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APPROPRIATE LEVEL OF EUROPEAN STRATEGIC AUTONOMY

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Report

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ABSTRACT

The European Commission's communication of July 24th, 2013, "Toward a more competitive and efficient defence and security sector", called for the creation of a strong and competitive armaments industry supporting the Common Security and Defence Policy (CSDP). According to this communication, the European Union "must be able to assume its responsibilities for its own security and for international peace and stability in general. This necessitates a certain degree of strategic autonomy: to be a credible and reliable partner. Europe must be able to decide and to act without depending on the capabilities of third parties. Security of supply, access to critical technologies and operational sovereignty are therefore crucial". For its part, the EU's June 2016 global strategy highlighted that having "a sustainable innovative and competitive European defence industry is essential for Europe's strategic autonomy and for a credible CSDP".
To increase the EDTIB's competitiveness, the European Union can take action on several levels. It can use its regulatory power as regards market organisation, the EDTIB's protection as a strategic activity, the development of standards and certification of equipment, as well as the security of supply.

It can also become, if not a client, at least a provider of subsidies, in order to finance defence R&T. It is the purpose of the preparatory action for CSDP related research.

The European Union's action in terms of regulation and support of the EDTIB depends on the role that States want to entrust the European Union with, in order to develop the EDTIB. Defence companies are economic players. But their sphere of activity relates to a mission: ensuring the security that is exercised by sovereign nations and by the European Union. Beyond the texts, the principle of subsidiarity and its application to the defence industry depends on the States' answer to these two questions:

What will the European Union's role be in the defence of citizens and its ambition on the international scene? What is the content of the "strategic autonomy" notion and what could the consequences of this notion be on the EDTIB?

To answer these questions, we first sought to compare how States perceive the notion of strategic autonomy. We did so through a common template with three issues:

What is the meaning of strategic autonomy in each State?

What are the consequences of that approach on the armaments acquisition policy, as well as the R&D policy?

Lastly, how does each State envision what could be an "appropriate level of strategic autonomy" at European level?

8 States or group of States were analysed: France, Germany, Italy, Poland, Spain, Sweden, the UK and Baltic States, which we have put together in a single group. This panel was meant to represent various possible points of view on the subject, knowing that the purpose of this study was not to study the 27 European Union countries. Having ruled on the composition of the panel before the Brexit, we considered that the study of the United Kingdom continued to be relevant, but the Brexit is taken into account in the analysis.

Lastly, after the study and comparison of these various "case studies", we determined what possible templates for "an appropriate level of strategic autonomy at European level" could be, and the consequences of these templates.
It appears that European strategic autonomy could'nt be defined on the basis of the EU Member States' shared interests, leading to strategic autonomy being the lowest common denominator between the States. On the contrary, this strategic autonomy must be a European goal that transcends the States' interests, allowing Member States to better ensure their safety.
This European strategic autonomy must be both capability driven and technology driven.
It is therefore necessary to have an annual coordinated review process at EU level, to discuss how Member States' military spending plans could instil greater coherence in defence planning and capability development, as recommended in the EU Global Strategy.
As a first step, European institutions and Member States would determine the capabilities that the European Union currently lacks, either because a capability gap is observed at European level, or because States do not have sufficient financial resources to develop that particular capability on their own.
As a second step, once the capabilities are identified, the technologies necessary to develop these capabilities would be determined, while taking into account a large spectrum ranging from low TRL, for capabilities that must be developed in the long term, to the highest TRL for capabilities in the short and medium term. A European research plan would be created, coordinated with national research plans to avoid duplication. This second step notably requires coordination between European institutions, EC, EDA, ESA, as well as the Member States that do have defence research plans, mainly LoI countries, but also any country which contribution would be significant.

A specific focus could be made on key components where we notice a lack of competencies at EU level, with the risk of being in a situation of denial of supply on the “low-end” of military technologies. This assessment could be made in the same way that it is currently made by EC on critical raw materials. At the end of the process, the objective could be to have a "defence industrial and technological EU Headline Goal 2030" which could be the mirror and the complement of the capabilities headline goals and of the capability development plan (CDP)

1. CASE STUDIES

1.1 The Baltic States: Estonia, Latvia, Lithuania

Political vision for the national level autonomy

The Baltic states – Estonia, Latvia and Lithuania – are rather similar in defence industry sector's development curve. None of them possessed any national defence industrial base since re-gaining their independence in the early 1990s and are currently preoccupied with establishing and putting it on a path of sustainable growth. Their security and defence industry associations consist mainly of the enterprises which have been operating in the civilian commercial sector but started developing interest in defence as a source of revenues and began adapting their products and services for military and security end-users[i].

In some cases, defence sales comprise 20-30% of their overall sales portfolios, and some companies have become part of a supply chain in large multinational defence projects (e.g. NATO's Allied Ground Surveillance[2]). The number of enterprises purposefully established to focus on the defence markets is small, although there has been an uptick in a number of start-ups which focus on developing new innovative solutions for defence and security sector from the very outset.

The only country which has a formal defence industrial policy adopted by a government is Estonia, which published it in 2013.[3] Currently, a similar draft policy document is going through the process in Latvia, while Lithuania is yet to define and formalize its defence industrial policy. Nonetheless, the fundamental premises on which political support to the development of national defence industrial base rest are similar in all three countries[4]:

- National defence industry is important in ensuring servicing of defence equipment and provision of supplies during crisis and in wartime, especially given that vulnerable geography of the Baltic states creates a risk of being cut off from the rest of NATO and the EU in such circumstances. National industries are unable to cover a full range of needs of the national armed forces, so the main challenge is identifying the areas in which security of supply and assured service provision are of critical importance. The baseline relates to clothing, food, personnel equipment (e.g. protective gear), medical supplies and similar items, with munitions being a major gap in this regard.[5]
- However, increasing technological sophistication of the armed forces of the Baltic states requires a fresh look at this aspect and forging a range of new partnerships between local enterprises and foreign suppliers of defence equipment. There is a strong political push to require such suppliers establish local bases for servicing equipment such as radars, communication equipment, infantry fighting vehicles, fire support systems, helicopters etc., in order to

reduce waiting times and costs, ensure wartime serviceability as well as build competences of the local industrial partners. They may eventually become important contributors to the future modernization and upgrade programmes and thus move up in the value chain.

- National industrial competence and capability is often seen as important in delivering customized solutions in the areas where foreign partners are not willing to share their expertise and technology due to national security considerations (e.g. cyber security, C4ISR).
- National armed forces and internal security agencies are too small to be the sole customers of national industry, which means national defence industrial base has to be export-oriented. This creates pressure to promote innovativeness of the enterprises, strengthen their marketing capabilities and, most importantly, establish and exploit niches of specialization where excellence can be achieved. Estonia, so far, has been most advanced in this regard, building upon its successes in the civilian IT sector and developing niche industrial competences and capabilities in cyber security (especially cryptography), software development and sensors. Lithuania's industrial strengths in lasers, semi-conductors and IT are also being increasingly leveraged to deliver innovative solutions to defence customers.
- Dual-use is one of the main principles driving development of defence industrial base in the Baltic states, as most of the indigenous innovations flow from the civilian universities and research centres, or from adaptation of products originally developed for civilian uses.
- Development of national defence industrial base is often perceived, at the policy level, as a means to ensure deeper European and trans-atlantic integration in the framework of the EU and NATO. By turning it into an important component of the European and American defence supply chains, it is hoped that national security of the Baltic states would be enhanced. Also, investments of defence "primers" from the EU members and the United States are seen as an additional security guarantee and even deterrent[6]. The United States are considered of particular importance in this regard.
- The need to generate revenue growth and employment opportunities, particularly in sectors which create higher added value and require highly skilled labour and technological investments, are politically important arguments in promoting defence industrial ambitions.

It is evident that "autonomy" – national or European – is not part of the defence industrial thinking at this stage of development of the Baltic states' defence industrial base, even though some political players of populist inclinations occasionally express a desire for greater national self-reliance. Indeed, there is a degree of aversion towards the terms such as "defence industrial policy" in the decision-making circles, as they are seen as implying diversion of scarce defence funds to industrial projects which contribute little to actual defence capabilities or create protectionist pressures. Ensuring

security of supply and continuity of service, pursuing deeper integration (i.e. enhanced inter-dependence) within the EU and NATO, increasing the growth of exports, moving upwards in value chain, promoting greater innovativeness and ensuring greater transparency are likely to remain main drivers of policy action.

Consequences on Defence procurement policy and defence R&T/R&D

The armed forces of Estonia, Latvia and Lithuania are focused on purchasing "off-the-shelf" materiel and equipment from major suppliers in the international markets or through government-to-government (G2G) contracts. Local industrial suppliers have traditionally been mainly providers of lower-end materiel, involved in modernising second-hand equipment as well as supplying highly customised technologically sophisticated solutions in some niche areas. In some cases, the armed forces provide testing and evaluation feedback and serve as "reference customers" for more innovative products with the export potential.

