



Transatlantic Defense Procurement

This brief examines transatlantic defense procurement. Defense procurement is not like normal trade. There is more protectionism, and the small number of purchasers means there is less of a market as well. The balance between suppliers and purchasers is also distorted. The market in the United States is much larger than in Europe, and so there is a cost advantage in “buying off the American shelf”, but there will be advantages in European and American contractors working more closely together in the future. This brief explores these dynamics in greater detail.

Industry Drivers

Defense equipment manufacturing is much the same as other major industries insofar as it is focused on the bottom line. It feels somewhat different from these other industries (like big pharma and automotive) because it has the twin elements of “national security” and “national interests” to uphold as part of its objectives. This can serve to obscure the commercial nature of the trade, but in some senses it is an honest depiction of a trade like no other. In theory the risk on major projects is taken by the manufacturer, and this partly accounts for the inflated price of defense projects. But in practice it is the government that underwrites all of the risk on major defense projects, mostly because it has the comfort zone of the tax base, which is not open to other types of commercial organizations, nor other types of manufacturing. In essence the scale of governments’ wealth in comparison to defense budgets, which amount to between 2-4% GDP, provides a huge amount of insurance cover for defense equipment projects, something that cannot be said if the risk is borne by the manufacturer. So, defense manufacturers get their risk covered twice – once by government overspend, and once by government guarantee.

The exposure of state governments to high levels of industrial risk explains the role of international power politics in the arms trade. There is good evidence that the export trade in military equipment is supported by the core assets of states – their diplomatic missions and intelligence services. The tale of the rival French and British bids to the Saudi government to supply the Saudis with interceptor aircraft is one that is tainted by both the French and British external intelligence services bugging their rivals to secure details of their respective bids. Beyond covering their industrial or economic risks, American and European administrations use military equipment as a way of influencing governments who receive them. The desire to supply the Saudis with military equipment is partly based on the financial rewards, but also because it gives western states an intelligence foothold in the Middle East. The American administration’s export of weaponry to Eastern Europe in the 1990s was due to US desire to cement the

modernization and westernization of Eastern Europe after the collapse of the Berlin Wall. For example, the Americans donated a number of F-16 Falcons to the Czech Republic in the 1990s (with hefty maintenance contracts), but with the explicit conditionality of security sector reform in that country. European governments have pursued similar agendas in Eastern Europe and the Balkans, and so there has been the potential for transatlantic rivalries to appear.

Because defense equipment relates directly to territorial defense and national security, more widely, the manufacturers are a key component in providing their governments with a military-strategic edge over rivals, in short supplying their governments with equipment that is good enough to defend their territory against most conceivable threats. In this respect, defense industry is one of the last sectors where true blue-skies thinking is permitted – under certain circumstances. A government’s need to remain militarily ahead of their rivals also affects the export market – American exporters, for example, are never keen to release the proprietary software required to work their equipment, nor to allow the receiving military to perform the maintenance, thus ensuring that third countries are not receiving the same standard of equipment as their own military. This withholding of proprietary software has recently caused some friction between the American government and the British and Australian governments. They have been locked in negotiations over the delivery of the “Joint Strike Fighter”, which would arrive without the British nor Australians having the right to access or modify the software controlling the avionics. Similar disputes between the Americans and British have grounded the Apache and Chinook helicopters the British have bought for use in theatres as part of the coalition of the willing. The protection of high technology in the military sphere has spread into the civilian sphere, where the trickle-down of military know-how has filtered into commercial applications. The best example of this is the “fly-by-wire” technology¹ that was first pioneered by NASA in the 1960s, and then eventually rolled out into such platforms as the Airbus A320, which was the first commercial jet-liner to have digital fly-by-wire controls in 1984. The competition between Boeing and Airbus in the commercial aircraft sector has been ferocious, and looks set to escalate with the “super-jumbo” class of aircraft (the Airbus A380 vs. the Boeing 747-400), providing more cost-efficient long-haul travel.

