Defence offset is a controversial topic that has long vexed policymakers. At its most basic, it can be defined as reciprocal investment. It occurs when a procuring country demands that overseas arms suppliers provide additional offsetting benefits to 'compensate' for extremely high procurement costs. Contemporary arms sales therefore invariably comprise two parallel transactions: the first is the primary defence contract involving the procurement of military systems, based on conventional price-quality considerations; and the second is the offset deal, whereby suppliers compete on the worth of their respective investment packages. Offset may be directly related to the primary defence contract, such as local production of the arms procured. Alternatively, it may be unrelated, and hence indirect to the principal contract. Here, it can include non-defence projects, such as domestic fish farms, pharmaceutical production or university education, as well as other forms of defence work not linked to the primary defence contract. The precise nature of offset is driven by the arms procuring country’s policy aims, whether they be focused on defence industrialisation or wider economic objectives, such as job creation, supply chain promotion and/or industrial diversification.

Developing countries ambitiously seek access to advanced technologies, but the lack of local industrial and technological infrastructure act as impediments to effective local absorption of foreign technology. By contrast, mature industrial states, such as the UK, focus solely on direct offset, because, by definition, they already possess advanced industrial bases, and thus prefer access to sophisticated defence technologies from major defence players. Defence prime contractors generate skilled jobs, innovation, profits and tax revenue; and as their defence supply chains comprise mostly commercial enterprises, indigenous investment – including offset – potentially acts to promote wider 'prosperity' benefits. Given that offset is a mechanism for generating both technology transfer and enhanced prosperity, it is normally a constituent element of the armament’s competitive tendering process. While cost-effectiveness represents the dominant determinant in down-selection of bids, the quality of the offset package will often be included in the bid evaluation criteria for assessing competing tenders. For example, Turkey has a high 40% weighting for offset, whereas the UK Ministry of Defence (MoD) has historically undertaken a more qualitative assessment of the ‘wider factor’ impacts from competing bids.

The UK’s first formal offset policy was introduced in 1990, but rather than using the name ‘offset’, the policy was called ‘industrial participation’ (IP) to highlight the focus on partnership. Although the European Procurement Directive led to the UK abandoning the policy in 2012, its underlying narrative of deepening the fusion between defence and development has recently resurfaced and is currently a major influence shaping defence-industrial policy. The renewed focus culminated in the announcement in the March 2021 Defence and

1. See Countertrade and Offset, The Offset Guidelines Quarterly Bulletin (October 2021), p. 343.
Security Industrial Strategy (DSIS) White Paper that a revised IP policy is under consideration, forming part of a post-Brexit national security framework built on military capability and economic prosperity.2

The purpose of this article is to explore and identify appropriate attributes of any future UK IP policy. To begin the discussion, a contextual backdrop of global offset challenges and trends is provided before examining the creation and abandonment of the UK’s initial IP approach. The article then directly examines the ‘prosperity’ case for introducing a post-Brexit ‘industrialisation’ policy. This paradigm is not offset and should thus be delineated from the traditional offset approach characterised by prescription and penalty. A conclusions section brings the discussion to a close.

Background

It is clear why arms procuring states employ offset. However, the motives of offshore defence vendors engaging in the practice are less apparent.

The reality is that arms exporters are reluctant to engage, as unsurprisingly they rail against giving away their technological inheritance as well as suffering disruption of existing supply chains caused by the need to create supply opportunities for new entrants. Yet, contractors have no choice, given their desperation for sales in a tight buyers’ market for arms. The buyer country exploits its leverage by seeking to extract industrial and technological benefits beyond the sale, leaving overseas defence contractors on the ‘horns of a dilemma’. If they refuse to comply with offset demands, the procuring state will switch to other suppliers willing to offer offset. However, if the suppliers do comply, due to the imperative of winning lucrative orders, the transfer of production techniques creates the danger of future competition. The buyers’ market argument has a simple logic. Yet, offset appears to have also flourished prior to the post-Cold War buyers’ market, with major offset programmes in the UK (Boeing AWACS, 1988), Saudi Arabia (Al-Yamama, 1988) and South Korea (F–86/F–104/F–4, 1970s), debunking conventional wisdom that the buyers’ market is the main driver of offset.3

2. Ministry of Defence (MoD), Defence and Security Industrial Strategy: A Strategic Approach to the UK’s Defence and Security Industrial Sectors, CP 410 (London: The Stationery Office, 2021), p. 51.

