuts did appear, especially where old conventional arms were concerned. Some projects were postponed in order not to have to reduce the amount of weapons bought or the costs of research and development. In the area of nuclear power, the defence kept its level of expenditure, but chose to postpone the development of some nuclear weapons platforms, such as submarines and aircraft carriers.⁵²

In 1991 the French defence companies were warned in a letter from the French authorities that the defence budget for 1992 would be reduced. It was not clear though *what* areas would be affected and there was some confusion about which projects that would be able to continue and how big the research subsidies would be. The French defence industry urged the Government to at least help them to get new export contracts in order not to suffer too much from the diminishing home-market. The Gulf war made clear that the French military would have to re-estimate its shape and strategies in order to work orderly. This also had an effect on the budget for 1992 in which an up-date of the conventional troops became more important than was the original idea.⁵³

The defence industry began to prepare for cuts in 1992, even before any concrete political decisions were actually taken. They let go of employees,

⁴⁹ Knutsson and Oxelius 1994.

⁵⁰ Menon 1995.

⁵¹ Ibid.

⁵² Knutsson and Oxelius 1994.

⁵³ Ibid.

decreased production and closed down plants. Since the unemployment rate was already quite high, the French Government took action to abate the effects of these cuts in some regions, and also made it easier to move workforce to other industrial sectors. The industry warned that too big reductions of the military expenditure would create a loss of competence among the researchers. There was also a change in production towards arms that had been efficient in the Gulf war. The French Minister of defence at the time (Pierre Joxe), hinted at how the authorities wanted the industry to change, and also made statements of future international co-operation and mergers of national defence companies, such as the robot departments of Aérospatiale and Thomson CFS. The Euro-corps were mentioned to facilitate European co-operation projects, and a standardisation of the defence equipment in.⁵⁴

Even though the new minister of defence, François Leotard, in April 1993 announced that the trend of diminished defence budgets would be broken, the new Government had to reduce the defence budget only one month later. The main reason for this was the poor State finances. In May, plans to privatise several state-owned companies were presented, among these companies were Aérospatiale, Thomson SA and Snecma. However, an immediate sell-out was not possible due to the bad conjuncture and the bad finances of these companies. Changes also came about in the nuclear policy, and the land-based missiles were thought to lose their importance, where aircraft and submarine nuclear weapons would keep their importance. Historically, 30% of the defence budget has been allocated to nuclear weapons. With the changed security situation the nuclear weapons became an obvious post to reduce.

During the summer of 1993 the defence industry realised that it was in deep trouble, and therefore it started to increase its pressure on the French State to increase the allocated money to the defence and to work more actively to help the companies receive export contracts. It seems like it was not certain any more that the French state would produce an order if a defence company began to do badly. The views that the French state should present a concrete plan for the years to come in order to make it possible for the industry to plan its strategies and processes of restructuring were also expressed.⁵⁵

Structure of the French defence industry

France has a broad defence industry with companies in most areas of defence industrial production, the biggest areas are defence electronics and aerospace, which in 1998 made out 34 and 33 % of the total defence industrial production respectively. But also naval constructions, nuclear arms, ground arms, and chemical products are manufactured.⁵⁶

The French defence industrial companies are both privately and publicly owned. In 1980, 54% of the defence industrial companies were owned by the public sector.⁵⁷ After the elections in 1981, a complete nationalisation of the French defence industry was foreseen. The goal with the planned privatisation

⁵⁴ Ibid.

⁵⁵ Ibid.

⁵⁶ Dussauge, Pierre and Christophe Cornu, *L'Industrie l'Armement*, Economica, 1998, p13.

⁵⁷ Ibid. p12.

and restructuration was to create one national producer in each of the big areas of defence industry. The solution was less extreme, where the actual structure of the already existing companies was taken into consideration. Between 1986 and 1988 Chirac's government started a process of privatisation of national companies, but among the defence industrial companies it was only Matra and CGE (later Alcatel-Alsthom) that were privatised. In 1995 62% of the activities in the defence industrial sector was carried out by state owned companies.⁵⁸

In France there are three different kinds of state owned (public) companies: state enterprises (les établissements d'État), public enterprises (les établissements publics), and national enterprises (les sociétés nationales). The companies in the first category are part of the state and do not have any own juridical identity. The companies in the second category have a separate juridical identity, its activities fall under private law, but the French State is the whole and sole owner. The companies in the third category are also separate juridical entities where the French State has direct or indirect influence over the activities carried out.

These different forms of state ownership have direct implications on how the companies are steered. The first category is steered by the Délégation Générale pour l'Armement. The second category has a greater autonomy even though the government chooses its direction, and the relation between the state and these companies is of a contractual nature.⁵⁹ The biggest French defence industrial companies in 1999 are Thomson-CSF, Aérospatiale Matra, Dassault Aviation, DCN, and GIAT Industries.⁶⁰

- *Thomson-CSF* is a defence electronics producer with civilian products as a big part of its productions.
- *Aérospatiale Matra* is the result of a merger in 1999 of Aérospatiale and the high technology parts of Lagardère Matra, as a step towards a privatisation of the whole company; the state shares were 47.8% in 1999. In 1998 the French state transferred its shares in Dassault Aviation to Aérospatiale, making the group bigger. Aérospatiale Matra is France's biggest aerospace producer, and it produces both civilian and military aeronautics, helicopters, aerospace, as well as other defence products.
- *Dassault Aviation* is a privately owned industrial group with the French state as an indirect owner through Aérospatiale's 46.5 % in the group. Its activities cover several areas of high technology, with and emphasis on civilian and military aircraft.
- *DCN* (La Délégation de Construction Navales) is a state enterprise, mainly producing submarines and other naval products.

