

Defence industrial policy – a sound security strategy or an economic fallacy?

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ABSTRACT

This article explores whether it makes sense for national governments to employ defence industrial policies – such as offsets and discriminatory procurement practices – to support their domestic defence industries. This question has so far primarily been discussed by economists, who have argued strongly against the use of defence industrial policies. This article maintains that these economists fail to address the often complex motivation behind the introduction of these policies. It illustrates these shortcomings by contrasting their arguments against a case study of Norway, which accounts for the country's use of defence industrial policies from the early post-Second World War era up until today. The article concludes that, depending on their objectives, defence industrial policies can be seen as either a sound security strategy or an economic fallacy.

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1. Introduction

Defence industrial policy – whether it takes on the form of discriminatory procurement practices or offset requirements – is among the most controversial policy instruments in use today. Its critics, ranging from the US Government and the European Commission to military officials and research economists, have gone as far as to claim that these policies derive their main justification from economic fallacies and their main support from political populism. Rather than delivering on their promises of increased employment, development and growth, the critics have argued that these policies have reduced competition in the defence market, decreased productivity in the defence industry and made sure that the governments that have implemented these policies have acquired nothing better than second-rate defence equipment (Brauer and Dunne 2004b). Despite this criticism, defence industrial policies remain a persistent fixture of the national security policy of many countries, and its popularity seems to have grown in recent years rather than declined (Markowski and Hall 2014). This article aims to explore this apparent contradiction between the popularity and the rationality of defence industrial policies, and try to find out whether defence industrial

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policies should be considered a sound security strategy or an economic fallacy. More specifically, this article aims to answer the following two questions:

- 5 (1) What objectives do national governments want to achieve by employing defence industrial policies?
- (2) Does it make sense for national governments to employ defence industrial policies to achieve these objectives?

10 The academic debate on this topic has been dominated by economists who have argued strongly against the use of defence industrial policies (e.g. Martin 1996, Brauer and Dunne 2004a). These economists have claimed that countries employing defence industrial policies usually wind up equipping their armed forces with inferior defence materiel and end up hampering rather than stimulating their economies. Their conclusions can be criticized for being based on fairly narrow theoretical frameworks and failing to account for the complex security issues, such as countries' need to ensure security of supply or safeguard national secrets. This article will accordingly contribute to this debate by challenging the economics-based view on defence industrial policy by comparing and contrasting their arguments against a politically informed case study of Norway – which explores for the country's use of defence industrial policies from the early post-Second World War era up until today.

20 Norway provides an especially good case for analysing defence industrial policy, as the country's modest size has forced the Norwegian Government to constantly temper and moderate its defence industrial ambitions. Unlike larger countries, which could be almost completely self-sufficient, or smaller countries, which had to rely almost completely on foreign suppliers, the Norwegian Government had to think strategically about what kind of defence equipment it should develop and produce nationally. By studying the policies that the Norwegian Government chose to introduce, this article can provide critical insights about the role national defence industries can play for national security and economic development.

30 The topic of this article is related to and further extends on several recent contributions in Defence Studies that have discussed the theoretical and empirical foundations of defence industrial policies and the importance of domestic defence industries for promoting national security (e.g. Uttley 2001, Kirkpatrick 2008). The article is not only interesting from an academic point of view, but it is also relevant for policy-makers. The recent introduction of a new EU Directive (European Union's Defence and Security Procurement Directive 2009/81/EC) might make it more difficult for EU member states to maintain defence industrial policies (Edwards 2011, Castellacci *et al.* 2014), and many European countries need to consider whether they should continue to support their domestic defence industries and how this should be done. This article also contributes to that discussion.

40 The article is organized as follows: Section 2 provides an overview of the different types of defence industrial policy instruments and presents the main criticism levelled against employing these policies in the academic literature. Section 3 provides an overview of Norway's use of defence industrial policies from the early post-Second World War era up until today. Finally, Section 4 discusses the arguments against defence industrial policy in the light of the findings from the case study on Norway, and concludes by summarizing the key results and implications of this study.

2. Defence industrial policy – an overview

The defence sector is different from most other industrial sectors. Its role in national security has exempted it from the workings of most international trade agreements and provided it with an almost unparalleled level of support and protection from national governments. The result has been that most national defence industries are subject to fundamentally different types of regulation and support measures than most other industries (industries such as agriculture, pharmaceuticals, and petroleum are subject to similar conditions). In this section, we will examine the unique policy framework that most defence industries are part of, first by looking at the different types of defence industrial policies that countries employ and then by looking at why the literature – particularly within the fields of political economy and international economics – suggests that countries should refrain from using these policies.

2.1. The different types of defence industrial policies

Defence industrial policies come in a variety of forms and guises, and there exist no standardized terms or official vocabulary to describe the different policy instruments. Nevertheless, it is possible to distinguish between three broad categories of policies: procurement-related (or demand-side) policies, research and development (R&D)-related (or supply-side) policies, and defence export regulations.