3. See Stephen Martin, Richard White and Keith Hartley, ‘Defence and Firm Performance in the UK’, Defence and Peace Economics (Vol. 7, No. 4, 1996), pp. 325–37; Ron Matthews, ‘Saudi Arabia’s Defence Offset Programmes: Progress, Policy

DOI: 10.1080/03071847.2021.2017592

An RAF Boeing E-3 Sentry AWACS, July 2016. Offset was a substantial component of the deal the UK government made with Boeing. Courtesy of Sharpshotero/Alamy Stock Photo
Offset in a Post-Brexit World

In fact, four other factors are at play, influencing the global demand for offset. First and foremost, procurement scale determines customer leverage, and, in turn, the quality of the offset package: the greater the scale, the greater the extent and quality of the technology packages vendors are prepared to offer. The second factor driving offset demand is the procuring country’s technological absorptive capacity. This capacity embraces not only local military platform manufacturers, but also the broader ecosystem embracing ‘dual-use’ technologies, R&D institutions, innovative supply chains, frontier engineering universities and the abundance of highly skilled scientists, technicians and engineers. In theory, much offset will be stillborn in the absence of viable absorptive capacity. Third, from the perspective of the offshore defence vendor, the feasibility and appeal of offset will be enhanced by the nature of the recipient country’s offset strategy: flexibility is more attractive than prescription and penalty. Fourth, demand for offset may be faltering as countries begin to question whether it is delivering on its objectives. For example, Australia announced in the 1990s that it was abandoning offset as the policy was failing to deliver on its objectives, and at the supra-national level, the European Commission sought to outlaw what it deemed the excessive use of offset, a proposal that was ultimately adopted by the European Parliament and Council of the EU in the European Procurement Directive. The Commission viewed offset’s role as anti-competitive, entrenching national defence-industrial sentiment and sustaining defence manufacturing duplication. Offset therefore acted as an obstacle in the evolutionary process towards a single integrated European defence market.

The directive is important because it required the UK government to adjust its IP policy. Article 346 (Treaty of Lisbon 2007) enshrined into law the idea that national security overrides competitiveness. However, while the Procurement Directive would continue to exempt defence from open competition, derogation would now only be granted on an ‘exceptional’ basis, rather than the norm, as previously was the case. This subtle refinement in the interpretation of Article 346 reverses the historical liberal interpretation adopted by the Commission, with the onus now falling on claimant member states to justify why a national ‘closed’ acquisition process is necessary for the protection of essential national security interests. Yet, the method of assessing such claims is problematical because the Commission did not define what is meant by national security, preferring judgments to be taken on a case-by-case basis to build up a body of case law. Over and above Article 346 exclusion, the directive allows six additional exclusions for its circumvention. These ‘alternative means’ are as follows: national R&D via bilateral and multilateral programmes; NATO and OCCAR (Organisation for Joint Armament Cooperation) procurement involving one or more European states; disclosure of sensitive information compromising national security; intelligence activities including, for example, satellite and encryption capacities; contract awards in third countries during, for example, military operations; and government-to-government (G2G) sales.

The effect of the directive was that direct offset became more strictly regulated and indirect offset became unlawful given its commercial character bore no relevance to national security. The stricter interpretation of Article 346 was held to represent

and Performance’, *Defence and Peace Economics* (Vol. 7, No. 3, 1996), pp. 235–48; and Dean Cheng and Michael W Chinworth, ‘The Teeth of the Little Tigers: Offsets, Defense Production and Economic Development in South Korea and Taiwan’, in Stephen Martin (ed.), *The Economics of Offsets: Defence Procurement and Countertrade* (London: Harwood Academic Press, 1996), pp. 245–98.

4. Stefan Markowski and Peter Hall, ‘The Defence Offsets Policy in Australia’, in Martin (ed.), *The Economics of Offsets*, pp. 49–73.

5. Yet nowhere was offset mentioned in the directive, nor indeed in EU primary and secondary law. It became enshrined into the negotiations because the directive’s interpretive guidelines judged offset to be obstructing the European Commission’s progression towards more open, transparent and competitive defence procurement. See Moritz Weiss and Michael Blauberger, ‘Judicialized Law-Making and Opportunistic Enforcement: Explaining the EU’s Challenge of National Defence Offsets’, *Journal of Common Market Studies* (Vol. 54, No. 2, 2016), pp. 451–54.

6. See Commission of the European Communities, ‘Interpretative Communication on the Application of Article 296 of the Treaty in the Field of Defence Procurement’, COM(2006)779, 7 December 2006; Commission of the European Communities, ‘Proposal for a Directive of the European Parliament and of the Council on the Coordination of Procedures for the Award of Certain Public Works Contracts, Public Supply Contracts and Public Service Contracts in the Fields of Defence and Security’, COM(2007)766, 5 December 2007.

7. See Treaty of Lisbon, ‘Article 346, *Official Journal of the European Union* (7 June 2016).

8. Weiss and Blauberger, ‘Judicialized Law-Making and Opportunistic Enforcement’, pp. 451–54.
the death knell in the use of offset by EU states, because it was viewed as 'one of the Commission’s main criteria for successful implementation [of the Directive]'\textsuperscript{9}. However, the negative view of offset exhibited by Europe’s legislators did not chime with that of national policymakers, and as a result at least 20 member states had not enacted the legislation at the intended August 2011 transposition deadline.\textsuperscript{10} Although most EU members strongly favoured continued use of offset during the Council negotiations,\textsuperscript{11} by 2014 all EU countries had complied with the legislation. The short-term impact of the Procurement Directive led member states to restrict their offset policies and limit the role of national offset agencies. Yet, in the longer term, it has become clear that offset has not disappeared from the EU’s defence acquisition landscape and remains a divisive and controversial issue.