⁵⁸ Ibid. p13.

⁵⁹ Ibid. p11-12.

⁶⁰ This presentation mainly draws from Ripley, Tim "Western European Aerospace & Defence Insutries - The Ownership Jigsaw" in Defence Systems Daily, at <http://defence-data.com/current/pagerip1.htm>, 5 November 1999.

- GIAT Industries is a state owned company with armoured systems weapons and ammunition systems as its main products.

The general trends of the French defence industrial companies are quite similar to that of Swedish companies. The communication with the government is very important, and the views of the government influence the strategies that the companies use in order to handle their changing environment. The two main strategies for the French defence industrial companies during the time period studied, as for the Swedish, have been an increase in the number of co-operation projects, and an increased emphasis on competence, partly shown in the development of dual-use and civilian products.

Communication - the importance of politics

The relations between the French defence industrial companies and the French State are a bit different than those between the Swedish defence industrial companies and the Swedish State. In general, it can be concluded that the state owned French defence industrial companies have been heavily steered, and that the private companies have been heavily influenced, by the French government. The initiatives for how the national defence industry is to be restructured has come from the French government and when journalists wanted to know something about the future of the defence industrial companies they started with an interview with the Defence Minister, not with asking the company executives. One result of this is that it sometimes has been difficult to see the state owned defence companies as subjects in the process. Here, there is a difference between state owned and private companies.

The process of restructuring the French defence industry started with a new White Paper (Livre Blanc) on Defence in February 1994.⁶¹ In this White Paper, the role of France and the security situation was discussed, and some priorities for the years ahead were stated. However, the White Paper stopped at describing long-term plans for the French defence, it offered recommendations and ideas, but there was no concrete directives of what kind of restructuring the defence industry should carry out in the coming years. The French authorities also expressed that an integrated European procurement organisation should be created, in order to get a better co-ordination of the production of weapons systems, and to create a more European industry. This would also facilitate export and co-operation competitive with the US. French support to its defence industry has been bigger than that of many other West-European states, which means that the pressure to restructure in 1994 was not yet as big as it was in other states.

In July 1995, a Strategic Committee was put in place to give the government concrete propositions with regard to the adaptation of the defence. The French priorities were stated to be space, information technology, and R&D. With regard to the DCN, Millon created a special group with the mission to think about its future, given the constraints the company was facing. It was pointed out that a future recapitalisation of French defence companies should not only be a transition of capital, but that they should be part of a complete industrial strategy.⁶²

⁶¹ Livre Blanc sur La Défense 1994, Collection des rapports officiels.

⁶² Jane's Defence Weekly 3 June 1995, La Tribune Desfosses (Internet version) 3 October 1995, La Tribune Desfosses (Internet version) 26 October 1995.

The French Defence Minister at the time, Millon, was closely involved in the preparation process of future restructuring of the defence companies, and he stated that he was studying the problems of the national companies company by company, from the three angles: national interest, customers and shareholders. He pointed out that the defence industry had to come closer to the civilian industry. Millon also stressed that it was necessary for the defence industrial companies to be of such a size that they could carry big arms programmes, programmes that have become more and more expensive. Millon underlined that he did not want to be at the service of the defence industry, but that he wanted to occupy himself with the French defence missions, and consequently the arms that are necessary in order to see the French army through. The restructuring projects that the strategic committee was thinking about, made the defence industry worried, and Millon stated that the lobbying taking place around the defence companies annoyed him.⁶³

Except creating political committees to study the situation, Millon also went directly to the leaders of the big companies. For example, he asked the new vice director of Giat Industries (GI) to make a profound audit of the accounts of GI, and then propose how a recovery was to be achieved. Millon declared that he would advise against a complete recapitalisation of Giat Industries, because the government did not have a "sane and clear" view of the financial situation.⁶⁴

As a result of his efforts to prepare the restructuring of the defence industry, Millon in 1995 announced a plan for economic and social adaptation for each branch, aerospace and armaments. This was to be done branch by branch, and company by company, studied with the board of each company. Then these adaptation plans would be put in place together with the social partners. Millon also wanted to help the restructuring of the defence industry through a support to SMEs and SMIs⁶⁵, which would become available at the same time for civilian and military companies, preferably for high technology. An analysis of the situation in *La Tribune Desfosses*, concluded that if the government prepared an economic and social plan for the aeronautics and arms, the worst was yet to come.⁶⁶

This strong political emphasis in France on the French defence industrial companies is probably a combination of two factors. One is that the French state has dealt with its ownership in a different way than the Swedish has, it has not been satisfied just with the fact that it has had a majority of the votes in a certain company. It has had a heavy political interest in the defence companies and it has been convinced that it should use that interest to steer the development. Another factor that might be of importance is the fact that the Defence Minister ultimately is responsible for what happens in the Ministry of Defence. Consequently, the Defence Minister in a direct way, and not only through the way he

⁶³ La Tribune Desfosses (Internet version) 3 October 1995.