While collaborative projects between nations like Eurofighter Typhoon (Britain, Germany, Italy, Spain), Eurocopter (France, Germany, Spain), and the Northrop/EADS air-refueling tanker look like sensible on the outside, they are often fraught with tension. Industry insiders often point out that these collaborations often demonstrate an acute level of competition and antagonism between partners, as national priorities tend to dominate. Such collaborations are often about gaining access to rival intellectual property or opening up new export markets – so a first mover advantage – rather than being about genuine intellectual or operational synergies. A subsidiary factor in all of this is the trickle-down of technology into civilian manufacturing. Hence, alongside international politics and military security, domestic politics plays a role as well. This domestic politics plays out in terms of security, economic competitiveness, and employment. Governments seek to control the best technology to use for the national defense, hope to

The European Union Center of Excellence of the University of North Carolina at Chapel Hill is funded by the European Union to advance knowledge and understanding of the EU and its member countries.

capitalize on the most profitable civilian spin-offs from military research and development, and want to keep as many jobs as possible. This is more acute in America than it is in Europe, but we can increasingly observe a strong form of pork-barrel politics in Europe that seeks to protect domestic manufacturing jobs linked to electoral advantage. The connection between electoral politics and economic success has bred a particular type of international competition between governments seeking to bolster and support their nascent defense and civilian industries (the two often overlap).

The nature of the defense industries has changed in Europe, however. The “primes” as they were known – BAE Systems, Thales, EADS, etc. – used to be manufacturers in their own right. But the introduction of risk dispersal to the industry (creating myriad smaller offshoots carrying their own risks to lessen the threats to central business) and the culture of sub-contracting has left the “primes” in the role of project management, rather than being in the business of manufacturing. Similarly, the desire among political elites to reduce the risk of large defense projects has encouraged them to go down the path of collaborative ventures with other European governments – the Eurofighter Typhoon project is the best contemporary example of this. Eurofighter has been built by a consortium of nations including Britain, Germany, Italy and Spain, with the financial risk spread between these countries, and the manufacturing of the aircraft also located across all consortium members. In a twist that highlights the nature of defense manufacturing and defense equipment export, each of the consortium members is permitted to modify their own aircraft and to sell Eurofighter under their own badge – the profits do not return to the cooperative, merely to the member.

Much of the story about the disparity between the US and the EU in the defense trade concerns efficiencies of scale. The US has much more money to invest in this area, and the political willingness to do so. This has bought the American government a defense industry able to build technologically advanced equipment on large scale production runs, reducing unit cost price. The US also has a relatively large and cohesive set of armed forces; in both of these spheres the Europeans lag far behind – the political will, finance and militaries are so fractured that the net result is often counterproductive procurement.

Sectoral Integration – The Military Industrial Complex

The term “military industrial complex” has taken on a considerable amount of political baggage since President Eisenhower first used it in 1961. It has become a watchword for a particular brand of conspiracy theory scholar or activist. Nevertheless, it reflects a pattern of “sectoral integration” that is an essential part of the industry. This sectoral integration represents the extent to which all the key components of an industry are working efficiently and effectively together. We can observe a reasonable amount of collaboration and cross-pollination between defense manufacturers across the Atlantic, but essentially two broad blocs of rival manufacturers exist – one located in the US and the other located in the EU. The more internally cohesive the industry, the more competitive it is as well. In this, the defense industry in the United States must be seen as being uniquely successful while in the EU, the degree to which this integration has

The European Union Center of Excellence of the University of North Carolina at Chapel Hill is funded by the European Union to advance knowledge and understanding of the EU and its member countries.

occurred is lumpy in the extreme, and has clearly affected European competitiveness with American firms.

The first thing to note is the scale of the respective operations on both sides of the Atlantic. The last available figures (2008) for equipment budgets in the two respective zones showed that the US spent \$713bn², whilst the EU collectively spent \$312bn. This disparity disguises the vast superiority of US military capabilities – far in excess of their budgetary superiority, so a simple look at defense budgets does not tell the whole story. This is vividly brought out by the current debate raging within the British Ministry of Defense about how to budget for replacing the equipment lost in the Iraq and Afghanistan campaigns. As the budget currently stands (2.1% of GDP, with a potential to be reduced to 1.86% of GDP), there is very little money to meet the commitments to build two new aircraft carriers, the purchase of Eurofighter Typhoon, the Future Rapid Effect System (FRES) – armored vehicles, and the nuclear deterrent, and no money to replace lost or destroyed equipment. Thus, without a rapid restructuring of defense procurement in the UK (or a massive injection of funds), America's principle ally will not be able to participate in future military interventions, on the grounds of costs and capabilities.