In addition to focusing on COTS/MOTS procurement of armament and equipment in the market or through G2G contracts, the defence procurement policies of all three countries stresses the need for multilateral cooperation and joint procurements. The record in this respect, however, is thin and patchy, yet some projects have been undertaken jointly between the Baltic states or in partnership with other countries (e.g. long range air surveillance radars by Latvia and Estonia, medium range radars by Estonia and Finland, anti-tank munitions by the Baltic states, Sweden and Poland). Also, in very complex projects, there is a need to compensate for the lack of technical and other expertise by employing the established mechanisms such as the European Defence Agency or OCCAR (as planned by Lithuania in procuring new infantry fighting vehicles[7]). Estonia has so far the most established and consistent defence-related R&T/R&D programme among the Baltic states which mainly aspires to connect the country with the knowledge networks of allies and partners, enable "intelligent customer" posture and provide a basis for innovative defence and security industry products and services through commercialization efforts. Niche specialization in the fields such as ICT, cyber security, robotics, sensors, materials and medical research is already quite well established in the country's R&T/R&D policy and portfolio.[8] Equally, international cooperation with the allies is an important principle, manifest in recent signing of the R&T cooperation agreement with the United States.[9] In all three countries, however, there are many stakeholders who openly question the need for and the value of R&T/R&D investments from the defence budgets, which reflects both the competition for scarce financial resources and relatively simplistic notions about the role of R&T/R&D in supporting defence procurement and defence industrial policies.[10] This skepticism, however, may act as an incentive for the industry to step up its own investments into R&T/R&D instead of almost exclusively relying on the state or/and EU funding.

Vision for appropriate level of European strategic autonomy

Without any old and entrenched traditional national defence industrial base to protect, the Baltic states are relatively free to formulate their vision for European strategic autonomy in ways that best align with their defence policy interests. As keen "integrators", they would be interested in seeing greater cross-border defence industrial cooperation, integration, consolidation and investments which would make them an integral part of the European defence industrial base. In this regard, the European mechanisms which promote involvement of as many Member States and ensure equal playing ground, especially for the SMEs which dominate the industrial supply base of the Baltic states, are of particular importance. (On the other hand, their strong trans-atlanticist strategic orientation makes them cautious with regard to initiatives which may erode the trans-atlantic link and relations with the US defence industry). Their focus on increasing export potential and competitiveness as well as their concerns about the security of supply and access to cutting-edge sensitive technologies in such domains as cyber security seem to make the Baltic states rather natural champions of the middle level European strategic autonomy, where such considerations are held in mutual balance. It remains to be seen, however, if their efforts to formulate and advance national defence industrial policies -- once they become mature enough to explicitly address the issues of European strategic autonomy and the place or interests of the Baltic states in this field -- eventually lead to this particular conclusion and vision.

1.2 France

Political vision for the national level autonomy

The concept of strategic autonomy is at the core of the 2013 French White Paper on Defence and National Security, as well as the previous one, issued in 2008. France has defined its level of strategic autonomy on three levels: political, operational, and industrial and technological.

On the political level, strategic autonomy is based on the concept of sovereignty that must allow "State's autonomy to make decisions and take action", which requires France to have the "ability to influence an external environment from which it cannot insulate itself".[11]

The very term of strategic autonomy is used in the 2013 White Paper. Such strategic autonomy is "underpinned by national ownership of its essential defence and security capabilities"[12]. It is the second level of strategic autonomy, the operational level, which includes "an autonomous ability to assess situations, total independence in decision-making and freedom of action"[13]. On the operational level, the notion therefore includes technical intelligence capabilities, operations command and management capabilities,

capabilities that allow the country to enter a conflict first (independence of action) and of course nuclear deterrence, which "is the ultimate guarantee" of France's national sovereignty[14].

Lastly, the principle of strategic autonomy has a third level, the industrial and technological level. France must develop "the scientific skills, appropriate technologies and complex weapons systems that will enable France to deal with potential adversaries", which requires constant investments in the industrial and technological defence base[15].

France does not envision this notion of strategic autonomy only within a national framework. France pursues a policy of mutual dependence with its partners in the European Union. "These freely agreed interdependencies will strengthen the sovereignty of each Member State by increasing the resources available at European level"[16]. The European Union therefore plays the role of a power multiplier, with the addition of industrial and technological operational capacities intended to allow every State to have a higher degree of strategic autonomy than it would have if it acted alone.

Consequences on defence procurement policy and defence R&T / R&D policy

A specific chapter of the French White Paper on defence and national security is dedicated to the defence industry and to the technological and industrial part of strategic autonomy. It is thus stated beforehand that the defence industry is "a key component of France's strategic autonomy"[17]. To the notion of strategic autonomy is added the notion of "technological autonomy"[18].

This policy of strategic / technological autonomy works on three levels:

- The acquisition policy level;
- The R&T policy level;
- The defence industry's control level

The acquisition policy in terms of defence equipment is defined in two documents, the 2008 White Paper on defence and national security, and a paper titled « For competitive autonomy in Europe, the Ministry's acquisition policy », a document released in 2004, with a second edition published in 2010.

Even though these documents are not available anymore today, and while the 2013 White Paper on defence and national security replaced the 2008 White Paper, the acquisition principles established by the 2008 White Paper remain valid today.

The acquisition policy is divided into three "circles":

The first "circle" contains "the military equipment essential to areas of sovereignty prerogative", for which "in view of our political choices, sharing or pooling resources choice is not an option" [19]. It is the case for nuclear deterrence, of course, but the domain is probably broader, even though France does not wish to give it an exact definition, in order to be able to adapt to the evolution of technologies. This type of acquisitions is covered by article 346 of the Treaty on the Functioning of the European Union.

The second "circle", which covers "the majority of defence and security procurement", works to promote a European interdependence "conceived in terms of reciprocity, security of supply and overall balance"[20].

Lastly, in a third "circle", "when security of supply is not a direct issue, either because it is guaranteed by a number of different suppliers or because it is possible to build up strategic stocks, France will turn to the world market"[21].

The sectors covered by these three circles are therefore not clearly defined, notably by any legislation. But France accordingly places its strategic autonomy policy within a French and European framework, while the recourse to world markets for acquisitions covers non-strategic sectors.

This theory of the three circles also applies to French R&T policies. In the 2013 White Paper on defence and national security, there is a reference to "key technological capacities"[22] without it being specified if these belong to the first circle – that of national autonomy, or to the second circle – that of European interdependence. French authorities do not officially provide this classification for two reasons:

- On one hand, and as it has already been pointed out, the notion of key or strategic technology fluctuates over time. As a result, France refuses to release a list of key technologies, even though the Directorate General of Armaments (DGA) follows closely the evolutions in this domain;

- Weapons systems are increasingly complex. As a result, they can include technologies that come under European interdependence, that is to say the second acquisition circle, while others come under strategic autonomy in a national framework, that is to say the first acquisition policy circle. This situation is reflected in the agreement signed in 2015 between France and Great Britain on centres of excellence in the field of complex weapons. In this agreement, two types of centres of excellence are considered, the "Federated Centres of Excellence" and the "Predominant Specialisation Centres of Excellence"[23]. The first category contains sectors in which both States want to keep some competences of their own. In the second category, the Predominant Specialisation Centres of Excellence, one of the States agrees to give up its primary competence in a

sector, and to only maintain a "residual competence", therefore fully applying the principles of mutual interdependence and security of supply.

Furthermore, one may consider that France's level of strategic autonomy in technology is simply limited by its financial capacity to fund defence R&T, a capacity that is currently around 750 million euros per year. There is a stated resolve to increase this amount, which has been stable for several years, over the coming years.

Lastly, the notion of strategic autonomy is also developed in France through legislation regarding the control of foreign investments in strategic assets, which forces foreign investors to request permission from the French government to be able to invest in a defence company, if the level of investment might lead to a company takeover. In practice, the French government almost always allows these foreign investments, but it does make sure that foreign shareholders ensure security of supply in defence products for French armed forces[24].

Vision for the appropriate level of European strategic autonomy

The French vision regarding the level of strategic autonomy at European level arose from an idea developed in the White Paper, the idea that mutual interdependence is meant to reinforce the sovereignty of every Member State by increasing available resources at European level. Strategic autonomy at European level should therefore not be the lowest common denominator of national strategic autonomies, but on the opposite, it should add value to these. The notion of common interdependence also entails both a reinforcement of the European Defence Technological and Industrial Base (DTIB) and task sharing in order to avoid pointless overlapping. It also implies that the European level could take over things that States cannot undertake alone, in order to develop technological and industrial competences – or even capacities – that States alone could not afford. Strategic autonomy at European level must therefore allow the European Union to reach a level of sovereignty that States alone could not reach, which requires willingness to see Europe play an important role on the international stage, including in its military action. It also requires willingness to reinforce the competitiveness of the European DTIB, which means that a definition of it must be provided beforehand. This aspiration had been reflected in the proposal for a definition of the economic defence operator, a definition that was rejected before the European Council of December 2013 dedicated to defence. France supports European initiatives that could give substance to this notion of strategic autonomy. The country also supports the prospect of preparatory action in terms of defence research, which should be followed by the European Defence Research Programme (EDRP) in the 2021-2027 European Union budget.