The procurement-related policies can be divided further into three types: “discriminatory procurement” (direct purchase without competition), “offset” (counter-trade), and “cost-share/work-share” (multi-lateral development and production). These policy instruments have in common that the national defence authorities ensure that their domestic defence industry receives contracts that they might not otherwise have won. However, they differ in terms of the benefits they provide to national defence contractors: offset and cost-share/work-share tend to provide domestic defence companies with new business opportunities in foreign markets, while discriminatory procurement tend to shield the domestic defence market from competition for foreign defence companies.

The most well-known and discussed type of procurement-related policies is perhaps offset. Offset is a type of policy where a country’s national defence authorities require a foreign defence contractor to enter into business agreements with its domestic defence companies as a precondition for receiving a contract to deliver defence equipment to its armed forces. When this agreement involves using a national defence contractor to produce part of the defence equipment that the country procures, it is called “direct offset”; and when the agreement involves purchases unrelated to the defence equipment that the country procures, it is called “indirect offset.” Offset is considered to be a very important policy instrument particularly in smaller countries, which need access to foreign markets to sustain a domestic defence industry (Edwards 2011).

A related but less familiar policy is cost-share/work-share. Cost-share/work-share contracts are multilateral agreements between the defence authorities in two or more countries, where they agree to develop and produce a new type of defence equipment. Cost-share/work-share contracts ensure that the defence industries of each of the participating countries receive contracts proportional to the amount of the defence equipment that they order (Hartley 2008, Heuninckx 2008). Cost-share/work-share contracts have been used by Norwegian

defence authorities and are considered by Norwegian defence contractors to be an important policy instrument (Castellacci *et al.* 2014).

The third type of procurement-related policies, discriminatory procurement, is a policy where a country's government either bans import of certain classes of defence material or instructs its defence authorities to purchase defence equipment from domestic suppliers even in cases when foreign suppliers could provide cheaper and better defence equipment. Discriminatory procurement is a policy that aims at protecting domestic defence contractors from foreign competition and is usually considered to be important in larger countries, which are not as dependent on access to foreign markets to sustain a domestic defence industry (Edwards 2011). (For an interesting discussion on defence procurement policies in US, UK, and Germany see Heidenkamp *et al.* (2013, pp. 34–40)).

The R&D-related policies usually take the form of a contract between a country's defence authorities and one or more of its defence contractors, where the defence contractors receive financial support from the defence authorities to develop new or improved defence materiel. R&D contracts have, among others, been used by the Norwegian defence authorities when they acquired new defence equipment, to alleviate the defence contractors of some of the risk associated with developing new and complex defence equipment (Blom *et al.* 2013, Castellacci *et al.* 2014).

The last of the three broad categories of defence industrial policy is defence export regulations. While the previous two types of defence industrial policy are used to encourage export of defence materiel, defence export regulations are used to prevent potential enemies or unscrupulous actors from strengthening their military capabilities or reduce the flow of arms to nations that are engaged in military conflicts. The specific formulation of these policies tend to vary both between countries and over time, and governments often have to weigh the benefits of having a tight regulation of defence export against potential loss of employment and economic growth. Although defence export regulations are an important part of a country's defence industrial policies, it is not this type of policy that has been criticized in the academic literature nor is it this type of policy that is the main concern of this article. This article's main concern is the R&D and procurement-related policies.

2.2. Motivation for and arguments against defence industrial policies

The literature discussing defence industrial policy is both limited and diverse. The few existing studies range from scholarly studies within neo-classical economics to more politically motivated accounts. In our account of the literature we will focus mainly on the studies that fall within the fields of political economy and international economics, chiefly because this literature has debated the merits of defence industrial policies most extensively. In the following section, we will look at the five main sources of motivation that this literature argues lies behind the introduction of defence industrial policies and look at the central arguments that this literature raises against using defence industrial policies to pursue these aims. The five types of motivations that we will discuss are: gaining access to foreign markets, facilitating technology transfer and spillovers, supporting infant defence industries, creating and protecting domestic jobs, and easing foreign exchange shortages.

The first motivation for introducing defence industrial policies is to gain access to foreign markets (Martin 1996, pp. 23, 39). Domestic defence contractors can be prevented from exporting their products by discriminatory procurement practices in overseas markets or

by concerns about the quality of the defence contractor's products among other countries' armed forces. National defence authorities can, however, use defence industrial policies to help their domestic defence companies overcome both these export barriers. They can, for instance, counteract discriminatory procurement practices in foreign markets by stipulating offset obligations that require foreign defence contractors to import products from their domestic defence companies. And they can mitigate concerns about quality of their domestic defence contractors' products by using offset contracts to facilitate some initial sales to other countries' armed force and thereby establish foreign "reference customers" that can vouch for the quality of their products. The national defence authorities can thus stimulate export and help maintain their defence industrial base.