⁶⁴ La Tribune Desfosses (Internet version) 3 October 1995, La Tribune Desfosses (Internet version) 26 October 1995.

⁶⁵ Small and Middle sized Enterprise, Small and Middle sized Industry.

⁶⁶ Interview with the Minister of Defence and analysis of the situation, La Tribune Desfosses (Internet version) 3 October 1995.

steers the resources of the defence budget, becomes a very important person for the future of the national defence industrial companies.

The restructuring of the French defence industry is a risky business with regard to the public opinion and the risks blowing up a social front. A restructuration of the defence industry has quite serious effects on some French towns where there are many defence companies. In Bourges for example, three defence industrial companies and the DGA have had production. This is another important aspect when comparing Sweden and France, even though the Swedish defence industry is important for the survival of some small towns in Sweden, it is nowhere near the size of the French defence industry. Bofors for example, is very important for Karlskoga, but when Celsius (of which Bofors is a part) in 1996 had a total number of employees of around 11 500, it was in 1995 estimated that the downsizing of the French defence industry would result in 50 000 people becoming redundant.⁶⁷ This means that even if some regional political considerations probably are present when the Swedish government think about the future of the national defence industry, it does not really face the possibility of having 50 000 persons out on the street. The French government is almost forced to take a strong leadership, or at least give the impression that it is doing so, to avoid domestic instability. The emphasis that was made by the Defence Minister, that there had to be a concrete political plan, branch by branch, and company by company, for how the industry was to be restructured does not seem that strange in the light of this situation.

The European political leaders also made joint moves to influence the action taken by the French defence companies. In the end of 1997, the French, German and British governments issued a tripartite statement, calling for Aérospatiale, BAe and DASA to propose a concrete project for the general restructuring of the European aerospace industry. BAe, DASA, Aérospatiale, and Casa answered to this call through presenting a report on how a competitive European defence industry was to be created. In this report the French State was being pointed out as the main obstacle in the process of restructuring, since it wanted to keep its shares in Aérospatiale. It was stated that if this market is to be restructured Aérospatiale has to be privatised. This report might have helped the politicians of the other big European military aircraft producing states to put pressure on the French state to start privatising its state owned defence companies.⁶⁸

There has been quite extensive pressure from foreign politicians and representatives of foreign defence industrial companies on the French state, to make it loosen its grip on the national defence industrial companies. The major reason for this foreign push for French privatisation has been that strong co-operation between the European defence industrial companies has been thought to be the only chance for these companies to survive in the competition from US companies. When such co-operation projects, or even mergers, take place the leaders of the other European defence companies want to deal with French business leaders, not with French politicians who might put political considerations before business.

⁶⁷ Svenska Dagbladet 21 March 1997, La Tribune Desfosses (Internet version) 27 October 1995.

⁶⁸ Agence France Presse 8 December 1997, Financial Times 9 December 1997, Defense News 30 March - 5 April 1998.

It is probable that there are several reasons why it has taken some time for the French state to actually start the process of privatisation of its defence industry. One is of course the French history of striving for political and technological autonomy in the defence area. Another reason has more to do with economy. The recession in the first years of the 1990s has also affected the state owned French industrial companies. This means that these companies were in a bad shape in the mid-1990s. One effect of their bad economic shape is that it is difficult to find buyers when the companies are to be privatised. Who wants to buy a company that desperately needs a recapitalisation of billions of French francs, as was the case with Giat Industries in 1998, and whose future is more than unclear? Bad economic shape is also visible on the stock exchange rate, and if that is too low, it is difficult for the state to sell its shares, since the loss would be too big. So, in order to pursue a successful privatisation of its defence companies, the French state has both had to shape-up its companies economically, and create an environment where the future of the companies does not seem too gloomy.⁶⁹

Co-operation

In general, The French defence industrial companies have had quite extensive co-operation projects in the development and manufacture of different products, as well as in R&D, and these co-operation projects have increased during the time period studied. The co-operation has been with both other French companies, and with foreign companies, bilateral as well as multilateral. A number of co-operation projects are European in their scope, but there are also co-operation projects with other parts of the world such as Russia, China, the US and the United Arab Emirate.⁷⁰

The reasons for co-operation differ a bit between the Swedish and French companies. Even though both French and Swedish companies wish to achieve a reduction of costs, and a manufacturing of products that are competitive on a world market, these factors are clearly the most important driving forces behind co-operation for French companies. They have not particularly had to fight for the government's orders, as has partially been the case for the Swedish companies, and there are almost no political or historical strains to the size of their market. The most important goal for the French defence industrial companies seems to have been to manufacture high quality, cost effective, products that are competitive on the world market. In order to achieve this goal, an increased emphasis on European co-operation has been apparent. In addition, French defence companies, and especially Giat Industries, also have been involved in some quite extensive co-operation projects which are part of offset programmes.

The examples of co-operation between French and other European defence industrial companies are plenty, and all companies studied have been involved in several different co-operation projects, most of them with other European companies. Giat Industries, for example, is involved in co-operation projects

⁶⁹ Le Monde 10 February 1998, Defense Daily 10 February 1998.