1. 3. Germany

Political vision for the national level autonomy

The exact term "strategic autonomy" is not used by German official documents, nor diffused in the security policy community, although the enhancement of defence industry in Germany is discussed with reference to national, European and global market level. Indeed, the protection of national defence industry has been traditionally considered a matter of strategic importance by policy-makers in the MoD, the Chancellery and the Ministry for Economics[25]. Since the German Constitution forbids any state intervention in the private sector, a pragmatic approach has been *de facto* developed over time aiming to guarantee the national industrial capacity to produce the equipment needed by the Bundeswehr. In the last couple of years, Berlin has adopted two official documents relevant, among other things, for defence industrial policy and what can be understood as "strategic autonomy" from Berlin's perspective: the 2016 White Paper on German security policy and the future of the Bundeswehr and the 2015 Strategy Paper to strengthen the defence industry in Germany. To these two documents we can add the 2016 Air Power Development Strategy on specific capabilities at it comes from the German air force.

Generally speaking, the White Paper has been considered by several analysts a significant document insofar it not only codifies established elements of Berlin's security policy, but it also takes strong, explicit and relatively new commitments on a number of aspects[26]. When it comes to defence industrial policy, it is quite cautious as it reflects the sensitiveness of this issue within the government and with respect to the public opinion. The White Paper envisages a "reorientation of armaments procurement"[27] based on a number of premises. First, it stresses the primacy of Bundeswehr's requirements, which need to be met in different ways: i.e. by differentiating between off-the-shelf purchases such as for information technology and in-house developments of complex weapon systems.

The second premise of German MoD approach to procurement is that "an independent, strong and competitive defence industry in Europe, including the national availability of key technologies, is essential"[28]. Here the motto is "Europeanization of Defence and Retention of Key National Technologies"[29].On the one hand, the document explicitly states the goal to plan, develop and procure military capabilities together with European allies so to enhance Europe's capacity to take action. On the other hand, it clearly sets the objective to "protect our [German] own technological sovereignty by maintaining key national technologies in order to ensure military capabilities and the security of supply chains"[30]. The term strategic autonomy is absent, but its spirit is well present in that paragraph. In other words, it seems to be a consolidated attitude to call for European cooperation but at the same time to strive to maintain national industry and technological sovereignty.

The third premise of MoD approach is about multinational cooperation in armaments procurement. It is deemed increasingly important, because in many cases only joint procurement can meet national capability requirement at the desired technological level, and since it enhances relations with Berlin's partners and improves interoperability with Allies. However, the White Paper recognizes that past multinational cooperation projects have been plagued by many problems, and accordingly proposes the "lead nation" solution: one country should assume the responsibility for the development and realization of a certain project, possibly on the sides of both contracting authority and contractor, in order to keep the process under control and avoid delays and inefficiencies[31]. The EUROMALE project, where Berlin acts as lead nation, is reported by the White Paper as positive example of this new approach – an approach which should also include uniform capability requirement and standardized design, and should regard not only procurement but also maintenance, repair and operational support. Considering the necessity and benefits of multinational cooperation, according to the document this implies "relinquish individual sovereignty for the greater sovereignty of all", but without hampering the previous premise on retaining key national technologies and thus technological sovereignty[32]. A difficult balance to maintain between the national and European levels of autonomy.

Consequences on defence procurement, R&T and R&D policy

Such an approach is to some extent aticipated and further detailed by the Air Power Development Strategy, released by the MoD a couple of months before the White Paper, which could be taken as relevant example in a crucial sector for procurement, R&D and R&T such as aerospace. The document builds upon decades of multinational armament projects in the aerospace sector participated by Berlin, in order to stress the connection between the Bundeswehr orientation for Future Combat Aircraft Systems (FCAS) and long-term partnerships with other nations: "Next Generation Weapon Systems in the FCAS network can only be created in a multinational European context"[33]. The work in cooperative procurement programmes should be divided according to the strengths of the various countries, and nations should relinquish a leading role in certain fields of technologies to reach compromise in other projects[34]. What seems to emerge here is the goal of a sort of "specialization by design" which links together the procurement, R&D and R&T activities across a broad portfolio of cooperative projects involving Germany and other European countries. Within this design, according to the document it is "desirable that companies in Germany assume the role of prime contractors in promising armament projects. Relinquishing such a role in return of for appropriate and guaranteed compensation and justifiable and sensible"[35].

Vision for the appropriate level of European strategic autonomy

Both 2016 documents are substantially in line with the 2015 Strategy Paper. The latter lists ten points which should help to strengthen the defence industry, not only in Germany but in the whole of Europe thus linking the national and European level. These points include the goals to enhance the European frame of defence industry, to deepen international cooperation and integration of military capabilities, to consolidate German and European defence industry, to promote research, development, innovation, common standard and export regulation also at EU level[36].
As a whole, beyond the traditional pragmatism, the German vision for the European level seems to be a bit more explicit and ambitious, in line with the increased political leadership of Berlin in Europe on a number of issues. Those issues include also security ones as epitomized – *inter alia* – by Germany's responsibility on the negotiations to address the crisis in Ukraine, its role within NATO reassurance and adaptation measures, and the number of its bilateral, regional and mini-lateral cooperation with European partners[37]. Regarding defence industrial policy Berlin seems to move towards a clearer articulation of a European level of strategic autonomy synergic with the national one, in particularly with regards to key national technologies necessary to maintain the technological sovereignty. Such articulation will rely on the on the size of its increasing MoD budget as well as on the strength of German industrial capacities in Europe – in both absolute and percentage terms. In this context, the UK referendum and the non-participation of Germany in important transatlantic procurement programmes such as F-35 are likely to focus Berlin outlook more towards the EU and its Member States.

1.4 Italy

Political vision for the national level autonomy

The term "strategic autonomy" is not widely used in the Italian defence policy community, neither by practitioners nor by experts. This does not mean the absence of a vision about the necessity to maintain at national and/or European level adequate technological and industrial capacities to ensure the autonomous fulfilment of today and tomorrow operational needs of Italy's Armed Forces. On the contrary, the development of such a vision has made a number of step forwards in recent years, mainly through the state law n. 56 of 2012 on the control of investments in the security and defence sector and the 2015 White Paper for international security and defence.

The political reflection on Italian defence industrial policy evolved since the 2000s in light of government participation to a number of European and transatlantic procurement programmes, developments at EU level (i.e. 2009 directives) and, above all,

market trends in terms of concentration and internationalization of the national Defence Technological and Industrial Base (DTIB), coupled with increasing reliance on exports. It goes without saying that the international security environment, the European integration process and the transatlantic relation played a significant role in this regard.
The 2015 White Paper outlines current Italian political vision on international security and defence, including on the industrial and technological autonomy to be maintained at national and European level. The document clearly states that European "integration" of national defences, including armed forces and DTIB, is a priority for Italy – together with transatlantic "cohesion", a less demanding goal. In particular, White Paper's chapter "Industrial, innovation and scientific policies" lay down important guidelines in this regards. First, maintaining a solid DTIB and a certain level of industrial and technological autonomy in Italy is considered necessary to protect national interests, by satisfying autonomously the needs of armed forces, but also by contributing to country's level of ambitions, technological innovation, exports, GDP growth and increase of high-skills jobs[38]. Second, the White Paper envisages two different groups of technological capabilities: "sovereign" and "collaborative". The "sovereign" ones are considered essential, "key and enabling," to satisfy the undeniable armed forces' needs, as well as national interests, in an autonomous and sustainable way. The strategic character of these technologies demands that a certain level of sovereignty should be maintained upon them, by ensuring that the development and the production phases will be kept within Italy, regardless of the international cooperation and the shareholding of the companies owning such technologies[39]. On the other hands, "collaborative" technological capabilities are those being developed via cooperative international endeavours, primarily European ones: they allow Italy to play a relevant role within multinational procurement programmes, and they are part of a logic of interdependence, specialisation and division of labour with partner countries – particularly in Europe.

As a whole, from the White Paper it emerges a political vision of complementarity between the national and European levels in terms of what can be labelled "strategic autonomy". In fact, Italy is well aware that not all the technological capabilities necessary to satisfy its Armed Forces' needs can be maintained and developed at national level. Accordingly, Rome firmly believes that European integration is necessary to reach the synergies and economies of scale crucial in this regards. The differentiation between "sovereign" and "collaborative" technological capabilities made by the White Paper is meant to lay the ground for the choices to be made by Italy regarding what to achieve at national level and what at European one, and the related investments. However, a clear definition of this differentiation is still work in progress within the Italian MoD, also in relation with the elaboration of its Industrial Technological Strategy (ITS).