Before the directive, the MoD secured about half of its arms acquisition through domestic sources via Article 346 waivers.\textsuperscript{12} This is on par with the EU average,\textsuperscript{13} and after the directive there is no reason to believe this share has diminished. Indeed, a reluctance to fully comply with the directive is evident in the years beyond its official transposition. A 2020 European Parliament report assessing the implementation of directive 2009/81/EC noted that ‘several Member States have abandoned their offset legislation [but] Member States that still seek offset-like measures have focused purely on direct offsets ... offset policies seem to have focused on the issue of security of supply and thus on maintenance activities, although local content requirements may still persist’.\textsuperscript{14} The directive forced member states to specify the circumstances under which they would resort to Article 346, and one of the more important factors is the notion of essential security interests, and notably the need to specify capability areas or technologies deemed to be critical. However, member states still appear to pursue offset policies, openly contradicting treaty rules. For example, offset requirements continue to be expressed as a percentage of the procurement contract’s total value, and even though that percentage has dramatically fallen to around 30% of contractual value, the practice remains in clear contravention of Article 346 (1)(b). The article clearly states that only strategic considerations (that is, related to protecting the relevant member state’s essential security interests) can be taken into consideration when designing protective measures, including offset.\textsuperscript{15}

Assessing the extent of recourse to Article 346 is difficult, but a significant share of defence procurement conducted outside the directive has regard to high-value complex weapon systems contracts, such as fighter aircraft, combat helicopters, submarines, frigates and tanks.\textsuperscript{16} Moreover, the small proportion of contracts awarded in line with the Directive’s provisions differ quite markedly from state to state. For example, in 2011–15, Lithuania and Slovakia, respectively, used the directive for 38% and 36% of defence equipment purchases, whereas the proportion of defence equipment procured through the directive by France and the UK was, respectively, 10% and 18%; for Austria, Sweden and the Netherlands, the proportion was below 1%.\textsuperscript{17} The continued use of offset in Europe is again evidenced by the findings of the 2020 European Parliament Report assessing the implementation of Directive 2009/81/EC.\textsuperscript{18} The document affirms that offset continues to be in wide use, especially, as highlighted above, through exemptions for complex systems, such as the renewal of jet fighter fleets,\textsuperscript{19} and via G2G procurement

\textsuperscript{9} Ibid.
\textsuperscript{10} European Commission, ‘Commission Staff Working Document: Evaluation of Directive 2009/81/EC on Public Procurement in the Fields of Defence and Security’, SWD(2016) 407 final, 30 November 2016, p. 24.
\textsuperscript{11} Michael Blauberger and Moritz Weiss, ‘If You Can’t Beat Me, Join Me! How the Commission Pushed and Pulled Member States Into Legislatng Defence Procurement’, European Public Policy (Vol. 20, No. 8, 2013), p. I135.
\textsuperscript{12} B Tigner and M Bell, ‘EU Defence Directive Briefing – A Happy Union’, Jane\’s Defence Weekly, 17 August 2011, pp. 29–32.
\textsuperscript{13} Blauberger and Weiss, ‘If You Can’t Beat Me, Join Me!’, p. I125.
\textsuperscript{14} Isabelle Ioannides (ed.), EU Defence Package: Defence Procurement and Intra-Community Transfers Directive (Brussels: European Parliamentary Research Service (EPRS), 2020), p. I19.
\textsuperscript{15} Ibid.
\textsuperscript{16} European Commission, ‘Commission Staff Working Document: Evaluation of Directive 2009/81/EC on Public Procurement in the Fields of Defence and Security’, p. 35.
\textsuperscript{17} European Commission, ‘Report from the Commission to the European Parliament and the Council on the Implementation of Directive 2009/81/EC on Public Procurement in the Fields of Defence and Security, to Comply with Article 73(2) of that Directive’, SWD(2016) 407 final, 30 November 2016, p. 4.
\textsuperscript{18} Ioannides (ed.), EU Defence Package.
\textsuperscript{19} Ibid., pp. 104, 146.
under foreign military sales (FMS). In 2018, US defence contractors signed 16 new offset deals with five EU states, amounting to $5.24 billion; that is, around one-fifth of the total value of all US offset transactions. No trend is discernible to indicate that the directive has led to a reduction of US offset obligations in Europe. Although there have been annual fluctuations in offset obligations between 2010 and 2018, Europe still accounted for 36% of offset value agreed with US defence contractors in 2018, the same percentage as in 2010. Even when competition was open to foreign bidders, those EU member states possessing relatively large defence-industrial bases quasi-systematically applied national preference, whereas those with smaller or no such bases often required offsets from foreign contractors. For example, Poland invoked Article 346 for procurement of F-35 jet fighters, citing the necessity to protect itself from Russia as the reason for derogating from the Procurement Directive. F35s are only available through FMS, and hence the Article 346 exception applied.

