

# International Trade Committee

## Oral evidence: Defence sector exports, HC 740

Wednesday 2 September 2020

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Members present: Angus Brendan MacNeil (Chair); Robert Courts; Mark Garnier; Sir Mark Hendrick; Mark Menzies; Taiwo Owatemi; Martin Vickers; Craig Williams.

Questions 1 - 18

### Witnesses

**I:** Prabhat Vaze, Director of Economics, Belmana; and Professor Trevor Taylor, Professorial Research Fellow in Defence Management, Royal United Services Institute.

**II:** Oliver Waghorn, Head of Government Relations, BAE Systems; Paul Everitt, CEO, ADS; and Rhys McCarthy, National Officer for Aerospace and Shipbuilding, Unite.

**III:** Dr Sam Perlo-Freeman, Research Co-ordinator at Campaign Against the Arms Trade; and Roy Isbister, Small Arms and Transfer Controls Leader, SaferWorld.



## Examination of Witnesses

Witnesses: Prabhat Vaze and Professor Trevor Taylor.

Q1 **Chair:** Welcome to this meeting of the International Trade Committee looking at defence sector exports. We have three panels today and each panel will be 45 minutes. We are going to try to be very tight with time so I hope that members will be cognisant of that and that witnesses, too, will help us in this with concise answers. Without further ado, I will ask the first two witnesses, Professor Trevor Taylor and Prabhat Vaze, to introduce themselves in their own terms.

**Professor Taylor:** I work at the Royal United Services Institute on defence management, procurement and defence industrial issues. Technically, I am the director of the defence industries and society programme.

**Prabhat Vaze:** I am Prabhat Vaze. I am a director at Belmana Consultancy. It is an economics consultancy that, relevant to this Committee, looks at business support measures, evaluating policies. I was previously a Ministry of Defence director of analysis.

Q2 **Chair:** Before we go to other members, briefly, what would you say are the benefits or the downsides to the UK of now being the world's second biggest defence exporter?

**Prabhat Vaze:** There are some general benefits from being an exporting nation in any sector. In defence in particular—I am sure we will cover this in the other Committee—with the UK having a strong military need, having defence exports to spread the fixed costs and the undoubted development risks associated with that, and those sorts of things, will make exporting particularly important for the UK.

Drawing on some economic aspects and some quality aspects, which are my area of specialisation, on the economic aspects, having the presence of globalised large multinational firms, which are exporting by definition—they are the large sum of the exports—has the benefit of having so-called frontier businesses. These are businesses that are highly productive and efficient, and they deliver services and products that sell abroad. That has some spillover effects. We have worked in areas where it brings in management practices, brings in the supply chain; these are businesses that have links all over the world.

Where we work in the south-west it has local effects with businesses that can spin out of these large companies, have better management practices and the productivity efficiency gain. To some extent, exporting is an action but it also characterises a frontier business and all the benefits that that brings.

We have done a bit of work on the innovation side as well. The benefits are that they are innovative and they have R&D. If we look at the innovation datasets, the firms that we know, the big firms are big



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patenters, they are collaborators with universities, they are collaborators with various other research bodies, they have a pipeline of developments. This again puts us in a place where exporting has the associated benefit of being innovative.

There is a regional dimension to that as well. The UK has other sectors where there will be what we call frontier businesses, these high-tech, high-productivity businesses, but there is a regional dimension to where they are located. To some extent, the fact that the businesses are in a different part of the country means these sorts of exporting types could widen.

Q3 **Chair:** Are there greater clusters in some parts of the UK than in other parts of the UK?

**Prabhat Vaze:** Exactly. There is clustering and, where we have worked, we have sometimes seen a cluster related to a defence firm, and it perhaps might not be as easy for other sectors to locate in that area, in that locality. Clearly, if you look at urban areas or cities, having a very productive, high-enterprise, high-R&D business is perhaps more common. It is hard to make sectoral comparisons, but those might be the start.

**Professor Taylor:** The benefits run into the political, they run into the economic, they run into the military, they are obviously industrial, and you have to look at every deal to see what the key elements are. I would cite the sale of the Type 26 design to Australia as something that carries benefits across the economy, obviously for the companies concerned but also political and diplomatic benefits. It will make it easier to co-operate militarily with Australia in the long term and build up further links between the Australians and the UK. The precise mix of the key benefits varies from deal to deal. Some things are particularly financial and economic, but they go across these different dimensions.

I would not emphasise too much the UK being the second largest, because figures in this domain are very difficult to calculate accurately for reasons we do not quite have time for here. The UK collects its numbers very carefully but, of course, we do not have such good information about other countries. The French and the Germans are not too far behind and sometimes show up as ahead. There are lots of countries that are competing in these markets. It is a very serious business.