⁷⁰ The 'technical' information in this section mainly draws from Dussage and Cornu 1998, and European Armaments Restructuring and the Role of the WEU Report submitted on behalf of the WEU Assembly Defence Committee by Mr Colvin, Rapporteur. Document 1623, 9 November 1998.

with Swedish, German, Italian, Swiss and British companies. An example of a French-Swedish co-operation project is that between GI and Bofors in the area of field artillery, to develop the Bonus shell. Giat also has quite extensive co-operation with German companies, and one example is in the area of 'intelligent' ammunition where it co-operates with Rheinmetall Industrie and Diehl in order to concur to the European harmonisation efforts.

Giat is also involved in a number of multilateral co-operation projects, one is that with Rheinmetall Industrie and Royal Ordnance. A joint venture company, RGR Armament GmbH, has been set up as responsible for the development, marketing and the production of the 140 mm gun and ammunition system for the FTMA programme (Future Tank Main Armament). It has been said that the new company will form the basis for extended co-operation in future technologies for tank guns and ammunition. Within the framework of GTK/VBCI/MRAV vehicle programme GI and ARGE/GTK (Germany) and GKN Defence (GB) have signed a letter of intent concerning co-operation. The three companies are to work together to determine the maximum amount of common components and propose a common industrial organisation in order to limit development and production costs. The companies intended to create a single contracting entity for the execution of the contracts if their offers were accepted. Aérospatiale-Matra is also involved in extensive multilateral European co-operation projects such as the Airbus Industry and the Airbus Military Co.

Another big multilateral European co-operation project where France participates, is the third prototype of the NH 90 Maritime and Transport helicopter, which is produced through a joint programme of France, Germany, Italy and the Netherlands. This is an example of a "'management' company".⁷¹

In the areas of missiles and space European co-operation and French participation, seems to have been especially frequent. There has especially been an emphasis on the development of space technologies and the French defence companies active in this area participated in a number of European and transnational space programmes, as for example the European Space Agency. In 1994, Matra Marconi Space became Europe's number one space group and the third biggest group in the world, through the purchase of British Aerospace space division, and in 1996 a new company was created, Matra BAe Dynamics. Matra BAe Dynamics is a 50/50-held subsidiary of Aérospatiale-Matra (formerly of Lagardère/Matra) and BAe. It combines the missile operations of its two shareholders.

Another example is Matra's participation in a process of merging its space sector interests, Matra Marconi Space, with DASA and DSS (Dornier Satelliten-system). This merger was supposed to become operational during 1999. These companies have pursued the creation of a European Space company since 1997. (Lagardère and GEC merged their space activities in MMS in 1990 and took over the space sector of BAe in 1994.) The new company would be one of only two companies in the world to offer a full range of space sector activities, covering several fields. Commercial, navigation, civil and military observation, and telecommunications satellites; the corresponding ground-based segments, as well as service and exploitation activities; scientific satellites and probes;

⁷¹ Ripley 1999.

launch vehicles and orbital infrastructures; and space related equipment and technologies.

An agreement reached in the end of 1996, and presented by the German and French governments in January 1997, enabled Matra BAe Dynamics to participate in the guided missile activities of DASA.⁷² This move was subject to the approval of the European Commission, a step towards the creation of European structures, which was considered essential as a response to the urgently needed improvement in global competitiveness. In the field of missile and missile-based weapons systems the new missile group, Matra BAe Dynamics-LFK (LFK is a subsidiary of DASA) was to become the second biggest missile group in the world.⁷³

The co-operation projects with non-European companies, and the efforts to expand world-wide, are several. One example is when Giat Industries opened a permanent representative office in Kuala Lumpur, Malaysia, in order to reinforce its presence in Southeast Asia in 1997. Another example is Alcatel's and Aérospatiale's efforts to strengthen their ties with the Russian space industry, through the signing of a contract in Moscow with the Russian Federation's State Committee of Telecommunications, represented by the national operator, RSCC.⁷⁴

An example of co-operation in R&D is Dassault Aviation, which has co-operated with several companies in this area: Brite-Euram, ERCOFTAC, Euromart, and Euclid. Dassault Aviation also takes part in European research co-operation programmes such as Brite-Euram, Esprit, Euclid, Euromart etc and works with research centres, and other scientific organisations in Europe, the US, Canada, Australia and Russia.⁷⁵

An example of offset-based co-operation is Giat Industries activities in the United Arab Emirate. In 1997 Giat Industries went into several projects as part of its offset obligations, incurred as a result of a sale of the Leclerc main battle tank to the UAE Armed Forces in 1993.⁷⁶

When the different co-operation projects are studied, it becomes quite clear how close some of the military production and civilian production are to each other. This is especially the case within the production of aircrafts. One example is Dassault Aviation, which is involved in several co-operation projects with producers of both civilian and military products. It has industrial co-operation with Alpha Jet (Dornier), Jaguar (BAe), and Atlantique (which are all European companies). It also manufactures complete systems and sub components with Fokker, Airbus, Alenia, CASA, and IAM, and it has signed industrial agreements with Alenia and Mikoyan. Another example of this was when Aérospa-

⁷² Franco-German Common Security and Defence, Nuremberg 9 December 1996.

⁷³ Le Monde 14 May 1997.

⁷⁴ Press Release from Giat Industries 1 December 1997, Press Release from Aérospatiale 6 June 1998.

⁷⁵ www.dassault-aviation.fr/group/history.htm 23 March 1999, Press Release from Aérospatiale 29 January 1997.