Although over 100 countries possess formal offset policies, the debate over the impact of offset continues unabated. In 2014, for example, Kuwait suspended its offset policy after criticism that overly bureaucratic processes were proving a disincentive to foreign investment. Difficulties have also been identified with the UAE’s complex and demanding offset model, with vendors purportedly struggling to discharge their liabilities. India’s offset policy is also facing criticism. In 2020, a former Indian Ministry of Defence acquisition expert called for the discontinuation of offset policy, claiming it focuses more on enforcing than facilitating offset, executes only limited transfers of technology, adds to cost and, in sum, does not work. This chorus of dissatisfaction has led to a decline in the use of formal offset. Avascent estimated that the cumulative value of offset obligations across 2006–16 would reach $500 billion. Frost and Sullivan predicted that offset would decline between 2012 and 2021 to reach $425 billion. Avascent predicted that even in an era of rising defence expenditure, offset would fall to $371 billion, although over the comparatively shorter period, 2021–25; yet, value delivered would be as low as $229 billion.

20. Ibid., p. 109.
21. US Department of Commerce, Bureau of Industry and Security (BIS), ‘Offsets in Defense Trade: Twenty-Fourth Study’, 2020. The BIS 2021 offset study offered no 2019 data on US offset programmes linked to defence sales in Europe. US Department of Commerce, BIS, ‘Offsets in Defense Trade: Twenty-Fifth Study’, 2021.
22. Ibid.; US Department of Commerce, BIS, ‘Offsets in Defense Trade: Sixteenth Study’, 2012.
23. Ioannides (ed.), EU Defence Package, p. 175.
24. Ibid., p. 110.
25. Laxman Kumar Behera, Defence Offsets: International Best Practices and Lessons for India, IDSA Monograph Series No. 45 (New Delhi: Institute for Defence Studies and Analyses, 2015).
26. Oxford Business Group, ‘Kuwait Suspends Offset Programme in Investment Drive’, 3 November 2014, <https://oxfordbusinessgroup.com/news/kuwait-suspends-offset-programme-investment-drive>, accessed 21 September 2020.
27. Andrés Ring, ‘United Arab Emirates: Tawazun Economic Program – The Tawazun Economic Council’s New Policy Guidelines’, Mondaq, 26 June 2019, <https://www.mondaq.com/economic-analysis/818694/tawazun-economic-program-the-tawazun-economic-council39s-new-policy-guidelines>, accessed 28 April 2021.
28. Countertrade and Offset, ‘Minister – “Make in India” Policy a Failure’ (Vol. 36, No. 5, 12 March 2018).
29. Countertrade and Offset, ‘India’s Former Acquisition Expert Calls for Offsets to End’ (Vol. 38, No. 16, 17 August 2020).
30. Avascent, ‘The Half-Trillion Dollar Challenge: Designing Offset Strategies to Build Reputation, Promote Development’, July 2012, <https://www.avascent.com/wp-content/uploads/2013/02/Avascent-Offsets-2-White-Paper.pdf>, accessed 15 June 2021.
31. Frost and Sullivan, ‘Military Offsets Market Looks to the Middle East and Asia-Pacific’, press release, 2013, cited by Alessandro R Ungaro, ‘Trends in the Defence Offset Market’, 17th Annual International Conference on Economics and Security, Istituto Affari Internazionali, June 2013, p. 6, <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2386528>, accessed 31 October 2021.
32. Aleksandar Jovovic, Alexis Strang and Riley White, ‘Defense Offsets Expectations Are Considerable, but Implementation is Uneven’, Avascent, 23 February 2021, <https://www.avascent.com/news-insights/perspectives/defense-offsets-expectations-are-considerable-but-implementation-is-uneven/#:~:text=Avascent%20expects%20global%20defense%20offsets%20and%20industrial%20participation%2C,in%202019%24400B%20over%20the%20five%20years>, accessed 15 June 2021. The same report noted that ‘while enthusiasm for traditional offset programs may have moderated, localization remains a common requirement’. The report further states that recent self-reported data on US company involvement in offset shows a slight decline in offset engagement. However, these trends belie a singular focus on ‘formal...
Finally, it is instructive to examine the case of the US, the world’s leading arms exporter, as it is heavily engaged in delivering offset programmes. Data on US offset activity shows that for 2018, offset transactions represented the second lowest since records began in 1993. In the following year, 17 US firms reported concluding 419 offset transactions with 25 countries, representing the lowest number of offset transactions. The decline in what might be termed ‘traditional’ offset activity suggests that disenchanted policymakers are reducing the use of offset, and instead exploring alternative business mechanisms to secure more effective infusion of skills and industrial capacity into the domestic economy. This is likely to influence present deliberations on the nature of the UK’s revised IP policy, but before attention is focused on the future, it will be helpful to consider the past.