Opponents of defence industrial policy have questioned whether the costs of offset are higher than the benefits of foreign market access. The opponents point out that foreign defence contractors will – under almost all circumstances – demand a higher price for their defence equipment when the national defence authorities demand offsets. They maintain that foreign defence contractors will incur costs associated with fulfilling the offset contracts (e.g. transaction costs associated with carrying out the offset deal and purchasing costs from buying from higher cost suppliers), and that the defence contractors will pass those costs on to the national defence authorities through higher prices (Markowski and Hall 2004).¹ In addition, the opponents argue that using offsets to prove product quality seems strange, since it is usually the job of the buyer to ensure that it is purchasing the best possible product and not the seller's government (Brauer 2004, p. 60).

The second motivation for introducing defence industrial policies is facilitating technology transfer and spillovers (Martin 1996, p. 38). National defence authorities can use defence industrial policies to facilitate transfer of technological competences and know-how from a foreign defence contractor to their domestic defence industry. The national defence authorities typically do this by stipulating some obligation of technology transfer in an offset contract that can be fulfilled by the foreign defence contractor, for example by establishing a local production plant. The national defence authorities can thereby provide domestic defence contractors with access to knowledge, competence and capabilities that would otherwise be difficult to obtain and thus help them become more technologically sophisticated and internationally competitive – benefits that in turn might spill over to the country's civilian sector.

Opponents of defence industrial policy have questioned whether foreign defence contractors will fully comply with their technology transfer obligations and whether the technology that is transferred will have the intended impact (Brauer 2004, p. 60). They argue that it is difficult for the domestic companies to evaluate the technology they receive and that the foreign defence contractors can be tempted to transfer old and outdated technologies. They also point out that less sophisticated companies might not benefit from technology transfers, since these companies will not be able to improve upon the technologies they receive and the technologies transferred will therefore only provide a temporary boost in competitiveness (Markowski and Hall 2014).

The third motivation for introducing defence industrial policies is to support an "infant" defence industry (Martin 1996, p. 39). National defence authorities can support an emerging national defence industry by using defence industrial policies to boost the sales of domestic companies and thereby enable them to benefit from learning curves and scale economies. The national defence authorities can do this by demanding direct or indirect offset on

5 contracts with foreign defence suppliers, or by favouring national defence companies when
they award contracts for supplies of defence equipment. The national defence authorities
can thereby over time help establish a more productive and competitive domestic defence
industry.

10 Opponents of defence industrial policy have questioned whether this is the right way to
develop an infant industry. They argue that policies such as national favouritism can have
detrimental effects on the cost and quality of the defence equipment procured for the coun-
try's armed forces (Apostolakis 1987). They also maintain that offset policies can make the
infant industry dependent on offsets, by encouraging it to supply highly protected markets
that offer few new export opportunities once the offset deals are completed (Martin 1996,
p. 39).

15 The fourth motivation for introducing defence industrial policies is to create and protect
domestic jobs (Martin 1996, pp. 39, 40). National defence authorities can use defence indus-
trial policies to create jobs in economically distraught regions that experience a high level
of unemployment. The national defence authorities can achieve this by, for instance, stipu-
lating offset requirements that obligate foreign defence contractors to locate production
20 plants in distraught regions or use defence companies from these regions as sub-contractors.
The national defence authorities can thereby contribute to the overall economic welfare of
the country by employing workers that would otherwise have been unemployed.

25 Opponents of defence industrial policy have questioned whether it is possible to use
military production to stimulate regional growth (Brauer 2004, pp. 58, 59). They argue that
many countries have difficulties directing offsets towards productive use in their own defence
industry and would have even greater problems directing it to specific regions. They also
point out that producing military equipment requires physical capital and technological
capabilities, which might be lacking in the economically distraught regions.

30 The fifth motivation for introducing defence industrial policies is to ease foreign exchange
shortages (Hall *et al.* 2009). National defence authorities can use defence industrial policies
to preserve their foreign currency reserves, by paying for imported defence equipment with
nationally produced defence equipment or commodities. The national defence authorities
can achieve this, for instance, by stipulating indirect offset contracts that require the foreign
defence contractor to accept payment in nationally produced defence materiel (for instance,
35 purchasing foreign tanks and paying with nationally produced ammunition). The defence
authorities can thereby ensure that their armed forces acquire foreign and superior defence
equipment without using precious foreign exchange reserves that the government might
need to repay loans or obtain other types of foreign goods.

40 Opponents of defence industrial policy have questioned whether offset improve the
foreign currency reserves (Brauer 2004, p. 59). They argue that paying with products rather
than with foreign currency might – in isolation – preserve the reserves a country has of
foreign currency. They point out that the country could instead have sold these products
on the international market (or better still used the available resources to produce other
products that are in great demand internationally), and probably received more foreign
45 currency than they preserved through the offset deal.