Consequences on defence procurement, R&T and R&D policy

Coming to defence procurement, R&T and R&D policy, it has to be kept in mind that in Italy the government is the major shareholder of the main Italian aerospace security and defence companies, such as Finmeccanica and Fincantieri. In this light, it should be reminded the law n. 56/2012 which has set the current approach to an important element of "strategic autonomy" such as foreign investments in strategic activities including "key strategic activities" (KSA). In the Italian view, KSA are those needed to maintain or achieve specific national technologies considered essential for national security and therefore necessary to satisfy armed forces' operational needs[40]. Indeed, the law is meant to allow – and indeed to encourage - EU and not-EU investors to participate in Italian companies[41] by establishing a range of measures the government can take ("special powers") in order to protect activities "strategic" for Italy's defence and national security. Such a range includes: the establishment of specific conditions to the purchase of company's shares in order to protect the security of supply, the security of information, the technological transfer and the export control; the veto power on companies decision of particular relevance (mergers, transfer of the society abroad, etc); the veto to the purchase of company's shares by subjects other than those controlled/owned by the Italian state, in case this would imply a shareholding able to jeopardize national security interests. The regulation proposed by the MoD on August 2012 to implement the law n. 56/2012 outlines 18 categories of strategic activities.

Having said that, the White Paper establishes a number of guidelines for procurement, R&D and R&T, partly derived by the aforementioned approach to Italian and European levels of autonomy. First, the overarching goal is to move from a customer-supplier relation towards a true partnership between the MoD and the private sector. Second, the evaluation of the "strategic" character of industrial and technological activities should take place by considering Armed Forces' needs, but also exports possibility, participation into multinational procurement programmes, dual-use character of these activities, their impact in terms of technological innovation. When it comes to the European level, beside the obvious need of an adequate level of security of supply, the goal is to have more multinational procurement and less national one, also by the enhancement of EDA and OCCAR. Harmonisation of requirements at national, EU and NATO level is also sought, as well as "hybrid standards" to exploit the opportunities of dual use technologies.

Vision for the appropriate level of European strategic autonomy

The Italian vision on defence industrial policy, national and European autonomy is likely to be further developed in the next months with the publication of the documents aimed to implement the White Paper, such as the aforementioned ITS. Among other goals, the

ITS is likely to pursue a renewed impetus of European cooperation and integration in this domain, particularly in terms of R&D, procurement and life-cycle services, as well as to support the European actors and formats which can support this impetus, such as EDA, FA/LOI, OCCAR, but also the EC – with a view to the upcoming European Defence Action Plan.

It goes without saying that the UK exit from the EU is a game changer for the European landscape, which will affect the Union as a whole as well as the defence sector in particular. In this regards, Italy will probably support undertaking of joint initiatives among like-minded European members to re-launch the integration process in the defence sector, including defence industrial policy ones. This would also be part of the traditional Italian goal to have more cooperation and integration with regards to the broader European security and foreign policy, recently epitomized also by the Rome's support to the EU Global Strategy document elaborated by the HR/VP Federica Mogherini. In this context, it is likely that Italy would welcome and contribute to a process to elaborate a European Defence White Book dealing also with strategic autonomy.

1.5 Poland

Political vision for the national level autonomy

Despite having the biggest military and the most comprehensive DTIB in the Central-Eastern Europe, for many years Poland has been unable to frame a coherent defence industrial policy, let alone a national vision of strategic autonomy. It was one of the key drivers – next to lack of money for new armament programs – of the rapid loss of technological competences and export markets throughout the 1990s. The fast deterioration of Polish DTIB was stopped only thanks to anchoring defence spending at 1,95% of GDP and investments at 20% of defence budget in a 2001 bill. Yet, Polish defence industrial policy remained focused on the consolidation of state-controlled companies and thinking about strategic autonomy was frozen, due to the assumption, that any serious scenario requiring use of Polish armed forces for territorial defence in unlikely and even if it happens, it will be a coalition one[42].

The gradual change came with the roll-out of the Technical Modernization Programme 2013-2022 (TMP), the largest ever (EUR 30 bln) effort to rearm Polish military, which for the first time prioritized territorial defence capabilities, like the Air and Missile Defence system or submarines, over expeditionary ones, like multi-role helicopters or transport aircraft. Further, in conjunction to the TMP, considered also as a financial impulse for the DTIB, consolidation of Polish defence industry was finally implemented with the decision on the establishment of the Polish Armament Group (PGZ) in 2014[43].

It was however, the annexation of Crimea by Russia and the break-out of the conflict in Eastern Ukraine, what had the biggest effect on Polish thinking about strategic autonomy and its defence industrial dimension. Within the dominant threat perception in Poland, it is now widely accepted, that Russian geopolitical goal is to rewrite legal and political post-cold war order, marked with the enlargements of NATO and EU to the Central-Eastern European nations. Consequently, there is a broad understanding that at some point in the future Russia will attempt to coerce Poland (also, but not only, with the use of military tools) to change its policy(ies) to the benefit of Moscow. Yet, a scenario of a full-scale, open war with Russia is still seen in Poland a very remote possibility. But a hybrid conflict, in which the defence burden would be mostly placed on Polish national capabilities, at least until Allies engage, is playing now an organizing role in Polish thinking about national defences against Russia.

With this, the debate on strategic autonomy is only starting in Poland. The term itself is rarely used, and instead its elements are discussed in the context of procurement policy or defence industrial strategy. Nevertheless, the analysis of the debate on how to manage TMP allows to map Polish thinking about constitutive elements of strategic autonomy at the national level.

Consequences on defence procurement policy and defence R&T/R&D policy

The overarching principle of Polish upcoming investments in defence capabilities is expected to be the equality of military-operational aspects and economic policy goals. The latter should be seen within the framework of a larger Polish attempt to stimulate industries across the entire spectrum of economy to break the middle-income trap and close the gap between Polish and Western European economy, particularly as regards GDP *per capita* and average salary level[44]. But what illustrates Polish approach to strategic autonomy is the former assumption: the focus on military-operational aspects in each of TMP programs. This is translated to the ability of armed forces to control armament entire life-cycle, with as little dependence of foreign entities as possible. Consequently, Polish defence companies are expected to have maximum capacity to service, as well as modernize and upgrade weapon systems used by Polish military. This includes also access to, and freedom to modify source codes, so that changes in the functioning of individual systems can be made accordingly to the evolution of threats and corresponding doctrines.

A number of steps has been already taken by Poland to implement these assumptions in the TMP programs. The PGZ effectively consolidated all state-controlled DTIB, and is now directly controlled by the MOD. The responsibility for negotiating offset arrangements has also been moved from the ministry of economy to the MOD. The transposition of directive 2009/81/EC was followed by establishing a legal procedure for assessing if a program involves "essential interest of security", as it is stipulated by art 346 TFEU, which allows application of national procurement regulations. Finally,

some of the key programs, like the AMD, will be negotiated as government-to-government agreements, using, in turn, derogatory clause proposed by the directive 2009/81/EC itself. All these instruments are expected to be supplemented with financial incentives, which would help develop DTIB and also spill-over to civilian domains. A reinforced R&T/R&D policy is also expected to be framed soon as a part of the upcoming "National Armaments Policy", aimed to provide a comprehensive framework for developing Polish DTIB further.

All these developments indicate a high level of ambition as regards Polish approach to strategic autonomy. It is clear, that Poland is keen to assure full autonomy as regards all armaments, in which its DTIB has technological competence (land systems, munitions, sensors, maritime capabilities), and a maximal possible level of autonomy as regards all other programs, in which Polish companies have to rely on partnerships with global primes for the lack of technological expertise (like aeronautics). What follows is autonomy to shape its defence policy, which is expected to provide a national defence and deterrence potential as a first pillar of national security, coming before, but fully in line with NATO defence and deterrence posture and gradual response planning.

The issue of national deterrence potential has been debated intensively. It's been suggested, that Poland has to develop a capability to deny Russia a possibility of a quick win in a limited hybrid conflict below the threshold of war, too vague to allow a prompt and robust reaction of NATO Allies. This implies development of a national deterrence-by-denial capacity, understood as Art 5 scenario-focused armed force, equipped not only with adequate capabilities, like armoured brigades or AMD systems, but also supported by a dedicated territorial defence force[45].

Vision for the appropriate level of European strategic autonomy

This approach, however, does not translate into thinking about strategic autonomy at the European level, or within the EU specifically. The lack of enablers and high-end capabilities in Europe is seen by Poland as a challenge for the future adaptation of NATO to the growing Russian threat, rather than the fate of the EU as a strategic actor. Therefore, Poland has supported and is likely to support most of European initiatives, aimed at broadening the pool of capabilities, available for the common defence under NATO commitments. Consequently, European strategic autonomy is seen in Poland as falling within the context of the transatlantic link. To assure a continued and effective U.S. engagement in European security, NATO Allies from Europe need to deliver more in terms of defence spending and acquired capabilities. Ability of Europe to take a bigger share of the burden to defend itself, and also stabilize its neighbourhood, is considered one of the key factors, which will decide upon the future of the transatlantic link and security of Europe as a whole.

Polish approach to strategic autonomy is by no means fully developed. But factors, which will shape its maturing process, are known. The perception of the continued threat from Russia, and the requirement of having a maximal level of control over armament life cycle derived from it, as well as the desire to use armament programs as a financial incentive for the DTIB development will all decide about Polish procurement and defence industrial policies. European dimension of the strategic autonomy can gradually gain in significance, but will also remain seen largely in the context of the transatlantic links. With regards to this, a game changer, now not on the horizon, though, could be Polish participation in an European programme, aimed at getting a high-end capability in a cooperative manner.