### Rise and Demise of the UK’s ‘Successful’ Offset Model

The UK was arguably the first country to supply arms-related technology transfer when the global recession in the 1870s created a buyers’ market, enabling Japan to exploit its market leverage and demand offset when procuring warships from the Tyne and Clyde dockyards. The first of the series was built in the UK but the rest were constructed under licence in Japanese dockyards. The early technology transfer arrangements were ‘outward-oriented’, linked to British arms exports. Over 100 years later, London launched its first major ‘inward-oriented’ offset policy, tied to British arms imports; the 1988 $1.5 billion procurement of seven Boeing AWACS aircraft. Their acquisition proved controversial, because a foreign system was replacing the high-cost, locally developed Nimrod, whose technical capability had failed to meet expectations. The MoD’s decision to buy a foreign off-the-shelf aircraft was eased by Boeing’s agreement to channel work into UK defence companies. After negotiations, Boeing agreed an ‘offsetting’ work package amounting to 130% of the primary defence contract value, over a delivery period of eight years. The offset arrangement was not without its problems, however, and the lessons learned led to the creation of the UK’s first formal 1990 offset framework. The MoD, as previously stated, decided to replace the term ‘offset’ with ‘industrial participation’, connoting more accurately the policy’s key characteristic of voluntary partnership rather than offset’s norm of mandated regulation.

### There was the challenge of determining when an offset is an offset

The new IP policy addressed several weaknesses linked to the Boeing offset deal. To begin, there was the challenge of determining when an offset is an offset. Confusion arose because prior to the signing of the AWACS contract, Boeing had placed $1 billion worth of contracts with British industry and requested that ‘follow-on’ contracts be eligible as credits against the 130% AWACS offset obligation; the MoD agreed that 60% of these contracts could be counted as credits, thereby ignoring criticism from observers that such work was not new business ‘caused’ by the AWAC’s procurement. Boeing was further allowed to claim offset credits up to an $800-million ceiling on Rolls-Royce engines supplied to UK customers of Boeing commercial aircraft, indicating that potentially more than 50% of the US contractor’s offset commitments were ‘civil’ rather than defence obligations. Also, the work Boeing had placed in the UK was argued to

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33. Jovovic, Strang and White, ‘Defense Offsets Expectations are Considerable, but Implementation is Uneven’; US Department of Commerce, BIS, ‘Offsets in Defense Trade: Twenty-Fifth Study’.
34. See John Curtis Perry, ‘Great Britain and the Emergence of Japan as a Naval Power’, *Monumenta Nipponica* (Vol. 21, No. 3/4, 1966), pp. 305–21.
35. See Martin, White and Hartley, ‘Defence and Firm Performance in the UK’.
36. *Ibid.*, p. 338.
37. *Ibid.*, pp. 339–40.
38. House of Commons Defence Committee, *The Working of the AWACS Offset Agreement*, HCP 286 (London: The Stationery Office, 1989) represented the basis for the 1990 Guidelines, as cited by Susan Willett and Ian Anthony, ‘Countertrade and Offsets Policies and Practices in the Arms Trade’, Copenhagen Peace Research Institute, <https://ciaotest.cc.columbia.edu/wps/wis01/#txt56>, accessed 16 November 2021.
39. Martin, White and Hartley, ‘Defence and Firm Performance in the UK’, p. 340.
40. House of Commons Defence Committee, *The Working of the AWACS Offset Agreement*, p. xiii.
be basic technology, with a House of Commons Defence Select Committee expressing concern that ‘relatively low technology work might constitute a disproportionate share of the offset approved work’.\(^{41}\) Finally, the MoD justified its decision to acquire AWACS aircraft by arguing that the ‘job losses resulting from the cancellation of Nimrod would be equal or less than the job gains across the country resulting from Boeing’s offset proposals’.\(^{42}\) Hence, the AWACS offset package was viewed as a mechanism to ‘compensate’ British defence contractors for the loss of work caused by the cancellation of the indigenous Nimrod programme. Based on this ‘opportunity-cost’ argument, it was logical that the 1990 IP policy invite 100% reciprocal investment; that is, the full value of the defence work that had been placed offshore.

The IP policy could be summarised in just one short paragraph:

IP should represent 100 per cent of the primary defence contract value, be placed with UK companies, be defence-related, new, and be of equivalent technological level as the primary defence contract, apply to all acquisitions of foreign military equipment exceeding £10 million, the value threshold when IP requirements kick-in, and not be subject to legal contractual status.\(^{43}\)

The IP policy offered several attributes uniquely different from the traditional offset model. First, the policy was deliberately designed to be flexible, so that instead of rigid adherence to complex, prescriptive and penalty-laden offset legislation, policymakers were encouraged to be judgemental and interpretivist in reaching mutually agreeable solutions.\(^{44}\) Enhanced policy flexibility was operationalised via the IP Unit, leaving the project specifics to the commercial judgement of the offshore vendor.\(^{45}\) Final decisions were, of course, subject to compliance with the ‘one-paragraph’ policy framework, although with the caveat that the 100% offset requirement be interpreted as a ceiling rather than a floor for offset negotiations.\(^{46}\) Therefore, the UK IP policy left the composition of proposals entirely to the bidder. In doing so, it did not insist on micro specificity of IP programmes, either by mandating a minimum overall percentage of offset or directing work packages towards specific companies, industrial capabilities or geographical regions.\(^{47}\) The effect was that offset quotas were agreed based on what offshore vendors could achieve rather than on interventionist approaches that led to arbitrary, inflexible and unviable offset policy aspirations. Moreover, as IP agreements were non-contractual, carrying no legal identity, penalties were not imposed if agreed offset percentage targets were not achieved; the MoD simply communicated that it had a long memory in such matters.\(^{48}\)