As mentioned in the introduction, this article wants to explore (1) what objectives national
governments want to achieve by employing defence industrial policies and (2) whether it
make sense for national governments to employ defence industrial policies to achieve these
objectives. The theories reviewed in this section serve as a conceptual starting point for

discussing these questions, by presenting a list of objectives that governments commonly pursue through defence industrial policies and arguments for why government should refrain from using defence industrial policies to pursue these objectives. In the following sections, we will contrast these theories against a case study of Norwegian defence industrial policy and discuss the research questions in the light of the findings we obtain through this exercise.

3. Defence industrial policy: an historical overview of the Norwegian case

The Norwegian defence industrial policy goals have remained constant since the early post-Second World War years: to create a defence industry that could contribute to national security by supporting the armed forces, and to contribute to the national economy by fostering export and employment. Nevertheless, the actual Norwegian defence industrial policies have, during the same period, varied considerably. The reason for these shifts in policies have been that policy-makers have interpreted and applied these policy goals to varying economic and security conditions. In our exposition, we will divide the post-Second World War years into five periods: the early post-Second World War era, the 1950s to early 1970s, the early 1970s to late 1980s, the late 1980s to late 2000s, and the early 2010 up until today.² For each period, we will discuss how varying policy climates and economic and security conditions have influenced the use of different types of policy instruments directed at the Norwegian defence industry.

Since few historians have taken an interest in writing about the Norwegian defence industry, the amount of secondary literature that we could base this case study on is limited. We have tried to overcome these limitations by using strong and reliable secondary sources such as the studies carried out by the Norwegian historian Olav Wicken. We supplement these studies with evidence from primary sources such as government white papers.

3.1. Norwegian defence industrial policy vs. reconstruction – the early post-Second World War era

In the immediate aftermath of Second World War, the Norwegian Government did not want to build up a large national defence industry (Wicken 1987a, p. 14). Second World War had left Norway in a critical condition, and the government believed that supporting the development of a large domestic defence industry would take precious resources away from its civilian reconstruction efforts. Furthermore, in the immediate post-war years, Norway received aid packages from the United States, which covered most of its needs for military equipment. The government knew that it would face a shortage of arms and ammunitions in the event of an armed conflict, since foreign defence companies tend to prioritize their own national defence forces before catering to the needs of others. The Norwegian Government reasoned that it needed a national defence industry that could provide the country with a secure supply of ammunition and maintenance capacity, and it therefore preserved a limited level of defence industrial activity.

3.2. The defence industry as an instrument for security and growth – 1950s to early 1970s

5 In the period from the 1950s to the early 1970s, the government adopted a more favourable view of the defence industry and began building up a comprehensive policy framework to support and regulate the industry.

The Norwegian Government adopted a more favourable view of the defence industry, in large part as a response to a series of national and international events and developments. 10 A NATO production program awarded a contract to Kongsberg Weapons Factory (KV) for the production of Bofors L/70 guns in 1953 (Wicken 1987a, pp. 37, 57). This contract brought with it grants to modernize Kongsberg's production processes, to help it fulfil its contractual obligations. This modernization process also helped Kongsberg improve the production 15 processes of other products and served as an impetus for improvements in the production processes of companies in related industries. This experience put the government's long-held position that defence industry was an impediment to economic growth under pressure (Heiberg 1997) and helped convince the government that the production of sophisticated military products could actually help modernize the country's civilian industries. This view was strengthened further by the government's experience from modernizing two of its other 20 national defence companies, Raufoss Ammunition Factory and the Navy Main Yard.

Another development that fostered a more positive attitude towards the defence industry was a reduction in military aid (Wicken 1990, p. 143). In the late 1960s and early 1970s, the military aid packages that Norway had received from the United States were reduced, and new military equipment had to be financed largely through national funds. This heightened 25 the government's interest in strengthening the national defence industry, both as a supplier to the Armed Forces and as an exporter to allied countries. The role as exporter was especially important because Norway was in dire need of foreign currency, and defence exports could provide a valuable addition to the foreign revenues generated by the steel, fish and pulp and paper industries.

30 The experience that the government gained as a buyer of sophisticated defence materiel was yet another of the events and developments fostering a more positive attitude towards the defence industry (Wicken 1992, pp. 112, 113). In this period, the Norwegian Armed Forces began to demand more sophisticated military equipment. The Norwegian topographical and climatic conditions were so special that foreign suppliers were either unable or unwilling 35 to provide the required military materiel. The government therefore decided that it would be useful to foster a strong national defence industry that could develop and deliver equipment that was especially suited for Norwegian conditions. In addition, a strong national defence industry could also be beneficial when buying defence equipment from foreign suppliers. In these instances, the government could draw on the Norwegian defence contractors' unique insights to choose the type of equipment that would best serve the Armed 40 Forces.