1.6 Spain

Political vision for the national level autonomy

The concept of strategic autonomy in Spain was defined by the Agreement of the Council of Ministers of 29 May 2015[46]. It is about gathering the military capabilities that guarantee the essential security interests of Spain as stated in the National Security Strategy of 2013. The former include those capabilities required to cope with non-shared threats as well as the activities of integration, maintenance, supply and engineering necessary to sustain the readiness of the weapons systems throughout their life cycle. in order to accomplish its security commitments. Broadly defined, strategic capabilities provide operational advantage and freedom of action to the Armed Forces. In industrial and technological terms, it is precisely defined in the Defence Industrial Strategy document published in 2015[47].

Consequences on defence procurement policy and defence R&T/R&D policy

The Chief of Defence is responsible for identifying such strategic military capabilities, being in the current planning cycle the following ones: targeting; air defence including missile defence; intelligence, surveillance and reconnaissance (ISR); cyberdefence, strategic projection and joint logistical coordination; interoperability and energy consumption in operations. These critical capabilities, together with the rest of non-critical ones are the result of a process of military planning that starts with the National Defence Directive, a political document that sets the guidelines for the employment of the Armed Forces.

In this way, the Chief of Defence links the strategic vision of the Government with the operational vision of the Armed Forces. The level of ambition is a result of that linkage and the degree of autonomy is associated with the critical tasks that the Spanish Armed Forces must be ready to fulfil by themselves. Accordingly, the main priority of the Defence Industrial Strategy of 2015 is to shape the national technological and industrial base so that it could provide the equipment, services and systems related to the

essential security interests (principle of sovereignty in the acquisition). Nevertheless, the strategic autonomy is open to joint ventures among national and foreign industries in order to reinforce the national defence base.

Vision on the appropriate level of european strategic autonomy

According to the Spanish concept, the EU strategic autonomy should be complementary to that of the Spanish one (such as the European network of navigation satellites Galileo is compatible and complementary to the Spanish defense satellites Hisdesat). Given the fact that the national industrial base cannot supply all the military capabilities required to achieve the proper strategic autonomy, the European Defence Technological and Industrial Base (EDTIB) is a natural complement to the Spanish one. Spanish governments have always supported the development of the EDTIB as well as the initiatives of the European Defence Agency (EDA), the Commission and so many other European institutions devoted to promote the industrial cooperation in Europe. Nevertheless, Spanish end-users do not expect the EU to improve their strategic autonomy but in the long run given the modest record of the different Capabilities Development Plans to match the military requirements. Therefore it cannot be expected any subordination of the national strategic autonomy to the European one in the short-medium term.

The European concept of strategic autonomy stems from 1999 when the European Council of Cologne asked for autonomous action backed up by credible military capabilities and appropriate decision making bodies. Nevertheless, the level of ambition and the capabilities approved in the following Headline Goals of 2003 and 2010 were designed for a model of power projection that is no longer valid for modern crisis management. Individual nations update from time to time their capabilities and strategies according to the technological and strategic changes but in the EU such adjustment is complicated given the divergences of national security interests and strategic cultures among EU member states. The EU strategic autonomy needs to be framed under the political guidelines of the EU Global Strategy and, in particular, under the framework of the defence sectoral strategy that it requests the Council to elaborate, in order to specify the civil-military level of ambition, task, requirements and capability priorities of the Strategy. .

On the contrary, individual countries are faster in adjusting their levels of ambition, force structures and military capabilities. In this way, the strategic autonomy of Spain is reviewed every four years by the National Defence Directive. As a result, the list of military priorities established in the EU Headline Goals and the capability development plans of the EDA only partially coincide with the list of critical capabilities of Spain (ISR, Cyber, and Logistics). Should the European list be the outcome of a European collective planning, it would be probably be more compatible and complementary with the

Spanish list. However, military planning is still conducted on national bases and the planning of critical capabilities will continue to be at the core of national security.

Another question to be addressed with regard to the level of EU strategic autonomy is about the reach of its industrial component. Spain restricts the overprotection that European directives permit for national security reasons (art. 346) just to the strategic industrial capabilities required to ensure the essential security interests. The defence industrial policy of Spain does not offer the same level of protection to the rest of the national technological and industrial base. Consequently Spain will have difficulties to support a concept of European strategic autonomy seeking to overprotect all the European EDTIB against the competition from third countries such as the US, China or Russia. Most of the arguments promoting the EDTIB try to compare global figures of capacities, budgets and investments without disaggregating the data devoted to achieve strategic autonomy. Whatever may be the level of European strategic autonomy to be adopted, it should focus more on providing the European Armed Forces with the critical capabilities they need than in strengthening the full EDTIB. Strategic autonomy is at the core of defence and industrial policies but it is just a part of both.

Finally, the levels of national and European strategic autonomies are contingent upon the evolving industrial and technology ecosystem. Governments, armed forces and the defence industrial sector must keep pace with technological and business changes. They will also struggle to preserve its strategic autonomy as well as the control and funding of their technological and industrial bases because the number of companies specialized in defense is decreasing and the use of commercial technology is increasing for security and defence products.

In conclusion, for Spain

- The EU Global Security Strategy and subsequent sectoral defence strategy should provide the strategic framework required to design the concept of European strategic autonomy. The design should be oriented towards the future rather than to the past or present strategic scenarios, in a sort of European "third offset" strategy to anticipate future ways of warfare
- While basic R&D programs are necessary to boost European competitiveness, strategic autonomy requires applied R&D. Such research and development programs should aim to create operational demonstrators to test critical capabilities
- These programs should be co-financed with common EU funds, national budgets and private investments in order to share technological risks
- The European strategic autonomy requires a centralized governance model to align strategic goals, resources and management. The challenge is to apply the comprehensive approach among so many institutions to manage the strategic

autonomy throughout the life cycle of critical capabilities, including its ownership and management.

1.7 SWEDEN

Political vision for the national level autonomy

For a medium size country, Sweden has a considerable defence industrial base, which is a legacy of the Cold War emphasis on national strategic autonomy and self-sufficiency.[48] Since the end of the Cold War, Sweden's defence industry has undergone several processes: 1) consolidation, leaving five major contractors in the field; 2) privatization and opening to foreign ownership, with four out of five of those contractors now owned by foreign shareholders; 3) ever growing openness to international partnerships and involvement in international armament projects to share costs, spread the risks and maintain technological competence, and 4) a shift from a focus on the domestic customer – Swedish Armed Forces – to export customers due to defence reductions in Sweden.[49]

Even during the Cold War, there was an acknowledgment that Sweden could not achieve full technological autonomy to support its armed neutrality policy. Many key enabling technologies for the weapons produced in Sweden were sourced from outside, particularly the United States. In the current environment – characterised by limited funds for domestic defence R&D; decline in the centrality of the domestic customer (Swedish Armed Forces); integration into regional, European and global collaboration networks; and imperatives to maintain export competitiveness – even sustaining the defined niches of excellence depend on international partnerships. In this regard, continued close partnership with the United States remains of high priority to the Swedish defence industry and government.[50]

Sweden's defence policy after Cold War initially shifted from territorial defence to expeditionary crisis response operations and from strict neutrality to non-alignment. Its defence budget has declined considerably since to just 1.1% of GDP in 2014 (or 4.711 bn euros), with concomitant implications to defence investments, defence R&D and defence industry. However, Russia's aggression against Ukraine since 2014 and its increasingly assertive military behaviour in the Baltic Sea region have prompted Sweden to review its defence policy, with a return to homeland defence and regenerating requisite military capabilities as key priorities. Defence expenditures are set to rise again to support this change, with a pledge to spend more than 1bn euros extra on defence by 2020, with significant investments into such areas as C3I, radars, anti-submarine warfare, fire support, anti-tank and air defence capabilities as well as modernisation of main battle tanks, infantry fighting vehicles and frigates.[51] Some of these priorities entail acquisition of high-end technologically complex weapon systems and platforms, where national and

European strategic autonomy considerations might play a role in procurement decision-making.

Overall, new threat environment and the attendant changes in the Swedish defence policy are likely to prompt some review of how the domestic defence technological and industrial base and its involvement in European collaborative networks can be leveraged to support Sweden's defence interests. Such considerations as security of supply, protection of sensitive technologies, interoperability with the military forces of partners and use of domestic and partner competencies to regenerate various capabilities for homeland defence will be of paramount importance.