Second, the policy was succinct, understandable and reflected the economic opportunity-cost of placing defence work abroad, hence the 100% requirement for local participation. As it evolved, however, the policy focus moved away from compensation towards competition to address the criticism that offset is anti-competitive and trade-distorting.\(^{49}\) This fresh approach sought to raise the visibility of world-class UK defence suppliers by encouraging overseas defence vendors to ‘search’ the UK defence economy and discover competitive partners that would potentially form part of the offshore original equipment manufacturer’s (OEM) global supply chain. Ultimately, it was based on the recognition that offset work around the world was finite and the UK wanted to position local companies to secure such work for the longer term.

Third, the IP policy aimed to remove the cost burden conventionally assigned to offset programmes. The MoD rationalised that if IP projects were driven by competitive forces rather than institutional diktat, the contentious administrative and technical

\(^{41}\) Ibid.
\(^{42}\) Ibid. This argument was subsequently discredited by academic analysis of Boeing’s offset programme job-creation data. See Martin, White and Hartley, ‘Defence and Firm Performance in the UK’, p. 136.
\(^{43}\) MoD, ‘Industrial Participation Policy Guidelines’, internal MoD document, 1990, p. 2. For a detailed explanation of the policy, see Ron Matthews and Richard Williams, ‘Technology Transfer: Examining Britain’s Defence Industrial Participation Policy’, RUSI Journal (Vol. 145, No. 2, 2000), pp. 26–31. See also author email correspondence with MoD, 3 November 2021.
\(^{44}\) Telephone interview with Adrian Dalton, former Head UK MoD IP Unit, 26 January 2021.
\(^{45}\) Ibid.
\(^{46}\) Ibid.
\(^{47}\) Ibid.
\(^{48}\) Ibid.
\(^{49}\) Ibid.
overhead costs justifying vendors to impose an offset premium would disappear.\textsuperscript{50} Indeed, in a pure trading transaction, where IP or offset does not apply, the price paid for military equipment would be the market price. Similarly, under the UK IP model, local defence suppliers would win subcontracts on a competitive basis, and therefore a premium was unwarranted. Accordingly, the IP Unit explicitly refused to accept offset premiums, and while this was not built into the IP policy ‘paragraph’, it was emphasised in the negotiations between the IP Unit and the offshore vendor.\textsuperscript{51} The unit’s policy position on premiums reinforced the distinction between a ‘directed’ approach, characteristic of most other countries’ policy stances, and the UK’s ‘hands-off’ competitive approach.\textsuperscript{52} Moreover, a by-product of a competitive market approach is that it encourages greater transparency which, in turn, reduces the potential for corruption.\textsuperscript{53}

Fourth, the IP policy proved remarkably cost-effective. The IP Unit commenced operations in the mid-1990s, and while its staffing levels varied over time, they were always low. In 2010, for example, the staff complement comprised a lead civil servant and a small number of executive staff engaged in monitoring IP commitments on MoD programmes.\textsuperscript{54} Although the IP Unit was a small operation, this belied its strategically important role of policy interpretation, implementation and oversight activities. It represented a repository of accumulated knowledge in a complex field of endeavour, providing a neutral policy bridge linking offshore vendors with UK defence suppliers engaged in producing subsystems on platforms assembled abroad. IP project values proved considerable. For example, from 1997 to 2010,\textsuperscript{55} the total value of IP generated from all defence programmes amounted to £10.7 billion, distributed across more than 2,000 firms in the UK defence economy.\textsuperscript{56} Yet, while job creation proved negligible – in common with the performance of other countries’ offset programmes – IP work packages saved manufacturing jobs, enhanced local skills, facilitated exports, provided access to OEM global supply chains and fostered R&D investment.\textsuperscript{57} This contribution to prosperity was facilitated by the UK’s mature industrial environment, possessing high technological absorptive capacity and an adaptive technology culture, reflected through creative and innovative learning behaviours. Independent assessment of the IP policy supports the view that it contributed to the development of cutting-edge metallurgy research institutes, advanced aircraft propulsion systems and communications technology exports, and overall made a positive contribution to UK industrial capability.\textsuperscript{58} However, the question remains as to whether a modified policy could have made an even greater contribution to UK prosperity.