Q4 **Mark Garnier:** Prabhat Vaze, on the employment opportunities that this whole industry gives to the UK, I am particularly interested in how you would differentiate between the employment opportunity that is related to the export side of the arms trade and that which is related to the domestic demand side of the whole thing. If we started losing that export side of things, what would that mean for employment in the UK?

**Prabhat Vaze:** That is an important area and, to some extent, there is a part of me that is an accountant and would almost like to account for the employment. In defence we have a starting point for employment



impacts in that there are assessments of the direct employment effect of the UK's own military procurement that filters into the sector. Then to some extent you can begin to either model or estimate the employment effects of the jobs that are created due to exports in that you can either assume some sort of similarity between what is for sale in the domestic market and what is for sale on an export market. These sorts of models just get you straight to the same question, which is what you were asking. What would happen if there was not an export?

Some of the early work that MoD did—I think they did it with RUSI—very much looked at the short-term effects that a change in the defence export sector might cause, and at the longer term. A general view would be that in the short term you would see effects because of a loss of exports. As to the long term, there is an element of other sectors taking these skilled employees, these engineering-type employees, and re-employing them in other sectors of the market.

This is very much a model, and in our work we tried to look at this in a slightly different way, in that we tried to look at the quality of the defence jobs as well and, in particular, where there is a premium to a defence sector job. We looked at it in two ways. We had this great dataset where we looked at wages, essentially, and salaries and tried to understand how much of a salary was due to the skills of the employee, their location, their age and their experience, and we then tried to allocate how much of that was because of the defence sector.

We also looked at the switchers, the people who move sectors, and by moving sector whether they got a pay rise basically, which is evidence that the job quality might be higher in the defence sector. That pointed to a slight defence wage premium.

There is a middle ground where you say, by and large, in the market these skilled employees will find work if there is a significant cut in exports. Then we are talking about the quality of the jobs, and maybe there is a case for defence jobs being more highly skilled or using those skills better. These are the marginal improvements of a defence job.

There are a lot of assumptions there, and I am sure my colleague will be able to expand on them and probably criticise them, but what we were trying to find is whether there is a case for a defence job, essentially, and it is this marginal effect that we could have found.

**Q5 Mark Garnier:** Can you quantify it? If you were to say there are X number of defence jobs in the country of which Y are domestic market and Z are export market, is it possible to quantify it like that?

**Prabhat Vaze:** Some of the data that we collect is basically on the sale of a product, so in the statistics we have so far found that—I may be interrupting—not in defence, but some of the work we do looks almost at bottom-up data, looking at almost contract by contract-type data or transaction by transaction data, trying to understand where there is an



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export, where it is going, and then trying to understand what would happen if that work was lost overseas and then backing out the employment effect. Those give you very big numbers, perhaps the envelope of the scale of the issue, rather than getting into the detail.

- Q6** **Mark Garnier:** Professor Taylor, you might want to answer this one but, Mr Vaze, please do come in as well. There is a secondary question, which is the critical mass that the export market provides. Given the fact that we are selling a lot overseas, there is a big economic value to the whole sector and, therefore, there is quite a lot of investment going into it. If we lost that export part of the market, not only will we lose jobs but will we lose the critical mass that then drives that investment into new products, new innovation and new technology? Forgetting just the simple mathematics of jobs, would we also lose that kind of value added that we have because we have an export market? We would just end up getting back to producing bullets and rifles as opposed to high-tech stuff?

**Professor Taylor:** It is very difficult to model, and Prabhat has kind of explained their efforts so to do. We have to recognise that when you go down to the level of the individual business, if you were to take MBDA for instance, the proportion of their output that is for export varies from year to year. It is impossible to say which jobs. Probably the easiest way to look at this, and the simplest way, is to look at what happens in a country that tries to have a defence industry but does not export, and the model for that is Japan. The consequences there are that, first, they pay a very high price for the equipment that is made in Japan. It is extremely expensive. The choice, if you choose not to export, is that you have either very expensive defence equipment made nationally or you allow your defence industrial capability to disappear, to run down, and you buy things from overseas.

We are at the point where for the more expensive pieces of defence equipment, even the United States national market is not big enough to make it economic for production, so you are seeing a bigger push to export on the part of the United States. We have to see these things as a whole. Trying to pick out the proportion of jobs that are export-orientated is extremely difficult because the consequences of not having a particular export deal. If we had not exported any Typhoons, what would we have done with the production workers who had finished making them for the four countries that were core partners? It is a very difficult thing. Look at Japan if you want to have a sense of what happens if you do not export.