Consequences for defence procurement policy and defence R&T / R&D policy

Swedish government's investments into domestic defence technology development have been gradually declining, while its Armed Forces adopted defence acquisition policy which focuses on: purchasing off-the-shelf solutions which are "good enough" and are already used by partner nations; modernization of the existing materiel; minimizing delivery costs and time; and, if necessary to invest in development projects, conducting them together with foreign partners.[52] A major implication of this was a shift away from a "Sweden first" principle, whereby Swedish domestic defence industry suppliers were always given a priority over foreign suppliers, to procurement from the international defence market. However, exceptions are still sometimes made with regard to the procurement of weapons and systems domestic production of which is regarded as being of critical importance to maintaining domestic industrial base and technological competences (e.g. acquisition of a new generation of fighter aircraft).[53]

Sweden does not have an official defence industrial policy in a form of a formal governmental document, however there is a number of implicit principles and approaches underpinning the development of its domestic defence technology and industry:

- First, it is increasing export competitiveness and expanding the international export markets for Swedish defence industry products and services. In this regard, Swedish defence industry is particularly focused on maintaining R&T / R&D investments as a basis of international competitiveness, with close to 18% of its revenues channelled to this purpose.[54] This also entails significant attention to maintaining a rigorous export licensing regime in order to avoid transfer of sensitive technologies – Swedish or those of partner nations – to potential geopolitical or/and commercial competitors. Yet, the decline in the R&T/R&D investments by the Swedish government (which cannot be compensated by the European defence research funding) and a lack of European level harmonisation in national export licensing regimes are regarded as important risk factors.[55]

- Second, it is focusing on maintaining excellence in rather limited number of technological and product niches instead of maintaining a full range of technological competencies and capabilities. As Björn Hagelin puts it, "industrial aspirations changed from 'strategic' to niche-focused, reflecting Sweden's increased willingness to participate in multinational collaborative projects".[56] For instance, in the Swedish defence bill of 2004, production of submarines and aircraft are considered most important areas[57], followed by armoured vehicles, C3I, network-centric capabilities and short-range weapons. Such 'key enabling technologies' as data fusion, sensors, signature management, protection and systems design are identified as important to sustaining the domestic defence technological and industrial base.[58] Ability of the defence contractors to act as system integrators and of the Swedish Defence Materiel Agency (FMV) to act at the level of "system of systems" are also considered vital.
- Third, it is developing civil-military synergies in ways that allow for more effective use of civil sector technologies and innovations in advancing defence technology and industry. This places high premium on the excellence of Swedish science and technology sector in general, innovativeness of its economy and ability of the armed forces and defence industry to capture and harness that innovation for defence purposes.

Vision on the appropriate level of european strategic autonomy

While committed to sustaining defence industrial and technological base in a number of areas, Swedish state and Swedish defence industry are mostly concerned about managing risks associated with ever growing cross-border inter-dependences and reliance on exports as well as about deepening links with the European and U.S. partners.[59] Swedish policymakers are likely to always assess very carefully the potential impact of European defence technological and industrial initiatives on the trans-atlantic relations with the United States. The ability of a medium-size country such as Sweden to make its foreign policy, security, defence and economic interests count at the European level will weigh heavily in its discussions about such initiatives.

Swedish defence industry particularly stresses the importance of ensuring a level playing field in the European defence markets and reducing protectionist barriers among the EU Member States for cross-border trade in defence products and services within the EU.[60] This clearly points to the vision which focuses in the middle of the scope of the Defence and Security Procurement Directive 2009-81. However, the industry is equally keen to see harmonisation of capability requirements among the EU Member States, in order to achieve greater economies of scale, facilitate multinational collaboration and reduce the scope for protectionist measures and restrictions justified on the grounds of national security.[61] In this regard, Sweden might potentially have an inherent interest in advancing higher level European strategic autonomy. On the other hand, this runs counter to Sweden's own rather protectionist approach to parts of the

national defence industry (e.g. in submarines building, fighter aircraft production or even C3I), where the current political leadership of Swedish defence envisages the need to enable exceptions from Article 346 of the EU Defence and Security Procurement Directive.[62]

1.8 UK

Political vision for the national level of autonomy

The UK vision for strategic autonomy at national and European levels has been changed by the results of the referendum on EU membership – as others British policies – although the tenets of London approach show a certain continuity, including a strong preference for national over EU level. In this context, it is necessary to couple the analysis of the *status quo ante* the 23rd June 2016 with a reflection on a number of questions for London's defence industrial policy. In doing so, at least three elements have to be kept in mind since they increase the uncertainty over British decisions. First, the negotiation of a UK exit from the Union is going to be a long and complicated process, with the activation of the Lisbon Treaty article 50 to take place not before October 2016 and two years allowed to reach a deal - that means London will likely remain for a while a member of the Union it wants to leave. Second, the British political situation saw a smooth transition of power within the Conservative party, but is not yet clear what is the plan at Westminster for the Brexit and a possible second referendum on Scotland's independency in the political horizon. Third, in the next ten months a round of important elections and referendum will take place in a number of key allies of the UK on both sides of the Atlantic, and their results will have a greater impact than in the past on a country which has chosen to put itself out of the EU framework.

Since the 1980s, the UK has adopted a defence industrial policy more market-oriented than the majority of NATO members[63]. Competition has traditionally been a key element in British defence procurement, opening opportunities for both domestic and foreign suppliers. At the same time, the MoD in most cases has requested suppliers to locate industrial and technological activities in the UK, coupled with a technology transfer towards London where possible. In other words, the key point in this British view is where technology is developed, where competences and copyrights are located, where jobs are created and investments are made[64].. This may be understood as a vision of national strategic autonomy in a globalized defence market, whereby the national DTIB is developed by de-prioritizing the "passport" of the property of companies with respect to their footprint in the UK.

Consequences on defence procurement, R&T and R&D policy

In line with this traditional view, the National Security Strategy and Strategic Security and Defence Review (NSS) adopted by Cameron's government in 2015 outlines important guidelines for R&T and R&D policy as well as for procurement. First, in line with the 2010 White Paper, it affirms the government will review "which technologies we need to develop ourselves, and which we should obtain commercially and through partnerships and joint investments with allies, academia and industries"[65]. Regarding partners for joint research programmes, the document lists explicitly the US and its Third Offset Strategy, – although without an in-depth analysis in this regards -France's technological capabilities in the aerospace, maritime and space fields, Japan, and multilateral forums including NATO[66]. No other European country is mentioned, nor the EU as such.

Second, concerning procurement the 2015 NSS states that UK will buy off-the-shelf products or services when this secure the necessary "freedom of action" and operational advantage, with three relevant exceptions: highly classified or sensitive technologies, or those governed by export control or treaty restrictions; capabilities necessary to maintain interoperability with important allies, but which will not provide to the standard required by British Armed Forces; capabilities where there is strategic, military and economic benefit for the UK from long-term collaboration with other nations[67]. Altogether, they allow a significant room of manoeuvre for the MoD in tailoring the procurement on *ad hoc* basis.

Finally, a specific caveat is posed by the 2015 NSS to international collaborative programmes, which in the recent past have represented a way to share technologies and costs with allies and achieve a European strategic autonomy in areas where the national one was not possible: the UK will participate in these programmes "where we have the right technologies, skills and industrial capabilities, and where we can reduce our costs and share technology to mutual benefits"[68]. Previously, the National Security Through Technology (NSTT) paper adopted in 2012 appeared to be more keen to European cooperation. Indeed, it explicitly supported participation in international programmes, it favoured first bilateral collaboration and as second best option it committed "to work multilaterally, for example through NATO or the EU, where this offers a clear benefit to the UK"[69]. The British purchase of American P8 and the establishment of development centres in three US cities suggest that the priority may be beyond the Atlantic rather than across the Channel. This will trend would also be reinforced by the technology transfer from the US required to support the renewal of the UK nuclear deterrence.

According to NSTT, the aforementioned principle of open competition should be coupled with the best-value-for-money one, and the actions to protect the UK's operational

advantages and freedom of action are allowed "only where this is essential for our national security"[70]. At the same time, since defence and security procurement is recognized to have a relevant economic impact, the NSTT affirms that the government "has a vital role in supporting UK-based industry to succeed in a competitive global marketplace"[71]. Again, the overall approach is strongly market-oriented, with some room of manoeuvre for the government and a premium placed on DTIB location on British soil rather than on its property. Having said that, within the range of procurement programmes managed by the MoD there are single source contracts, for example regarding small arms ammunitions, test and evaluation, and large maritime platforms, which do not fit in this overall approach.

Vision on the appropriate level of european strategic autonomy

After the vote to leave the EU, the British vision for the national level of autonomy will have to be framed by a non-EU member perspective, which is off course substantially different from those experienced in the previous 43 years. In political terms, it could be argued that on 23rd June 2016 the slight majority of the electorate expressed a clear preference towards much more national autonomy in a number of fields. How it would be translated into the defence sector is still unclear. Interestingly, before the referendum the RUSI posed the question of the need of a new Strategic Defence and Security Review in the case of Brexit, since a number of assumptions of the 2015 document would have been changed, and new challenges would arise both within and outside the UK[72].

The British vision for the European level of autonomy is deep rooted, considering for example the staunch opposition to any increase of EDA budget – while no opposition arose to the preparation of the Preparatory Action by the Commission. However, its evolution will largely depend on how the more compelling questions on national defence and defence industrial policies will be addressed by London. The establishment of a dedicated industry exports Ministry is a hint in this regard. At the same time, it will depend by the next negotiations with Brussels and European capitals on a number of issues relevant for British DTIB, including but not limited to: the access of UK-based industries to EU internal market; the use by British companies of Horizon 2020 and other EU funds for research in the security and defence sectors; the export rules for EU-based companies towards the UK market, and the application of the 2009 "defence package" EC Directives; the status of transnational defence companies such as MBDA, as well as of companies with strong industrial footprint in the UK *and* in another EU member state such as Thales and Leonardo-Finmeccanica; the London's position in relation with EDA; the role of LoI/FA and OCCAR in a scenario where the UK is outside the EU[73].