⁷⁶ Press Release from Giat Industries 27 January 1997.

tiale and Renault teamed up in 1996 to develop a new generation of light aircraft engines.⁷⁷

Competence

An increase in competence is a clear strategy that the French defence industrial companies, as the Swedish ones, have used in order to handle the changes in their environment. The emphasis, even stronger than in Sweden, has been on structural changes through strategic co-operation and mergers, but also on the development of high technology and dual use products. Already in the Defence White Paper from 1994 the importance of dual-use technology and a future privatisation of state defence industrial companies was emphasised, as well as the fact that the over capacity and costs of the defence industrial companies have to diminish. It is also clear that the process of turning towards dual use and civilian products has been less of a problem for the French companies than for the Swedish. One reason for this is probably the size of the French companies, where several companies have used their size to comprise civilian products as well as military. In addition, the consolidation process with mergers of French defence companies has brought different civilian competencies together.

One difference between Sweden and France though, is that the French mergers, of which the merger between the French military aircraft companies will be described below, rather have been carried out in order to increase the French national competence, than to increase the competence of a certain company. The consolidation process has thus been national in its scope already from the start, and there have been no signs of a possibility to merge French companies on the European level before the national consolidation process had taken place. That possibility was never really seen as a serious option. A strong political will, to keep big French defence industrial companies and a big French defence industry, and great difficulties in the privatisation process, are factors that have been important in this development.

All though the Defence White paper from 1994 stated the future priorities of the French defence industry (given the political, economic and technological changes in the beginning of the 1990s), the really big changes did not take place until in 1998. When the structural changes started, mergers between national companies were prioritised. One of the most extensive restructuring processes is that of getting the three aerospace companies Aérospatiale, Lagardère/Matra and Dassault Aviation together. After several efforts to merge private Dassault Aviation with Aérospatiale, the French state reach an agreement to merge Aérospatiale with Lagardère/Matra. In the beginning of 1999 Aérospatiale-Matra was formed, and at the same time Aérospatiale was partially privatised but with the French state keeping a "golden share". As this process, due to the size of the French defence industry, is important for the whole restructuring process of the European defence industry, it will now be described and discussed a bit more thoroughly.

In 1995 the Official strategic committee proposed that the aeroplane parts of Dassault and Aérospatiale, and that the missile parts of Lagardère/Matra and Aérospatiale should be brought together. This was the beginning of the process

⁷⁷ www.dassault-aviation.fr/group/human.htm 23 March 1999.

of consolidation of the French defence aircraft industry. In the military production, Dassault Aviation has mainly been concerned with the development of the aircraft Rafael. The future for their research, which has been quite similar to that carried out by Aérospatiale, is not clear once Rafael has been developed. A new project might take 15-30 years. At this time Aérospatiale was in need of a recapitalisation of 10 billion Francs and that is exactly what Dassault had. In 1996 it was decided that Aérospatiale was to merge with Dassault Aviation. Then the negotiations of how this could be realised started. They never came out in success though, mainly because the CEO of Dassault Aviation, Serge Dassault, refused to merge his company with a company that was partially state owned. He demanded a complete privatisation of Aérospatiale, something the French state was not prepared to do.⁷⁸

1998 was the year when the big structural changes of the French defence industry took off. The French State shareholder recapitalised Giat Industries with an injection of 4.3 billion Francs. "In the present period of intense international competition this recapitalisation will reinforce the confidence of our current and potential customers. It will also consolidate the role of Giat Industries in the European ground armaments industry."⁷⁹ Almost at the same time, the French government decided to transfer its 45.76% stake in Dassault Aviation to Aérospatiale. The transfer was supposed to take effect on 30 December. Then the French government gave the Chairman of Aérospatiale a mandate to rapidly conclude strategic agreements, and to submit proposals for an initial public offering as required for a consolidation of the French military and civil aircraft companies.⁸⁰

In July 1998, Lagardère and Aérospatiale submitted a proposal to the government, by which the Lagardère group would take a 30 to 33% stake in Aérospatiale, through the transfer of Matra HT to Aérospatiale, along with a privatisation of the group and its listing on the stock market. After some negotiations Lagardère and the French Government announce that they had reached an agreement to bring together the activities of Aérospatiale and Matra HT through the contribution of Matra HT to Aérospatiale.⁸¹

The new group became the leading European company in its industry, and ranked as number four in the world after the three American companies Lockheed Martin, Boeing and Taytheon Hughes. Lagardère contributed 100% of Matra Hautes Technologies and 50% of Matra Nortel Communications. In a joint press release, the Aérospatiale and Lagardère groups welcome the agreement between the French government and Lagardère, concerning the terms of the merger between Aérospatiale and Matra HT. It is stated that the agreement is in accordance with the memorandum of the agreement signed on 22 July 1998, and that this agreement will consolidate and strengthen France's expertise in aerospace and defence.

⁷⁸ La Tribune Desfosses (Internet version) 1 December 1995, Le Monde 22 February 1996, Financial Times 22 February 1996, Le Monde 2 July 1996, Financial Times 2 July 1996.

⁷⁹ Statement by Chariman Jacques Loppion, Pressrelease 8 February 1998.

⁸⁰ Defense Daily 10 February 1998, Le Monde 29 May 1998

⁸¹ Financial Times 23 July 1998, Le Monde 24, 25 July 1998, Defense Daily 24 July 1998, Defence News 27 July- 2 August 1998.