- Q7** **Mark Garnier:** Just very quickly to summarise that, essentially by creating an export market you enlarge your production capacity so you get the scalability economics, the value-for-money economics, and you get the investment into new technology. You make it cheaper for your own domestic markets and you inevitably, although you cannot quantify it, employ lots more people.

**Professor Taylor:** That is pretty much accurate. One of the things I would distinguish is economies of scale, where making 200 a week is



cheaper than making 10 a week, but often the thing that is most important in defence is that you have a continuous production run that lasts 10 or 15 years rather than one that runs five and then you have to find other things for people to do.

**Q8 Robert Courts:** Can I just declare some interests at the outset, please? On my register of financial interests, I have some hospitality and air show tickets. I have a constituency interest in that I represent Brize Norton, so of course I have a very strong defence presence in my constituency. I led the debate that called for the combat air strategy “Team Tempest” and I am referenced in the House of Commons documents according to that.

Professor Taylor, when the MoD is procuring, does it think about exportability as a central part of its procurement process in the way that it should? You could talk about Tempest in a moment, but perhaps start off by referring to 31e because, of course, this is meant to be the new way of ship procurement, a return to the exporting days of the 1970s, this modular design. It is meant to be all about exporting, so much so that it features in the title of the ship. Has it done the trick, and has the downgrading that we have seen recently suggested a lack of enthusiasm for exporting?

**Professor Taylor:** Historically, if you look back, the MoD would say that it wanted to take exporting into account when it was framing requirements. That goes back, in my memory—you can see I am not a young chap—decades, but they have said it but not done it until relatively recently. Now there is a greater effort to build this in. As far as ships are concerned, the Type 26 has come in as the one that is attractive for export. That is because it has certain characteristics that are key, that other countries value and that are unusual in warships.

It is too early to tell about the Type 31e. Babcock have a very tight contract in terms of time and money to deliver the ship, and if they are successful that is a lot of credit to them and it would mean a very cost-effective ship if they can get it in for the money that they are talking about. But it is too early to tell. I do not think we will see other countries signing up until they can see much more evidence that this is going to happen.

**Q9 Robert Courts:** There is a lot of downgrading of the weighting for exportability within the competition. Does that suggest that the enthusiasm for exportability has waned?

**Professor Taylor:** There has always been something of a clash between the interests of the services who always wanted the best equipment that was technologically possible, even if it was not financially affordable, but they have always pursued that. They are putting their lives at risk, so they have always had an interest in trying to get the best possible. There is also a considerable affection for thinking we are going to be operating alongside the United States and, therefore, we want kit that is



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comparable with that that the United States has. Those generally mitigate against exportability.

Where there is a change now is a recognition that we need things that are not unique to the UK and that other people might want to buy, but also in the conceptualisation of how we think about defence equipment. Modularity has become a lot clearer rather than just a word. It used to be just something that people talked about. It is a bit clearer in an engineering sense that you can upgrade and downgrade. Sometimes it is a quite simple thing; with a Type 26, for instance, one of the things is size. There is a lot of space in the Type 26 that you can do things with, whatever it is. The real advent of an idea about modularity has helped to get exportability in a more prominent place.

**Q10 Robert Courts:** Could you just comment on Tempest as well, because that also has the concept of modularity? The search for national partners seems to suggest that exportability is at the heart of it.

**Professor Taylor:** Tempest is the biggest adventure in the Ministry of Defence at the current time because it is extremely ambitious. It is politically difficult in many ways because of the threat it poses to United States industry, and particularly to Lockheed Martin. There is a lot of noise around Tempest.

With Tempest, you mentioned collaboration. Collaboration is the first stage of an export process. If you can find collaborative partners to work with you, there are three parts to a collaborative deal. One is what technology you bring. With Tempest, the Swedes and the Italians are bringing some interesting technology. Another is the money that you are willing to put in up front to help finance the development. But the third thing is the access to your market that you give when you join a collaborative effort. It is a precursor to wider exportability.

Obviously, it is too early to say what the export success of Tempest might be, but it is very encouraging that you have these partners signed up already. It is a disappointment in many ways that Germany, Spain and France are not involved—they have a separate project—but it is a very exciting project, a very ambitious project. I am quite encouraged by the basis that has been laid so far.

**Q11 Robert Courts:** That leads on quite conveniently to the next thing I wanted to ask you. Are we seeing the reality now that it just is not commercially viable for contractors to bid for domestic procurement opportunities unless they are building in the exportability from the outset, the high-tech, complex things like that?