Having argued that the capabilities of national militaries have been degraded, it is important to note that defense industries on both sides of the Atlantic are doing well. While the global financial crisis has hit a large number of manufacturing industries the defense industries are relatively insulated from its worst effects because of the long lead-in times of large programs – which often stretch over several economic cycles – and that the investments are underpinned by governments and their central banking systems. In short, if the defense industries fail to get paid, then it is safe to assume that the entire economy has collapsed, and that this is not a normal economic market.

The military requirements and the economics of defense are not always consistent. For a great deal of what militaries are asked to do by their civilian controllers they require “second best, now”. In short, equipment that is in stock and does the task reliably well. But militaries also occasionally require equipment that can change a whole field – examples of such technology include the Stealth Bomber and the U2 spy plane. The major problem facing the European defense industry is the almost total inability to create this kind of technology. The regulatory process for controlling product specifications and research and development budgeting has driven innovation – in any meaningful sense – out of European defense industries. Given the problems with some ordinary equipment procurement runs of, for example, standard issue rifles, armored vehicles, and aircraft carriers, it could also be strongly argued that the European defense industry does not always manage to provide the basic equipment to a decent standard either.

American defense industries have managed to successfully provide basic equipment to their military since WWII, at least, and have done so on the basis of being able to create production lines of credible scale, and of constant production (which is not the case in the EU). They have also managed to create brand new high technologies when required, most notably via the Skunk Works program of Lockheed Martin. This involves the creation of

The European Union Center of Excellence of the University of North Carolina at Chapel Hill is funded by the European Union to advance knowledge and understanding of the EU and its member countries.

small units of technical experts, given a free run of experimentation on a particular technology, under conditions of secrecy – its success continues to be unparalleled.

On both sides of the Atlantic the role and presence of academia within the military industrial complex has become more pronounced. For example, according to Nick Turse, in 2005 the Massachusetts Institute for Technology (MIT) received \$608m in Department of Defense funding, whilst Johns Hopkins University received \$231m³. In Europe there have a number of significant collaborations established between arms manufacturers and universities to provide research funding, doctoral research support, and stipends for undergraduate students who will go on to work for those companies. The relationship between US universities and the military and its industrial base is unbalanced though, because it is the very strength of the American university system that gives the American arms trade its advantage globally. But this dependence is mutual – whilst the military and defense manufacturers need university talent and research, the universities are also reliant on defense money.

The expectation on universities to continue to raise external research money has placed the manufacturers in a strong position – the universities simply cannot afford to do without this funding; and university campuses are becoming bifurcated between research units that do high-value research (funded by military or pharmaceutical money) and those which do not. This tendency is far less marked in Europe, where the emphasis on university-industrial relations is more broadly based – across a range of industries. The Lisbon Agenda (to transform Europe's economy into one premised on high-technology), and the preferences of European governments that their universities should be engaged in research that is of relevance to industries, of all shapes, has undoubtedly transformed the university as a type of institution. However, it does mean that there is a high level of integration between the graduate pool, university researchers, and the defense industries – an enviable relationship for any industry moving forwards into potentially difficult times.

Current Issues

The largest issue facing European governments is the inability to repair or re-equip following the Afghanistan and Iraq campaigns. This affects the UK – Europe's largest military player – the most, and substantially undermines Britain's ability to participate in future campaigns. Without a serious revision of the British defense budget, or a new way of procuring defense equipment, the UK will experience a serious degradation of its defense capabilities in the next ten years to 2019. The rest of Europe, with the exception of France, has struggled post-1991 with the rolling back of the American security guarantee and their historic unwillingness to invest properly in defense technologies. The European Commission has sought to address this problem with the creation of the European Defense Agency (EDA), whose role and task is to identify the gaps in European defense capabilities and then to encourage member states to collaborate to fill these gaps. The creation of the EDA has proved to be good news for European defense manufacturers who have enjoyed receiving European funding for exploratory research projects. The over-stretch on European defense budgets is rapidly pushing them towards

The European Union Center of Excellence of the University of North Carolina at Chapel Hill is funded by the European Union to advance knowledge and understanding of the EU and its member countries.

a point where it becomes sensible to think about buying “off-the-shelf” from American defense manufacturers – this would also cure the intractable problem of how to integrate with American forces in theatre; using the same equipment would be an obvious solution.