Aérospatiale then reorganised in order to support the development of European civil and military aerospace industry, and the French consolidations. It was reorganised by business sector. To enable the reorganisation of the European aerospace and defence industry, Aérospatiale in 1999 decided to spin off virtually all of its operations in four wholly owned subsidiaries: Aérospatiale Airbus, Aérospatiale ATR, Aérospatiale Missiles, and Aérospatiale Strategic Missiles and Launch Vehicles. The French shareholders and transfers commission, issued favourable the decision to privatise Aérospatiale.⁸²

A confirmation of Lagardère's preliminary agreement with the French government in relation to the strategic partnership between Lagardère and Aérospatiale was received in the beginning of 1999. Lagardère received 33% of Aérospatiale's share capital in exchange for the transfer of Matra HT business to Aérospatiale, and a payment of 850 million Francs. This transfer was to be carried out providing that the listing of the new group was successful, with the government's share ending up at 47,8%. Important positions were to be appointed jointly by Lagardère and the government. A decree was sent relative to the transfer from the public to the private sector of the equity of Aérospatiale SNI. An agency was selected to handle the upcoming privatisation.⁸³

This merger of Aérospatiale and Matra was supposed to accelerate the consolidation of the European aerospace and defence industry, in order to improve competitiveness and allow European industry to develop more balanced relations with their American counterpart. The strategic priorities of Aérospatiale-Matra were stated to be: to pursue the conversion of Airbus into a single corporate entity; to form a world leader in missiles, by linking Matra BAe Dynamics and Aérospatiale Missiles; and to strengthen the group's space business through continued European consolidation.⁸⁴

The consolidation process was pushed further through other co-operation agreements signed in closely connected areas. The French state had earlier had bad experiences of privatisations after the turbulent privatisation of Thomson-CSF that started off in the beginning of 1996, and that could not be finished until the end of 1997. Once an agreement was reached though, France created a national electronics giant, the partially privatised Thomson-CSF (the French state came to own 34% of the shares through Thomson SA), including Dassault Electronique, the satellites of Aérospatiale, and the telecommunications and space business of Alcatel-Ahlstom.⁸⁵

In the autumn of 1999, after BAe had "dumped" DASA and Aérospatiale, and instead came to an agreement to merge with GEC Marconi, Aérospatiale-Matra reached an agreement to merge with DASA. The new grouping has the name EADS (European Aeronautic, Defence and Space Company) and became the third largest aerospace and defence group in the world after Boeing and Lockheed Martin, and it controls 80% of the Airbus consortium. The aim was to integrate the Spanish group CASA as soon as possible. The French state will only hold 15% of the shares in EADS and has made a provision that it will dele-

⁸² Press Release from Aérospatiale 9 March 1999.

⁸³ Decree no 99-94 dated 13 February 1999, Defence Systems Daily 16,17 February 1999.

⁸⁴ Ibid., Jane's Defence Weekly 29 July 1998.

⁸⁵ Le Monde 16 April 1998, Jane's Defence Weekly 22 April 1998, Le Monde 23 June 1998.

gate commercial decisions to Lagardère.⁸⁶ Thus, the BAe move seems to have speeded up the process, and made the French government partially reconsider its need to interfere in the defence industrial companies, in order to preserve and expand the French defence companies' competence and make it possible for them to compete on both a European and global market.

Similarities and differences between Sweden and France and their defence industrial companies

Historically, there are some similarities between the situation of Sweden and France, in the way in which defence industrial policy has been carried out. There has been a strong emphasis on autonomy, even if the reasons for this choice have been slightly different. Such an emphasis on autonomy has resulted in a big national defence industry that has produced most of the conventional weapons needed for the national army. The dilemma has been to keep the independence when political, economic, and technological factors change. The differences can primarily be drawn from the two facts that the French government has acted differently than the Swedish government towards its state owned defence companies, and that the French national defence industry is, and has been, so much bigger than the Swedish. The size difference also means that the development of the world market has been more important to French defence industry than to the Swedish. The French state has also had an ambition to increase its defence budget.

In the late 1990s several differences and similarities can be found. The differences in how the state ownership is exercised have resulted in different political strategies for the restructuring process of the defence industry. In Sweden the restructuring of the national defence market was started first, and a change of the general national defence policy was more difficult to pursue and came after the restructure of the business had started. In France, the order has been reversed, and the French government started by revising the general national defence policy, and then the restructuring process of the national defence industry started. The differences in size means that different strategies have been used when the process of restructuring the national defence market has started. In France the political emphasis on a national consolidation process has been stronger than in Sweden, where the national consolidation process could be seen as a result of the European development rather than an explicit ideological policy choice.

The similarities found largely have to do with the importance of communication between politicians and business leaders, and the strategies that have been used by the defence companies in the restructuring process. It is interesting to see that communication between politicians and business leaders do not only take place on the national arenas but also on a European arena. It shows how interwoven these questions are on different levels. The European level seems to be used for many different purposes. One is to bring some actors and activities closer together, as when the different defence companies are asked to present a report on their future structure. Another is to put pressure on a government to make it undertake political changes which are in the interest of other actors on

⁸⁶ Financial Times 16,17 October 1999, Le Figaro 19 October 1999, Les Echos 20 October 1999.

the European level, as e.g. the pressure on the French government to privatise its defence companies.