Once the government had adopted a more favourable view of the defence industry, it began to introduce policies to support and regulate the industry. The government increased its investments in modernizing the defence industry and encouraged the Norwegian defence 45 companies to strengthen their technological capabilities by collaborating more extensively with the Norwegian Defence Research Establishment (FFI). National procurement was used to increase productivity in the domestic defence industry and to make the industry more

5 competitive on the international market. By forcing the defence companies to comply with strict contractual requirements, such as stringent delivery deadlines and detailed product specifications, the government stimulated the sector to develop and improve – an effort that, among others, helped [kV](#) and Raufoss increase their combined defence exports from about 19 million NOK in 1960 to 84 million NOK in 1970 (Wicken [1992](#), p. 48).

10 The Norwegian [G](#)overnment also began to make use of trade-related defence industrial policies such as offset. The [g](#)overnment's use of offset can be traced back to the Navy Fleet Plan of 1960, when it demanded that a German defence contractor had to purchase goods from Norway as part of a contract to supply 15 new submarines to the Norwegian Armed Forces (Innst. S. nr. 57 (1960–1961), St. prp. nr. 25 (1960–1961)). The government also met demands for offsets when its industry exported defence material to other countries. For instance, the government had to accept German representation in NATO's command at Kolsås (Norway) and make available fuel and ammunition storages to the German marine to secure Raufoss Ammunition Factory and Kongsberg Weapon Factory contracts to the German Armed Forces (Wicken [1992](#), pp. 54, 137).

20 Nevertheless, the practice of demanding offsets remained controversial. Proponents argued that offsets helped the Norwegian defence companies secure contracts and thereby helped them modernize their production and increase employment, while opponents argued that offsets led to higher costs on imports and that the Armed Forces ended up with more expensive and less efficient defence material (Wicken [1987b](#), pp. 62–64). Such discussions may explain why it took several decades before the offset policy was formalized.

25 As the government began to promote the export of defence materiel, it became increasingly important to tighten the export control, to prevent the defence companies from selling military materiel to foreign customers that could engage in unethical behaviour (e.g. ethnic cleansing) or threaten Norway and its allies. The Norwegian control on defence exports originated with a parliamentary resolution from 1935 stating that Norwegian defence companies were prohibited from exporting weapons and munitions to countries that were engaged in regular or civil war unless the League of Nations had deemed the war defensive and legal. This parliamentary resolution was further clarified and extended in 1959 with the addition of a list of countries to which Norwegian defence companies were barred from exporting (Wicken [1992](#), pp. 43, 44). From the late 1960s, the Norwegian [G](#)overnment began to tighten export regulations by prohibiting export of arms and ammunition to non-democratic NATO member countries and further limiting the list of countries to which export were allowed. These restrictions had economic and industrial consequences, in terms of limiting the Norway defence companies' opportunities to export and complicating their participation in cost-share/work-share programmes, such as the European co-production of the F-16 combat aircraft (Wicken [1992](#), pp. 45, 46).

40 Still, the export control regime was fiercely debated and subject to conflicting pressures. On the one hand, proponents for tightening the export control regime argued that defence export lead to prolonged suffering for people in war-torn countries and would damage Norway's relations to other countries by engaging in conflict as one of the parties' arms dealer. On the other hand, proponents for relaxing the export control regime argued that defence exports increased employment, technological spillovers and foreign exchange earnings, in addition to strengthening the NATO alliance by contributing to mutual dependence and common standards for military equipment (Wicken [1992](#), pp. 111, 112).

3.3. Defence industrial policy as keynesianism and libertarianism – early 1970s to late 1980s

5 During the late 1970s and 1980s, the defence industrial policy was influenced both by libertarian ideas of competition and by Keynesian ideas about counter-cyclical investments. The libertarian ideas were expressed through the government's decision to alter its public procurement practices to ensure a higher level of competition and more equal treatment of suppliers. In the late 1960s and early 1970s, the government sponsored several studies
10 that looked at ways of formalizing procedures for public procurement (e.g. Halsne *et al.* 1970). These studies resulted in a set of rules for defence procurement that was adopted in 1972. Although the rules emphasized principles of competition and equal treatment of suppliers, they also underlined that the government could bring to the fore "other beneficial aspects,"³
15 such as industrial development or national security, when evaluating tenders. The last principle – emphasizing other beneficial aspects – opened for discriminatory procurement practices vis-à-vis foreign suppliers (Wicken 1992).

The libertarian ideas also influenced the use of offsets and led to a more equal and predictable treatment of foreign suppliers. In 1981, the Parliament (Stortinget) supported a
20 proposal by the Ministry of Defence (MoD) to introduce the first official guidelines for offsets (industrial cooperation). These guidelines contained no fixed criteria for when offsets should be used, but left it open for consideration in each individual procurement agreement, based on the products to be procured, technological scope and the size of the procurement.