Critical insights in response to this question are offered by an executive who managed pre-Brexit IP obligations at a UK-based foreign multinational offset provider:

> Over time we built a comprehensive understanding of the working of UK IP Policy. It reflected the local highly developed defence industrial base and was used by many within the defence industry as an additional lever to support export and expansion plans. Indeed, several notable organisations successfully exploited the policy to support their long-term stability and growth. The non-contractual nature certainly made for interesting conversations within large multi-national organisations, as did the possible adverse impact on brand and reputation through non-performance. Over time a greater appreciation of industrial and economic considerations helped shape specific policy interpretations, especially the economic impact on technology transfer and market access support. In summary, the policy worked well for the UK defence industry, but whether a wider, rather than ‘defence only’, focus could have attracted different and more advantageous projects is an interesting thesis. The defence only focus, recognising that some latitude needs to exist for dual use technologies, limited the ability to exploit UK academic capabilities and resources on the basis that this constrained how and where innovation had to be used – thereby increasing the risk of limited returns on investment, making investment less attractive. As such the policy favoured manufacturing capabilities over academic and entrepreneurial enterprise.\textsuperscript{59}

\textsuperscript{50} Ibid.
\textsuperscript{51} Ron Matthews, ‘The UK Offset Model - From Participation to Engagement’, Whitehall Report 1-14, July 2014, p. 42; email correspondence with the Industrial Participation Unit, 9 June 2010.
\textsuperscript{52} Ibid.
\textsuperscript{53} See Ben Magahy, Francisco Vilhena da Cunha and Mark Pyman, Defence Offsets: Addressing the Risks of Corruption and Raising Transparency (London: Transparency International UK, 2010).
\textsuperscript{54} Email correspondence with Adrian Dalton, 4 February 2021.
\textsuperscript{55} Industrial participation values are only available from 1997.
\textsuperscript{56} Email correspondence with Adrian Dalton, 3 November 2021.
\textsuperscript{57} Matthews, ‘The UK Offset Model’.
\textsuperscript{58} Ibid. See, in particular, pp. 69–78.
\textsuperscript{59} Email correspondence with an anonymous corporate executive at a major foreign UK-based defence offset provider, 28 September 2021.
Notwithstanding the above positive outcomes, the launch of the European Procurement Directive created legal uncertainty due to how national security was defined, representing the grounds for allowing direct offset under Article 346. This prompted the MoD to seek advice from Queen's Counsel, and its eventual negative assessment of the policy’s legality led directly to the abandonment of IP policy, and its replacement by the Defence and Security Industrial Engagement policy (DSIEP).

UK Transition from Participation to Engagement Following the Directive

Launched in March 2012, the DSIEP is not an offset policy in the conventional sense of applying pressure on offshore vendors to supply reciprocal investment. Rather, in compliance with the Procurement Directive, the policy was delinked from individual MoD acquisition competitions, dispensing with the erstwhile 100% IP target. Instead, the DSIEP sought to promote an ‘open’, voluntary, non-penal, defence-related and non-coercive approach to foreign vendor investment, based on the overarching goal of competitiveness. It encourages overseas defence contractors to place work with the UK’s defence and security companies and requires a change of stakeholder mindset away from formal industrial participation to informal engagement. This novel approach is in harmony with the thrust of the 2012 MoD White Paper, ‘National Security Through Technology’ (NSTT), resonating with its ‘wider UK perspective’.

A major theme of the White Paper was to boost investment, innovation and competitiveness in the UK defence economy, as a means of securing sustained export performance. The DSIEP initiative ‘invites’ offshore prime contractors operating in the UK to register and disclose annually the economic benefits generated through local investment into manufacturing, training and R&D. To enhance export performance, the DSIEP aims to persuade participating foreign companies to view the UK as a prime location for extending opportunities to local companies, especially small and medium-size enterprises, to become part of the foreign OEM’s global supply chain. Although DSIEP participation is voluntary, an important incentive to participate is that the annual reports are reviewed at ministerial level, representing a corporate marketing opportunity to impress the principal customer. A major potential flaw in the approach, however, is that the content of signatory submission is not audited, casting possible doubt on data authenticity.

The DSIEP is managed by Defence Equipment and Support (DE&S). The last annual report was submitted in 2016 and reflected the aggregated investment activities of 10 foreign defence company signatories, comprising AECOM, Airbus, Boeing, L3 Communications, Raytheon, Rheinmetall Defence, Rockwell Collins, RUAG, Safran and Saab, representing a combined inward investment value of £1.145 billion. However, since 2016, the DSIEP has been dormant and under review. In 2019, in a move unquestionably linked to the 2018 publication of the MoD report, ‘Defence’s Contribution to UK
Prosperity’, responsibility for DSIEP was passed to the Defence Prosperity and Strategy Team. The policy presently falls under the purview of the department's broader Industrial and Integrated Review and is yet to be reactivated. All options are on the table, but due to the coronavirus pandemic, post-Brexit industrial planning is currently in abeyance and not expected to resume until recovery is under way. Whether the ‘toothless’ DSIEP is revived, reinvented or replaced, the challenge for the MoD is to determine if the reinstatement of an appropriate offset policy will advance UK prosperity following the pandemic, the end of the Procurement Directive’s application and Brexit.