For European defense manufacturers, the American market remains the most lucrative place to do business, and yet also the most difficult to penetrate. Britain’s leading defense manufacturer – BAE Systems – is 40% owned by American shareholders, and yet has faced considerable problems in entering the American market in any meaningful sense. It has faced politically inspired legal moves to prevent it from becoming a significant force in America – whilst the British Serious Fraud Office (SFO) decided to drop its investigation into BAE over allegedly corrupt payments to Saudi officials in the 1980s, the US Department of Justice has continued its investigations into the same practices, including following financial trails into Switzerland. A successful prosecution of BAE in America would effectively bar it from trading in American markets, and thus constitutes a serious threat to its global business. Meanwhile, the major American firms are enjoying great success in European markets.

Two examples of European business in America shed light on the current stresses and strains in the relationship. The first example is BAE’s sortie into defense-related fields. BAE is currently running the Human Terrain System (HTS) program for the US Department of Defense, which provides complex anthropological advice to soldiers about the villages they will encounter in Iraq and Afghanistan. However, there have been a notable number of people employed by this program being killed, or being removed from it for security or psychological reasons. An interesting attempt to tie up anthropological research and military operations has found itself now mired in controversy; the contractor, better known for defense equipment, might be wondering why it allowed itself to move into this sort of field of activity.

The second example is the replacement flight-refueling aircraft program for the US Department of Defense, which was widely expected to be awarded to Boeing, but was instead awarded to a consortium bid from Northrop and the European defense company EADS in February 2008. The contract consisted of 179 aircraft costing \$35bn, over fifteen years, with a maintenance contract for \$60bn. This deal was widely seen as being good for European defense manufacturers, but there was little difference between the rival bids in terms of American jobs – the presence of EADS on the bid merely made the issue subject to a considerable amount of political commentary in the US, and threats from Congress to block funding for the program. This eventually led to the Department of Defense cancelling the contract with Northrop-EADS in September 2008, and announcing that the two rival bids would be considered by the incoming Obama Administration. The outcome of this review is keenly awaited; but for European firms such a backlash in America does not bode well for being able to do business in America, a market in which they see their futures being firmly pegged.

Conclusion

As it stands the European and American defense manufacturers remain strong rivals, but on the positive side, there are very good reasons for them to become more integrated. The compound inflation that blights defense equipment has pushed full spectrum capabilities production beyond the means of most European states; thus buying American equipment makes a great deal of sense. However, many European countries – with indigenous defense manufacturing capabilities – have been reluctant to do this because they value the prestige they feel is conferred to them by this capability, and the jobs it provides to their citizens. The effect of this European variant of “pork barrel” politics and lobbying power cannot be underplayed, and indeed is increasing in strength. Nevertheless, there is a day of reckoning for European governments on this issue, as they can no longer afford to purchase new equipment and replace or repair the equipment they have lost in Middle Eastern theatres – this operational imperative may shake them out of their nationalist mind-sets. For the American political system, protecting manufacturing jobs – in this time of financial uncertainty – has taken on a dogmatic form, and presents a considerable threat to the business models of European defense manufacturers.

Defense industries on both sides of the Atlantic are highly integrated with important sectors within their societies and economies – with this being more the case in America than in the EU. Universities and schools provide a very good example of a tertiary sector, now geared to serving or supporting the production of military equipment; although again this is more pronounced in the US than it is in the EU. The European Commission has established the European Defense Agency (EDA), however, that aims to provide some cohesion to the European defense market and manufacturing effort, which has seen some early success.

Ultimately though, the defense equipment market is still governed by narrow national self-interests. Collaboration, where it has occurred, has been an exercise in reducing the financial risks of large scale research, development and manufacturing projects, and has not been about creating common capabilities. The export of military equipment has highlighted the extent to which national governments use this trade to curry favor with third countries, and to influence these countries domestic and foreign policies. In this regard, we are still very much in a 19th century international system of power politics, and only systemic shocks will change this in the medium to long term.

¹ Fly-by-wire technology removes the mechanical link between the pilot and the surface control areas of the aircraft, instead allowing the pilot to input control via a digital link, saving weight in the aircraft, and reducing the number of control surfaces where fatigue can occur.

² Fred Kaplan’s formulation.

³ Nick Turse, *The Complex*, (Faber & Faber: London) 2008, p.38.