**Professor Taylor:** A bid is a risk and it depends what you are talking about. If you are talking about a development contract where there is a significant amount of development work, it is by definition risky to give a fixed price for that, because if you are talking about an activity that is



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going to take 1,000 people three years to complete, anybody that does a PhD knows that it is quite risky. There are things that could go wrong.

To make that kind of bet and to give a price at the outset is—if you think there are no chances of export, companies will be rather reluctant to go that way. You should not ask me about competitive tendering for this kind of work because I do not have much faith in it. A more partnered approach, such as we are seeing with Tempest, is much more realistic.

**Q12 Robert Courts:** We have spent most of our time, just in our little conversation now, talking about the aerospace sector, and that is probably reflected by about 90% of sales in the UK export sector being aerospace. Does that reflect that the naval, maritime and land-based side of things is falling behind, that they do not have the same level of success, or is it some other factor? Does it suggest prior expertise or Government priorities or anything like that?

**Professor Taylor:** We have to break it down. Of course, we have been focused for many years now on nuclear submarines. Those submarines are nuclear submarines, not diesel submarines, and it is almost impossible that we would want to export them or that anybody would want to buy them because of the expense and difficulties that are associated. They are capable, but they are not exportable systems. We do not do diesel submarines, which are made in Germany and France and elsewhere.

The Navy's capital ships have tended to be exported only once the Navy is finished with them because they are very high-end ships and very expensive with a global role, and they have tended to be too expensive for customers. The Type 26 is a breakthrough in that domain, and perhaps the Type 31 will follow.

Land Systems we never really developed. We had a very capable domestic company in Land Systems. I think you will not remember, but I remember Royal Ordnance as a state enterprise and they did a lot of the design work and they never really broke through into having top of the range. The Germans are much better at armoured vehicles—they were for many years—than we were so that has languished. That is recovering to a certain extent. It is changing to a certain extent. You have the sectoral approaches, whereas in aerospace people think, of course, of British Aerospace, BAE Systems, but we also have the propulsion systems, which is unique in Rolls-Royce. We have avionics expertise in Leonardo, much of it is the old GEC, and we have great weapons expertise in MBDA. All these things fit together in the aerospace sector. I cannot go through a big list of companies, but you have people like Cobham who are world experts in air-to-air refuelling and things like that. We are very strong in aerospace.

**Q13 Robert Courts:** Mr Vaze, I have not asked whether there is anything you would like to add to that. Just to round off, either of you, do you have any comment on whether measuring exports by value is the best way to



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understand how successful businesses are, or is there something else we should be doing?

**Prabhat Vaze:** On the sectoral breakdown—a similar sort of criteria as to what the differences are between land and sea—you have a powerful case there about the difference in the success of the aviation sector. I would only add that it is enriching, there is a wider base of ecosystems within the aerospace sector as well, this strength in linking in with universities, shared facilities, research and enterprise that accommodates and works with the aerospace sector.

The only comment I have is whether the differences between the sectors are intrinsic in the individual sectors and, with aerospace having such a strong component with the civil side of it, whether there is a different way you have to do aerospace compared with the other two. Some of the things we are talking about now are somewhat related to that. To do aerospace well all these other sorts of footprints that you see in the technology skills, the way the business works, are as much a feature of that sector as well. I guess I am saying the sectoral comparisons are difficult.

Q14 **Chair:** To wrap up this panel here, I am aware the UK is a lot more successful than comparable states such as France, Italy and Germany. Why is that?

**Professor Taylor:** It is comparative success, and it depends what you count, but some of the things that are particularly helpful are that the firms concerned often are ready to take a long-term strategic view and be very patient and invest in sales campaigns that last for years. Also the Government role. I am a supporter of DSO. What the Government do in helping all businesses understand export markets and stimulating debates about exports, that is very helpful.

Also something that was in doubt for a while, but now is becoming increasingly clear, is that the armed services themselves are willing to make the contributions that they need with regard to things like training. Quite often the appeal of a British piece—when someone buys a piece of kit they want a training package, they see it as an advantage if they can get exposure to the kind of training that UK forces have. They see it as an advantage to be able to talk and have regular contact with professionals in the military that they very much respect. It is a combination of things.

Obviously, it is to do with product. To a certain extent it is to do with politics. Who you buy from often depends on who you are keen to please, and we do not always benefit from that. In fact, we quite often lose from that because people want to please another large country.

Q15 **Chair:** Is it a little like the Eurovision song contest then?



**Professor Taylor:** We do better in the defence business than we do in the Eurovision song contest. Those are some of the points that are helpful and made us successful: the political links, the patience and so on.

Q16 **Chair:** Thank you. Prabhat, would you like to come in on that?