For the companies, co-operation and the preservation and development of competence have been important strategies. Co-operation has been undertaken in different ways: within a group or closely related companies, with national or foreign companies, bilateral or multilateral. The goals for the co-operation projects have also differed, it could be to reduce the cost of developing new products, increase the competence of a company, reach new markets, and reach political goals. The companies' competence has mainly been increased through strategic co-operation, structural changes within the company (e.g. mergers with other companies and/or the spinning off of some parts of the company), an increased emphasis on the use of high technology and IT, an increased production of dual use products and civilian products; and the emphasis on getting and keeping competent employees.

According to Moravcsik⁸⁷ defence industrial collaboration occurs when the domestic arms producers are in favour of such a project. When the national arms producers oppose a co-operation project it fails. Thus, it has been the economic interest of national arms producers rather than the interest of military or chief executive that has steered the development. Doubtless this differs from state to state, as seen in this study, but in general this is the trend found in this study as well.

⁸⁷ P 130 in Evans, Peter B et al (Eds.) Double-Edged Diplomacy - International Bargaining and Domestic Politics. Berkley: University of California Press, 1993.

COMPANY ENVIRONMENT

The Economic environment

So, is it possible to say something about the environment in which the Swedish and French defence industrial companies find themselves through this study? The economic environments of companies have been pictured in several different ways. A traditional way is to see the environment as a market, in which buyers and sellers are the main actors. These actors' main purpose is to maximise their interests and consequently the market is characterised by its non-organisation. 'Market' is here a theoretical concept, an ideal picture of what the relations in a certain part of the market' should look like.⁸⁸ However, due to the fact that the defence industrial companies environment is highly politicised, it seems as if other analytical concepts might be better tools to analyse this environment.

With regard to the relationships between the defence industrial companies and their national governments, the image of a network, as presented by Lundgren and Snehota⁸⁹, seems to fit quite well. They present an empirical picture of buyers and sellers where the environment is presented as a network (the industrial market). In this network, well established, long term relationships between actors are of major importance. Actors in a network structure have multiple relations that are all dependent on each other. The network is only limited by the knowledge of the actors, and the effect that this knowledge has on their actions. Continuity and stability mark the relations between different actors, but the relations are not static, they are also marked by change. For the defence industrial companies and their customers, the states, this picture the emphasis on long term relations, continuity and stability seem to be especially relevant for the characterisation of the environment.

It might be that this picture is changing when the environment changes and become more European. But even if this is the case, it is also likely that the new relations build on the old, which means that the structure of the old network is important for the directions in which the changes take place. Exactly how the relations between states and companies change in this process of restructuring of the defence industrial market seems to be a question for further research during a longer time period than the one studied here.

The close connections between governments and companies found, might imply that the Swedish and French defence industrial companies should have quite good opportunities to influence the development of their environment as described by Jacobsson.⁹⁰ Companies in a political environment have to respond to other demands than if they were to act only in an economic environment. In order to be able to influence the political (and legal) environment in a, for the company, successful way, special knowledge about the present process of the present policy area is vital. For companies involved, it is important to know what changes are taking place at the moment, who acts, where to act, and when to act. It is important to have a network that is connected to the public sphere.

⁸⁸ Brunsson and Hägg 1992, Lundgren and Snehota 1998.

⁸⁹ Lundgren and Snehota 1998.

⁹⁰ 1994.

Due to the close connections to the national government and the additional European contacts (through industrial groups and other European companies), it seems likely that the important information of what changes are about to happen, who is involved, and where the important decisions are being made, is not too difficult for the defence companies to receive. This implies that the defence industrial companies actually have tools to influence the process.

In other empirical pictures of a company's environment, *who* is considered to be a competitor and the relations between different competitors in terms of competition and co-operation, is of great importance for a certain environment and its practice.⁹¹ Companies can relate to each other in several ways: through conflict, competition, coexistence, co-operation and collusion, points that are to be regarded as modal points on a competitive continuum.⁹² In addition to practice, ideas and rules are important factors that limit the actions and interactions of actors.⁹³ Important in the empirical pictures described here, is the actors' subjective perception of other important actors in their environment.

When the relations between the different companies are studied, traits of all stages of the different relations on the co-operative continuum described by Easton can be seen. In this study, co-operation is doubtless the most important of the phenomena described by Easton. But even though co-operation is very important for all companies studied, it also seems as if the competitive traits increased among the Swedish companies. This might be due to the relatively small size of the Swedish defence industrial market. Since the Swedish market has been small, one strategy to increase the position of the companies has been strategic co-operation projects with foreign companies with access to a bigger market than the Swedish company has. Through such co-operation projects, the competence of the company also increases, which might mean that Swedish companies that did not use to compete, in fact became competitors.

This has not been the case in France, where the market for the defence industry has been world wide the whole time, since the French government's strategy to keep a big defence industry has been to keep the exports of defence industrial products high. One result of this is that the French defence industrial companies have been more sensitive to the changes on the world market. Another result is that a national consolidation was sought, possibly making the French companies more competitive on the world market.

However, it seems as if national consolidation is not enough to keep the French companies competitive on the world market, and therefore they (and other actors) have been driving a process of increased European co-operation as the beginning of a European consolidation process. The way in which this process started in the late 1990s, seems to fit quite well in to the picture given by DiMaggio and Powell, of the structuration of an organisational field. DiMaggio and Powell⁹⁴ define an organisational field as "those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers,

⁹¹ Brunsson and Hägg 1992, Easton 1988.