The Keynesian ideas were expressed through the government's ambition to use defence procurement to counter cyclical fluctuations in the economy. In the later part of the 1970s,
25 the Norwegian economy was at a boiling point, and the government attempted to curb inflation and free up resources and manpower by purchasing public goods from foreign suppliers. This also affected the defence sector, which experienced a reduction in national demand (St. meld. nr. 25 (1973–1974)). In the early 1980s, there was another shift in Norwegian industrial policy, as the economy contracted and industrial activity declined. The government
30 then grew increasingly worried about falling employment in the industrial sector, and began to expand its acquisitions from the national defence industry (St. prp. 1 (1981–1982)).

The regulations of defence exports also followed a counter-cyclical pattern. The government seem to have been influenced by falling oil prices, declining stock market, and increasing unemployment when it liberalized the export regime through much of the early 1980s.
35 This wave of liberalization only lasted until 1987, when the Norwegian Government began to tighten the export regime again, as a response to several controversial sales of defence equipment that resulted in a strained relationship to some of Norway's closest allies (such as the kV/Toshiba case, see Wicken 1992).

Although new libertarian and Keynesian ideas influenced the late 1970s and 1980s, older
40 ideas about stimulating high-tech industries that could contribute to export revenues and spillover effects continued to serve as one of the prime justifications for Norwegian defence industrial policy (Wicken 1992, p. 85).

3.4. Defence industrial policy as long-term strategy – 1990s and 2000s

In the 1990s, the Norwegian Ministry of Defence established a long-term strategy for defence
45 procurement that stated that Norwegian defence contractors should be the preferred

suppliers in the areas where the defence industry was internationally competitive (Innst. S. nr. 191 (1994–1995), St. prp. nr. 48 (1994–1995)). This procurement policy was largely justified on grounds of national security. The argument was that the Armed Forces would rely on the support of a robust national defence industry to ensure security of supply during an armed conflict, offer technical know-how during the acquisition of complex defence equipment and safeguard national secrets from falling into the hands of foreign countries (e.g. submarine capabilities). In addition, the Norwegian Ministry of Defence established a long-term strategy for offset that said that offset should be used to provide the Norwegian defence contractors' access to closed foreign markets and provide a stable source of demand in periods where the Norwegian defence authorities purchased most of their defence materiel from foreign suppliers (St. prp. nr. 59 (1997–1998)). This long-term strategy was developed over time, and an increasing emphasis was placed on the authorities' responsibility for actively shaping viable market conditions for the defence industry.

The clearest expression of this long-term commitment came in 2007, when the government published the white paper "The Armed Forces and the Industry – Strategic Partners" (St. meld. nr. 38 (2006–2007)). This white paper stated that the development of the defence industry would contribute to economic growth and competitiveness, in addition to securing essential supplies of competence, equipment and services to the Norwegian Armed Forces. The white paper also stated that the government would strengthen the strategic cooperation between the Armed Forces, the Norwegian research community, and the Norwegian defence industry.

In this period, the Norwegian defence authorities also revised the offset guidelines several times. In the 1991 version of the guidelines, the defence authorities stipulated a requirement of 100% offset on all foreign acquisitions exceeding 50 million NOK (i.e. that the foreign defence contractor had to purchase defence materiel from Norwegian defence contractors for the *same amount* that they sold products to the Armed Forces) (St. meld. nr. 38 (2006–2007)). In 2001, this threshold was raised to 75 million NOK until it was lowered again to its current level of 50 million NOK in 2007 (the changes were due to a four-year period (2001–2004) in which an offset-sceptical conservative government was in power).

At the same time, the Norwegian defence authorities made it clear that they preferred using indirect offsets and that they wanted offset contracts to contain a substantial amount of research and development activities. The defence authorities believed that indirect offset offered more interesting business opportunities for the Norwegian defence contractors than direct offset. Indirect offsets allowed Norwegian defence contractors to compete for offset contracts based on their technological competences rather than their ability to produce parts of the products that the Defence Authorities had procured (see explanation of offset in Section 2). The defence authorities also wanted to foster a more technologically sophisticated defence industry and therefore created strong incentives for a high R&D content in the offset contracts through a multiplier system. The multiplier system allowed foreign defence companies to write off more of their offset obligations when they signed contracts that involved R&D activities (e.g. an R&D contract can receive a multiplier of five and allow a foreign defence company to write off five times the R&D contract's value of their offset obligations).

3.5. EU directives and the changing policy regime – early 2010s and onwards

5 On 1 January 2014, the Norwegian Government transposed the European Union's *Defence and Security Directive* (2009/81/EC) into national law⁴ and opened up what might possibly be a new chapter in its defence industrial policy history. The Directive was introduced by the EU to increase the trade of defence and security equipment within the European Economic Area (EEA) and thereby encourage competition, limit duplication, and eventually
10 strengthen the productivity and competitiveness of the European defence sector. The Directive is expected to be a powerful political tool, since it regulates and limits the use of Article 346 of the Treaty on the Functioning of the European Union (the Lisbon Treaty), an article that has allowed member states to exempt trade in defence materiel from the internal market.