**Prabhat Vaze:** Looking at success, it is clear that it is obviously related to the larger deals that we win and to some extent—this is reiterating what has just been said—the ability to win those big deals has been the key number that has allowed us to have this good position. The factors that we have just heard are part of it when we are trying to win slightly more mature contracts in mature markets where you are trying to increase the value of the deals and go for the high-value deals. It is features that add up to making that pipeline of future success in winning those large contracts and deals.

**Professor Taylor:** Value is a subjective term but it is certainly a multidimensional term. It is not just financial. Some of the things that I would emphasise, it depends what you are keen on. The Type 26, the sale of Sea Ceptor to New Zealand has a value in that it links the New Zealand navy with the Royal Navy for probably decades and it puts those two organisations in much closer regular contact than they might otherwise be.

The other point about the value of a deal is that the defence industry, the capability, is almost impossible to replace once you have got rid of it. The history of submarine building and what we neglected in the submarine sector is evidence of that; Astute cost a lot more because the workforce at Barrow was run down from something like 14,000 to 2,500 or 3,000. You can imagine the skill loss there, and getting it back was very difficult.

An export sale might not be worth very much, but if it helps keep your industrial people busy until the next order, the financial value matters less than the industrial capability, the fact that you can have an industrial capability that enables you to sustain and modify your own equipment rather than buy it from overseas when you cannot modify it yourself and you may not be able to sustain it yourself without foreign help. Value is a multidimensional term, so just measuring the financial value is not the only thing.

Q17 **Chair:** The point you made there about defence manufacturing—and I assume, as with Barrow-in-Furness, you could equally apply this to civilian manufacturers as well—is that once the manufacturing base is lost, the skill has been lost, it is a difficult thing to replace and start up again.

**Professor Taylor:** Defence products tend to be particularly complex products to integrate. You have seen the Koreans and the Japanese build up a car industry where ours has gone down, the indigenous car industry, but it is particularly difficult in defence. You can see it. For instance, even the most ardent Italian or German industrialist would recognise that they



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have not really recovered their aerospace expertise from having their military aircraft industry closed down for a decade after the Second World War. That is a long time ago.

The knowledge, skills and expertise that you need, as well as the capital, make it a particular feature. It is probably true in the nuclear industry as well, if I was to cite another case—nuclear engineering, nuclear power generation—but there are other industries where the entry barriers are not so high.

**Chair:** Thank you very much from me. I was about to congratulate you both for being very brief, but I see a supplementary question is coming in from Mark Hendrick, who is going to carry on the theme of brevity that we have had so far. It has been very good.

Q18 **Sir Mark Hendrick:** There has been a great deal of talk about the size of some of these contracts and the percentage that British Aerospace takes of our defence exports but, if we look back, a good deal of it is probably to do with the success or simply the volume of the Al-Yamamah contract and the likes of Typhoon, and coming forward from Typhoon to the latest aircraft that we are selling abroad. Do you not feel that we are very much hitched to Saudi Arabia, and our current circumstances, the developing attitudes towards Saudi Arabia, are very much putting at risk the volume that we see before us?

**Professor Taylor:** It is a concern that there is so much dependence, or at least that Saudi Arabia is such a big client. It is a big client for the United States as well, by the way. It is a bigger client for them than it is for us. But it is a very major customer, it is concerning. The potential is wider. We have seen Typhoons sold to other Middle Eastern countries and, as we look forward to Tempest, the potential market will be much wider. Of course, we have done quite well with other aerospace products. We have sold Jaguar and Hawk very extensively in India.

You are quite right, Saudi Arabia is a country of real concern because of its importance. One of the difficulties of thinking about Saudi Arabia is that, if the Government there did change, would it change to anything better or would it be to something worse than we have today? Everybody is cognisant of this. It would be very helpful and encouraging to see a wider range of sales. I should not miss out that we do sell aerospace products in the United States. The Hawk has been sold to the United States, the Harrier was sold to the United States. These do not show up so big in the export figures because, of course, the United States insists that anything that is sold there is also manufactured there. Most of the manufacture takes place in that country.

It is a good point that you make, and everybody is trying to manage the problems of transition and behaviour in Saudi Arabia.

**Chair:** I like the American approach to free trade: you can do it in the way we tell you to do it. Gentlemen, I thank you both for your time and



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for your example to the next two panels. Mark Garnier, I can see you gesturing. Were you wanting to come in there?

**Mark Garnier:** No, I was asking my researchers to leave the door open because there is no air in my office.

**Chair:** I am far too sensitive to your micro-movements. Gentlemen, I thank you very much for your time. It is greatly appreciated.