2. COMPARATIVE ANALYSIS OF THE STRATEGIC AUTONOMY NOTION IN EUROPEAN UNION MEMBER STATES

A number of findings appear when comparing various national templates.

2.1 Few countries have an industrial defence strategy

The first conclusion to be drawn is that **only certain States have considered it necessary to formulate their policy regarding defence industry in a specific document**.

Historically, **the United Kingdom** had the most comprehensive document, with the *Defence industrial strategy / Defence White Paper* being published in 2005. This document, released by the Ministry of Defence, was not updated. Consequently, it is not certain that it is still relevant. The SDSR (Strategic Defence and Security Review) 2015 and the 2012 White Paper address the role of the UK's Defence and Technological Industrial Base in the British defence policy.

Germany also has a specific document devoted to the defence industry, the *Strategy Paper to strengthen the defence industry in Germany*, published in 2015. Germany's policy regarding the defence industry was also addressed in the *White Paper 2016 on German security policy and the future of the Bundeswehr*, as well as in *Air Power Development Strategy*, published by the Ministry of Defence in May 2016.

Italy, in its 2015 White Paper on Defence, announced that the Ministry of Defence would publish an Industrial and Technological Strategy (ITS)), and provided some guidelines in this regard (i.e. on "sovereign" and "collaborative" technologies).

Following the Ministry Agreement of May 29, 2015, and in accordance with the national strategy of 2013, Spain published a Defence Industrial Strategy in 2015. This strategy lists technological areas linked with essential security interests. Furthermore, Spain also published a strategy regarding defence technology and innovation[74].

Among Baltic States, **Estonia** published an industrial defence strategy for the 2013-2022 period. Latvia is currently in the final stages of adopting a similar document (only Lithuania has not been working on any formal defence industrial policy or strategy yet). This must be highlighted, since these States do not have a significant defence industry.
Other countries do not have a specific document fully dedicated to the defence industry. However, although **France** does not have such a document, all the successive White papers on defence and national security, and notably those from 2008 and 2013, dedicated a specific chapter to this topic.

Sweden does not have a specific document dedicated to the defence industry either, and Sweden's Defence Policy 2016 to 2020 did not directly address the issue. The same applies to Poland.

2.2 The term "strategic autonomy" is not commonly used, but many countries use similar terminologies

Secondly, as regards semantics, the term "strategic autonomy" itself has not spread to every State.

In France, this expression is mentioned many times in the White paper on defence and national security.

In Italy, since the 56/2012 law, which regulated *foreign investments in strategic activities*, the notion of Key Strategic Activities has developed.
Other countries do not use the term "strategic autonomy" as such. However, Germany uses the term "key technologies" in the 2015 *Strategy Paper to strengthen the defence industry in Germany*, as well as in the *White Paper 2016 on German security policy and the future of the Bundeswehr*.

In the United Kingdom, the term "strategic autonomy" is not used either. The United Kingdom is known for having an open armaments market, which can be a contradiction with the notion of strategic autonomy itself. Nonetheless, the 2005 Defence Industrial Strategy used the term "key industrial capabilities", notably with reference to the technologies that the United Kingdom had to master in order to protect the country.
In Spain, the Agreement of the Council Minister of May 29, 2015 asserts that the role of the State is to shape the national technological and industrial base so that it could provide the equipment, services and systems related to the essential security interests.
The 2009/81 directive on the defence and security market conduced the government to define the Strategic Industrial Capabilities in the defence sector[75].

Sweden does not use the term "strategic autonomy". Nevertheless, the notion can be implicitly pieced together, for Sweden established a list of priorities in which submarine and aircraft are considered most important areas, followed by armoured vehicles, C3I, network-centric capabilities and short-range weapons. Sweden also developed the notion of "key enabling technologies" as data fusion, sensors, signature management, protection and systems design are identified as important to sustaining the domestic defence technological and industrial base[76].

Estonia, which has an industrial defence strategy, does not use the term "strategic autonomy", but the Ministry of Defence must identify "critical fields", which must be

preserved and developed in order to provided "capability or vital services" for "defence forces"[77].

2.3 The notion of strategic autonomy (or similar) does not have the same content/substance from one country to another

There are two ways to define strategic autonomy. The first is capability driven; and the objective is to provide armed forces with the capabilities necessary to ensure the country's essential security interests. The second type of autonomy is technology driven, and it aims to identify the technologies necessary to ensure these security interests.

However, the divide is not that clear between capability driven strategic autonomy and technology driven strategic autonomy. All countries define their strategic autonomy based on the capabilities they want to have in order to protect their territory and citizens. The main purpose of the defence industry is to provide the armed forces with the equipment necessary to carry out their mission. Notwithstanding, one finds that, the more developed a country's armaments industry is, the more it will tend to define the technologies necessary to develop the military capabilities it wants to obtain.

Half-way between capacity driven strategic autonomy and technology driven strategic autonomy, is the notion of key industrial capabilities, which is the capacity to conceive equipment incorporating several technologies. It is the case for Spain or Sweden, the latter example highlighting the need to preserve capacities to make combat aircrafts and submarines. But in this case, on may wonder if the notion of strategic autonomy only refers to industrial capabilities controlled by Sweden and that must necessarily be preserved, rather than to the ability to act independently. The same holds true in Poland, since the objective of full strategic autonomy is linked to domains in which the Polish industry has technological skills.

It must also be noted that the accuracy of the information provided by States on the content of their strategic autonomy does not depend on the level of defence industrial development. Spain, which armaments industry is one of the least significant among the LoI countries, established a defence technology and innovation strategy in 2010 and the document was updated in 2015[78]. In contrast, France did not release the list of technological capacities considered as critical as this list is constantly moving. But there is a precise classification between technologies that France wants to continue developing in their own right, technological capabilities where task-sharing can be implemented at European level with guaranteed security of supply, and those that can be abandoned because there is no risk in terms of security of supply.

Today, Italy and Germany are the countries that communicate the most about the technologies they want to develop.

In Italy, the 56/2012 law listed the key strategic activities that the country wants to maintain, and they were also listed in an implementing decree. Germany did not advertise much the industrial defence strategy published in 2015[79]. But this document listed four capacity domains: management, reconnaissance, operations and support; which are crossed with the four main domains: land, air, sea and cyber, in order to determine key technologies that the country wants to develop at national level.

2.4 The notion of strategic autonomy does not have the same scope from one country to another

The content of strategic autonomy itself, notably regarding key technologies that must be obtained, is not the same from one State to another. Two factors determine the way in which States will identify the technological scope of strategic autonomy.

- The first factor is the international autonomy ambition, combined with the denial of supply risk. On this point, France is certainly the country with the strongest ambition, knowing that the denial of supply risk is measured even between allies and notably in relation to the United States. The retaliatory measures suffered because of the refusal to participate in the intervention in Iraq in 2003 can explain the French standpoint, even though diplomatic relations and the level of cooperation between the two countries is excellent today.

- Available financial resources. It is necessary to restate this obvious fact: strategic autonomy has a cost, considering that the States will fund defence R&D, and not the industry. The unanimous call from States to use dual technologies is not only explained by the opportunities offered by information and communication technologies in that field, but also by the desire to alleviate the budgetary burden while economic growth remains slow in Europe.

2.5 The notion of strategic autonomy is linked to maintaining the competitiveness of national DTIB

Most States emphasise it one way or another: all the jobs created and the level of technologies developed in the field of defence justify the effort generated to maintain defence industries' competitiveness at national level, creating at the same time a situation of strategic autonomy even though it is not always claimed. Technologies considered as "key" often overlap between various countries. The positive aspect of this convergence of views is that the States, at least those with the most significant defence industries, contribute to create a shared understanding of what a European strategic autonomy could be, with the capabilities and key technologies that will constitute this strategic autonomy. The negative aspect is that these circumstances tend to maintain situations with unwanted duplications in funding the development of these key

technologies. Furthermore, States exchange very little information about the technologies they want to develop. In that sense, the British-French dialogue regarding missiles and the future Combat Air System established in the Lancaster House Treaty in order to determine key competences that they each want to obtain is undoubtedly the most advanced example of technological mutualisation based on guaranteed security of supply between both States.

Finally, the issue of industrial capabilities can be a divisive factor between those looking for strategic autonomy and countries that do not have a defence industry and do not see the benefit in having European strategic autonomy, in terms of security or in terms of industry and technology.

2.6 Just a few member states develop a vision for European strategic autonomy

It appears that Member States do not really develop a vision and proposals about what an appropriate level of strategic autonomy at European level could be.
France is the country with the most defined vision on that subject, but the country does not identify precisely what strategic autonomy at European level could be. France, in its White paper on defence and national security, develops a political philosophy of what European strategic autonomy could be by developing the idea that mutual interdependence is meant to reinforce the sovereignty of every Member State by increasing available resources at European level. The idea is that Member States of the European Union can have greater sovereignty together than each country taken separately. In that sense, strategic autonomy at European level should therefore not be the lowest common denominator of national strategic autonomies, but on the opposite, it should add value to these. It must also be noted that by developing the notion of economic defence operator before the European council of December 2013 dedicated to defence, France had indeed addressed the issue.