15 Since the Directive has been transposed into national law only recently, it is still an open question to what extent the Directive might prevent Norway and other EU and EFTA member states from making use of defence industrial policies. There are nevertheless some defence industrial policy instruments that most likely will be affected by the new Directive: offset agreements and discriminatory procurement (Heuinckx 2011). The Directive will most likely
20 make it difficult to request indirect offsets, but direct offsets can still, to a limited extent, be demanded to ensure for instance security of supply. Discriminatory procurement, on the other hand, can still be carried out under the new Directive, but the member states will have to substantiate that their essential security interests are at stake.

25 Nevertheless, the Directive opens up for continued use of other policy instruments. For example, two or more member states might escape from the scope of the Directive by entering into a cooperative programme (cost/work-share agreements) for the development of a new product based on a substantial amount of research and development. The Directive also opens up some new opportunities for small and medium sized enterprises, by a non-mandatory Article 21 in the Directive that states that nations *may* demand up to 30%
30 of defence contracts being outsourced to other companies (Heuinckx 2011). (see also Balis and Heidenkamp (2014) for a broader discussion on the development of a European defence industry).

The Directive will not necessarily be applied to all future purchases by the Norwegian defence authorities – procurement that has a significant impact on national security may
35 be exempted from the Directive. The Norwegian defence authorities maintain a list of technology areas that they consider especially important for national security and that form the basis for their cooperation with the national defence industry (see also discussion on vital defence industrial sectors in US, UK, and Germany in Heidenkamp *et al.* 2013, pp. 28–34). This list has changed over time, and the areas have been further developed and specified
40 in preparation for the implementation of the new regulation.⁵

4. Discussion and conclusion

The purpose of this article has been to explore (1) what objectives national governments want to achieve by employing defence industrial policies and (2) whether it make sense for national governments to employ defence industrial policies to achieve these objectives. We
45 will now try to answer these questions by comparing the arguments against defence industrial policy (which we reviewed in Section 2) with the findings from the Norwegian case

study (which we examined in the previous section). We will first discuss the five different motivations for introducing defence industrial policies and the central arguments that the literature has raised against using these policies to pursue those aims. We will then explore whether Norway has been motivated by other aims than what the literature describes, and discuss whether these aims can serve as justification for employ defence industrial policies.

The first motivation, gaining access to foreign markets, was an important objective for the Norwegian Government. The case study showed that the Norwegian Government in the 1950s began to use offset to help its defence companies secure contracts abroad. And in the 1990s, the government stated that one of the main reasons for demanding offset was to provide the defence industry access to closed foreign markets. Although the Norwegian Government did not declared explicitly that it used offsets to secure foreign reference customers, studies by Castellacci *et al.* (2014) suggest that the Norwegian defence industry considered establishment of foreign reference customers as crucial for gaining access to foreign markets. It is therefore likely that securing foreign reference customers served as an unofficial justification for the government's offset policies. In this sense, the criticism raised in the literature against using defence industrial policies to gain access to foreign markets is relevant, and the government should critically consider whether the benefits of market access outweighs the costs of demanding offset.

The second motivation, facilitating technological transfer and spillovers, was an objective that the Norwegian Government pursued to some extent. We saw in the case study that the government from the 1950s onwards began to use defence industrial policies to bolster technological innovation and facilitate spillovers to the civilian industries. The Norwegian Government used these policies to encourage domestic defence companies to carry out research and development in Norway rather than to force foreign defence contractors to transfer their knowledge to Norway. We also saw that the government in later years began to use offsets specifically to encourage Norwegian defence contractors to become more innovative, by allowing foreign defence contractors to write off a larger share of their offset obligation when they placed research and development activities in the country. In this sense, the criticism raised in literature against using defence industrial policies to facilitate technological transfer and spillovers is not entirely relevant, since the Norwegian Government has been in no danger of importing out-of-date technologies as long as it has focused on increasing the amount of research and development carried out in the country.

The third motivation, supporting infant defence industries, was never an explicit goal for the Norwegian Government. We saw in the case study that the government used defence industrial policies to increase the Norwegian defence industry's domestic and foreign markets. However, we did not find any evidence indicating that the Norwegian Government considered its defence industry to be an "infant" that required short-term support before it could "stand on its own feet." In this sense, the criticism raised in the literature against using defence industrial policies to supporting infant defence industries seems less relevant for Norway than it might be, for instance, for developing countries.