⁹² Easton 1988.

⁹³ Brunsson and Hägg 1992.

⁹⁴ 1991.

resource and product consumers, regulatory agencies, and other organizations that produce similar services or products".⁹⁵ The authors argue that the advantage of this concept is that it includes all relevant actors, both with regard to connectedness and structural equivalence. Fields must be defined empirically and can only exist "to the extent that they are institutionally defined".⁹⁶ Increased interaction, interorganisational structures of domination and patterns of coalition, the information load to be contended, and the awareness of a common enterprise, are all phenomena that are part of the process of institutional definition, the "structuration" of a field. When a field is structured the organisations within that field become more similar to each other. Especially then the increased interaction, but also other phenomena such as the awareness of a common enterprise, are parts of the process studied here. This seems to be happening in Europe, and perhaps also on the Global market where the US at present have three big defence industrial companies (Boeing, Lockheed-Martin, McDougall) and Europe has two big consortia (BAe-GEC Marconi and Aérospatiale/Matra-DASA).

The Political Environment - The European Integration Process

As has been shown in this paper, the states are part of the companies' economic environment in the form of customers, the buyers of the defence industrial companies' products. As that the only customers for the defence products are states, the defence industrial production is steered by the demands of the same states. In addition, the states also have a more political role in that they also are part of the political environment that creates the rules within which the defence industrial companies have to work. As a consequence, the defence policy a state pursues greatly influences the environment of a defence industrial company. Of great importance for the development of the defence industry in Europe is the European integration process. The European integration process is important because it affects the policy choices the individual states make, and because it influences the shape of the regulative framework in which the companies have to work.

The evolving European polity and its integration process have mainly been analysed either from a supranational perspective⁹⁷ or from an intergovernmental perspective⁹⁸. In the 1990s, several studies claiming that the prime characteristics of this polity are neither supranational nor intergovernmental have been presented. Based on empirical studies, the European polity has increasingly been described as a post-modern system, a system of multi-level governance⁹⁹. It is possible to distinguish four important traits in a system of multi-level governance.¹⁰⁰

The *first* trait concerns the number of levels and the relationship between these levels. If the system is seen from a perspective of multi-level governance, more

⁹⁵ Ibid p. 64-65.

⁹⁶ Ibid p 65.

⁹⁷ e.g. Haas 1968.

⁹⁸ e.g. Moravcsik 1991, 1995.

⁹⁹ e.g. Caporaso 1996, Andersen and Eliassen 1996, Marks et al 1996.

¹⁰⁰ Britz, 1998.

levels are considered to be of importance than in more intergovernmental oriented analyses. The relationship between the levels are non-hierarchic, i.e. in order to communicate with one level it is not necessary to pass the levels in between. Contacts are taken directly from one level to another, even if these levels are far away from each other in the system. A *second* trait is that the number of actors is higher than in more traditional analyses. What actors are to be considered as important depends among other things on what issue, or policy area, is dealt with. It does not have to be any of the traditional actors in European integration theory, the commission or the member states, even if the traditional actors are those who generally have the most weight. The *third* trait is that the centre of the system is quite weak, and that its autonomy is limited of the centre for political power within each member state. This means that there are different centres for political power, which differ in strength, and where different allies rule, depending on what issue/policy area that is in focus. A *fourth* trait is that the national and European politics become interwoven. What issues that are considered to be of national importance are not defined only from a national perspective, but also from a European perspective.

This picture of the European polity as a system of multi-level governance fits quite well with the situation found in this study. There are several levels where states and companies interact, the relationship between states and companies are not only developed on a national level but also on a European level. The number of actors is high, and the actors participate several times in the process in different constellations. There is no obvious hierarchy between the different levels. One examples is the requests from the states that the defence industry itself agrees on how it should be restructured, an opportunity for the defence industrial companies to influence their future environment. Another example is that the German and British defence industrial companies tried to influence the French state to privatise its defence industry.

Bearing the studies of multi-level governance in mind, Wayne Sandholtz and Alec Stone Sweet present a transaction-based theory of European integration,¹⁰¹ emphasising the importance of supranational governance in the European integration process. Sandholtz and Stone Sweet point out that the integration process is not limited to areas defined within the European treaties. If there is no treaty-based competence for increased supranational governance, the relevant actors will create such a development if necessary. All depends on the cross-border transactions.¹⁰² The six nation LOI (Letter of Intent) agreement signed in 1998, could be seen as an example of this. The agreement was an effort to coordinate the political development of the six biggest defence industrial producing states in Europe.¹⁰³ However, in the case of the defence industry the new structures created, are not, as Sandholtz and Stone Sweet assume, supranational. They are intergovernmental agreements, but with the effect that the integration between the participating states increase.

¹⁰¹ 1998.

¹⁰² Ibid p12, 25, see also Mörth 1998.

¹⁰³ The Letter of Intent was signed by France, Germany, UK, Italy, Spain and Sweden in July 1998, and it lists six key areas (security of supply, export procedures, security of information, research and technology, treatment of technical information, and harmonisation of military requirements) where the governments may help its defence industry.

At last, it should not be forgotten that the European integration process, in general and especially in the case of the defence industry, does not proceed in a vacuum. It is part of a global process and it could be concluded that the development towards increased global competition in the production of defence products has resulted in increased intergovernmental bargaining, and consequently increased integration in Europe.

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