For Germany, more than strategic autonomy at European level, the main issues are the reinforcement of the European defence industry, which is too disparate, as well as a rationalised multinational cooperation.
For Italy, the notion of European strategic autonomy is analysed in a manner similar to Germany's, with the need to multiply joint acquisitions and cooperation in the field of armaments.

For the United Kingdom, the notion of strategic autonomy at European level is not an issue in itself, which does not prevent partnerships and joint investments with allies, citing the Americans with the third offset strategy and the French.
In Spain, the notion of strategic autonomy at European level must reinforce national strategic autonomy: Galileo is compatible and complementary to the Spanish defence satellites Hisdesat.

While in Sweden, the need to standardise the demand is deemed necessary, there is a form of mistrust with regard to any industrial policy in that sector, the important thing is the establishment of a level playing field in the European defence markets reducing protectionist barriers among the EU Member States. Care must also be taken not to weaken the transatlantic relationship because of European initiatives in the field of armaments. Similar considerations apply in Baltic States and in Poland. For Poland, the main objective is to broaden the pool of capabilities, available for common defence under NATO commitments. Consequently, European strategic autonomy is seen in Poland as falling within the context of the transatlantic relationship.

3. WHICH APPROPRIATE LEVEL OF STRATEGIC AUTONOMY FOR THE EU?

In conclusion, even though the term "strategic autonomy" is not commonly used by Member States of the European Union, and even creates mistrust for some, a number of States consider that an armament industry is an asset if one wants to obtain high technological level military capabilities. Countries that have a significant armaments industry identify the key technologies they want to have at national level. A significant number of States consider cooperation as a way to obtain capabilities that they could not have acquired at national level, due to the lack of sufficient technological competences.

All countries therefore consider that the European level, regardless of its form – minilateral, multilateral, with 28 Member States or only 27 – enables them to obtain military capabilities that will reinforce their security. While none wishes to weaken the transatlantic relationship, all countries recognise that a competitive European DTIB can only be an advantage in case of transatlantic cooperation as this one would be more balance and fruitful. Lastly, all countries studied, even those that have the least developed DTIB, acknowledge that their DTIB is of special interest, both in economic terms, because of the technologies that it allows to master and the skilled jobs it creates, and in terms of the country's security.

The European Union is given a choice between several options regarding the level of strategic autonomy that it wants for its defence industry:

- To consider that it is not necessary to develop strategic autonomy at European level since the objective is not shared by all member states;

- To consider that strategic autonomy can only be the sum of the shared interests and objectives of European countries in this field;

- To consider that strategic autonomy at European level transcends the notions of strategic autonomy at national level. It means that it allows, unlike the previous template, to extend the notion of strategic autonomy compared to national templates, by adding an additional level of capabilities and technologies developed and owned by the European Union.

- At another level, it is necessary to determine if the notion of strategic autonomy must be capability driven or technology driven

Lastly, and maybe most importantly, it is necessary to decide if the European Union's ambition must be superior to that of the Member States, or only result of their shared interests.

The latter question was never clearly answered. The EU Global Strategy, which was welcomed by Member States, tried to define this level of ambition without offending anyone. This resulted in the following statement: "an appropriate level of ambition and strategic autonomy is important for Europe's ability to foster peace and safeguard security within and beyond its borders".

The European Union is caught between two pitfalls in the field of defence. If it is too autonomous, it can be accused of wanting to weaken the transatlantic relationship. If on the contrary it takes cover behind the NATO alliance, namely behind the United States, it will be considered a burden for the US, some sort of "stowaway" in the Atlantic Alliance. Lastly, strategic autonomy will be better accepted if it refers to indisputable and politically neutral objectives. In that sense, the objectives included in the EU Global Strategy –20% of defence budget spending devoted to the procurement of equipment and Research & Technology and 35% in collaborative equipment projects – have the merit of being accepted or potentially accepted by everyone, on both sides of the Atlantic. It could be the same thing for the objective of 2% GNP dedicated to defence expenditure agreed at the Wales NATO summit in September 2014.

Nevertheless, military power is not just related to the need to defend oneself, it accompanies soft power instruments such as diplomacy and economy.

If one examines the various options suggested, considering the development of strategic autonomy as unnecessary would be tantamount to denying the existence of the European Union as a player on the international scene.

The second option, which consists in defining strategic autonomy as the sum of shared interest and objectives of European countries in that field, meaning the lowest common denominator between States, would be tantamount to denying the fact that the European Union can transcend State sovereignty to create its own sovereignty. This issue is today at the centre of the debate concerning the European Union's future, and it can be understood why it is not definitively settled. But from a strictly practical point of view, applying the lowest common denominator rule to defence capabilities and technologies would amount to grant States competences in domains that they already manage. By applying this rule, the European Union would either fund research that are already funded by the States, or the States would stop funding defence research using the argument that the European Union is already funding it. In both cases, such a solution, which would not allow States to increase their level of security while potentially leading to budgetary waste, would be unproductive. The best option is therefore to define the content of the European strategic autonomy by transcending national concepts of strategic autonomy.

The answer to the issue of whether strategic autonomy must be capability or technology driven is that both must be combined. Strategic autonomy will have a financial cost for

Europeans. Each State and the European Union as a whole must therefore obtain tangible results in terms of security, which can only be the case if the European Union develops capabilities that States cannot acquire on their own. Ideally, in terms of capabilities, the European Union should possess and use freely full-spectrum land, air, space and maritime capabilities, including strategic enablers. But it will only be the case if the technologies necessary to build them are available within the European Union.
It is therefore necessary to have an annual coordinated review process at EU level to discuss Member States' military spending plans which could instil greater coherence in defence planning and capability development, as recommended in the EU Global Strategy. Another component must probably be added to this review process that should include each State's defence research planning in order to have global mapping on the subject, a coordinated approach including Member States, European commission, EDA, ESA.

It is therefore necessary to combine the capability approach and the technology approach in order to determine the appropriate level of strategic autonomy at European level. This is incidentally what States with a developed armaments industry do.

European strategic autonomy could henceforth take the form of the following incremental approach.

As a first step, European institutions and Member States would determine the capabilities that the European Union currently lacks, either because a capability gap is observed at European level, or because States do not have sufficient financial resources to develop that particular capability on their own. In an approach where the European Union transcends the States' will, these capabilities must be strategic, and not result from the discontinuation of capabilities that the States no longer want to fund because they no longer seem urgent. Other solutions must be found to address this issue. The review process on Member States' military spending plans would be used in this first step.

As a second step, once the capabilities are identified, the technologies necessary to develop these capabilities would be determined while taking into account a large spectrum ranging from low TRL, for capabilities that must be developed in the long term, to the highest TRL for capabilities in the short and medium term. A European research plan would be created, coordinated with national research plans to avoid duplication. This second step notably requires coordination between European institutions, EC, EDA, ESA, as well as the Member States that do have defence research plans, mainly LoI countries, but also any country which contribution would be significant.

Because of the approach adopted, both capabilities and technologies developed at European level would necessarily have a strategic nature, since the Member States and

European institutions determined them as such. It will be important to ensure that these technologies funded by EU will be develop by european companies on the soil of EU member states. A specific focus could be made on key components where we notice a lack of competencies at the EU level with the risk of being in a situation of denial of supply on the “low-end” of military technologies. This assessment could be made in the same way that it is currently made by EC on critical raw materials. At the end of the process, the objective could be to have a "defence industrial and technological EU Headline Goal 2030" which could be the mirror and the complement of the capabilities headline goals and of the Capability Development Plan (CDP)

The fact that every European Union Member State must embrace this process, and for that be convinced that they get an increased security level and economic benefits, must not be overlooked.
This requires the European DTIB’s reinforcement and integration process to continue, so that the interests of both companies and Member States can be convergent. For example, it will be necessary to include innovative SME that exist in States with the least developed DTIB, and also to involve the supply chain of these countries in the European cooperative programme.

In conclusion, it appears that, if one disregards the term “strategic autonomy”, which seems to worry some, the philosophy of this concept is shared by the European Union Member States. What is lacking now is a process allowing to develop rationally strategic capabilities and technologies that go beyond what States do individually to ensure their defence, taking into account that each State needs to do more in terms of defence expenditure, defence procurement equipment and R&D at national level, a pre-condition to have a higher level of strategic autonomy. ■

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#8

Report

APPROPRIATE LEVEL OF STRATEGIC AUTONOMY

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The Armament Industry European Research Group (Ares Group) was created in 2016 by The French Institute for International and Strategic Affairs (Iris), who coordinates the Group. The aim of the Ares Group, a high-level network of security and defence specialists across Europe, is to provide a forum to the European armament community, bringing together top defence industrial policy specialists, to encourage fresh strategic thinking in the field, develop innovative policy proposals and conduct studies for public and private actors.

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