The fourth motivation, creating and protecting domestic jobs, was from time to time an objective for the Norwegian Government. We saw in the case study that the government used defence industrial policies in the early 1980s to stimulate demand for Norwegian defence equipment and thereby increase the employment in its manufacturing sector. We also saw that the government reduced its use of defence industrial policies in the late 1970s

to curb demand for Norwegian defence equipment and help cool down the economy. It seems that the Norwegian Government did not use defence industrial policies to increase employment as such, but rather used it as part of a counter-cyclical strategy of controlling aggregate demand. In this sense, the criticism raised in the literature against using defence industrial policies to create and protect domestic jobs is not completely applicable, since the Norwegian Government tried to manage aggregate demand in the manufacturing sector rather than to create jobs in the defence sector.

The fifth motivation, easing foreign exchange shortages, was an objective that the Norwegian Government only pursued in the first decades after the Second World War. We saw in the case study that the government wanted to increase export of defence equipment during the 1950s and 1960s to increase its reserves of foreign currency. The government later abandoned this strategy. In this sense, the criticism raised in the literature against using defence industrial policies to ease foreign exchange shortages is more relevant for the past than the present Norwegian policy framework.

The case study also uncovered that the Norwegian Government had other motivations for introducing defence industrial policies than the literature suggested. These motivations served as the government's principal justification for using defence industrial policies. Some of these motivations were related to security of supply and safeguarding national secrets and others were related to arming the military with suitable defence equipment. In terms of security of supply and safeguarding of national secrets, we saw in the case study that the Norwegian Government began already in the early post-Second World War era to foster a limited level of defence industrial activity to ensure a secure supply of ammunition and maintenance capacity and that ensuring security of supply remained since then one of the principal reasons why the government made use of defence industrial policies. We also saw, during the 1990s, that the government expanded its conception of security of supply to embrace include information and included safeguarding of national secrets as another important reason for supporting its domestic defence industry. In terms of arming the military with suitable defence equipment, we saw in the case study that the government from the 1950s onwards began to foster a strong national defence industry that could develop and deliver equipment that was especially suited for Norwegian conditions (e.g. the anti-submarine weapon system, Terne, and the anti-ship missile, Penguin) and provide Norwegian defence authorities with technical know-how during acquisitions of complex defence equipment.

In conclusion, we can say that the main findings in this article is that the criticism raised in the economic literature against using defence industrial policies fail to account for the often complex motivation behind the introduction of these policies. Contrary to much of what is assumed in the literature, the Norwegian Government did not introduce defence industrial policies primarily to achieve economic objectives such as increased growth, export or employment. Rather, these policies were introduced as part of a broader security strategy, which involved objectives such as ensuring security of supply, safeguarding national secrets, and arming the military with defence equipment suited for Norwegian topographical and climatic conditions. Although the economic literature presents important and valid arguments against using defence industrial policies to achieve purely economic objectives, these arguments are not convincing when the primary objective is national security – which it is for Norway and most likely, many other countries. In this sense, this article finds that the literature defines the objectives of defence industrial policy too narrowly and ends up

criticizing these policies for failing to accomplish objectives that they were not designed to achieve.

To paraphrase the title of this article, we can conclude that defence industrial policies might be an *economic fallacy* if the objectives of employing these policies are almost exclusively economic and involve goals such as increasing growth, export or employment. But if the objectives are security-related and involve goals such as ensuring security of supply, safeguarding national secrets, and arming the military with suitable defence equipment, employing defence industrial policies can be a *sound security strategy*.

Notes

1. Exactly how much more expensive a product becomes by demanding offsets is difficult to say, since studies on this issue are limited and results are likely to vary greatly between different offset schemes. To our knowledge, no estimates of the costs of demanding offsets have been made for Norway, in part because the defence authorities have prohibited defence contractors from delivering tenders that explicitly state the cost of the offset component.
2. Today, the Norwegian defence industrial base comprises about 120–140 companies, which have a combined operating revenue of 10.9 billion NOK and employ almost 5000 people in defence-related activities (data for 2014, see Pedersen 2015). [AQ4](#)
3. “Other beneficial aspects” is a vague expression that the government used intentionally to create some room for political manoeuvring.
4. Through a revision of “Forskrift om Forsvars- og sikkerhetsanskaffelser (FOSA)” and “Anskaffelsesregelverk for Forsvarssektoren (ARF)”.
5. It is still uncertain how the member states will make the case that specific technology areas are essential for national security and whether this approach will be successful. The current Norwegian technology areas are: (command, control, information, decision-making support, and combat systems; system integration; missile technology (particularly for use in demanding topographic and coastal areas) and related sensor and fire control systems; underwater sensors and autonomous underwater systems; ammunition, aiming devices, remotely controlled weapon stations, rocket and missile engine technology and military explosives; material technology (including composites) specifically developed and/or adapted for military use; and, life cycle support for military air and sea vessels.

Disclosure statement

No potential conflict of interest was reported by the authors. [AQ5](#)

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