Into the Brave New Post-Brexit World...

Post-Brexit, the MoD will no longer be subject to the Procurement Directive and will thus have the political freedom to reintroduce a ‘version 2.0’ IP policy. Indeed, a revised IP framework chimes with current MoD thinking. In March 2021, it launched the DSIS, explicitly stating that the ‘UK government plans to introduce a post-Brexit revised Industrial Participation policy’. Although a pilot programme will be launched to evaluate possible options, the strategy confirms that the revised IP framework will seek to maximise opportunities for UK supply chains and, in a departure from the original policy, will apply to all bidders on a defence programme: UK and non-UK-based primes alike. Such an approach could help to retain subcontract work on the UK programme, reducing potential leakage overseas for the fulfilment of prime contractor offset obligations in other states. Thus, in a competition where, for instance, Boeing and BAE Systems were bidding, ‘all’ Boeing’s bids would be subject to IP whereas for BAE Systems the IP would be based on the work subcontracted offshore. DSIS will also remove the imposition of mandatory offset percentages calculated against the primary defence contract value, and instead encourage offshore defence vendors to voluntarily set feasible local content objectives via incentivising value-for-money national security solutions through competitive UK subcontractor engagement. This approach to IP is similar to the original version, although the conditions have been tightened.

Additionally, the revised strategy places a much greater emphasis than hitherto on onshore capability. The former acquisition approach, based on ‘global competition by default’, will be replaced by a more flexible and nuanced approach, demanding conscious assessment of markets, technology, national security requirements, opportunities to work with international partners and prosperity opportunities, before deciding the correct through-life acquisition approach for a given level of capability. The MoD will continue to welcome overseas companies to invest into the UK onshore defence economy as per its 2002 Defence Industrial Policy, encouraging international partners to co-develop and collaborate on new capability. DSIS 2021 builds on this policy by highlighting operational sovereignty to reduce external political interference and maintain the necessary capability for the government to use its armed forces as it sees fit. The ability to respond independently to urgent requirements and scenarios was emphasised in the 2012 NSTT. The DSIS arguably goes further, however, by prioritising a UK capacity to support and perhaps modify the equipment its forces depend on, thus sending a strong signal about technology transfer to foreign companies and governments that want to sell to the UK. A key element of DSIS is the MoD’s willingness to procure complex US air and maritime systems, but maintain sovereignty in systems integration, upgrades, critical component manufacture, testing and evaluation. Critically, for this to happen, it is imperative that the DE&S Integrated Project Team is tightly entwined into the new IP organisational structure.

Moreover, for the first time there are plans to incorporate wider ‘social value’ considerations into the Defence and Security Public Contract Regulations by allocating a 10% weighting to the decision criteria. It will be based on a social value model, which is broad-based, encompassing the following five categories: 1) post-pandemic recovery (including recruitment, retraining, and working with local stakeholders to facilitate reductions in...
crime and poverty); 2) economic inequality (such as supporting disadvantaged persons in deprived regions, providing accessibility to the disabled, creating more apprenticeships and employment opportunities in supply chains, and forging greater resilience, especially reductions in cyber vulnerability); 3) climate change (particularly, the net zero 2050 carbon initiative); 4) equal opportunities (with a focus on transparency, inclusivity, non-discrimination, gender equality and slavery risk reduction); and 5) wellbeing (such as addressing all aspects of mental health, including loneliness). 72

The heightened focus on prosperity foregrounds tensions between operational sovereignty and budgetary constraints

The government’s attempt to embrace social goals through its procurement regulations represents a radical démarche from conventional practice. Only a few other countries have followed a similar policy route, including South Africa through its efforts to promote Broad-Based Black Economic Empowerment policies as regional secondary benefits linked to the 1998 Strategic Defence Procurement Package. 73 Brazil and New Zealand mention social benefits in their offset policies, while Colombia is reportedly requesting foreign contractors to provide a mix of 60% aerospace projects and 40% social programmes in its offset and G2G programmes. 74 Although implementation of the UK MoD’s social value approach remains vague at this time, what is clear is that its criteria will not be applied to overseas tender evaluation, though with the caveat that ‘where possible [MoD officials] should try to apply the model’. 75 The passage of time should reveal the nature of operational challenges, but in its present form the social value model, at least in foreign defence procurement, does not signal an abandonment of light-touch laissez faire policies in favour of a dirigisme regime.

The wider ‘economic’ features of the social value model are in harmony with the broader government drive to promote national security not just from the traditional military context, but from the standpoint of economic security. The promotion of defence as a vehicle for ‘prosperity’ commenced with the 2018 Dunne Report, 76 and has since been a constant theme in defence policy. The DSIS highlights the ‘need to ensure that the UK continues to possess competitive, innovative and world-class defence and security industries that underpin national security, drive investment and prosperity across the Union … [and] contribute to strategic advantage through science and technology’. 77 In this regard, defence is viewed as a positive force, promoting prosperity through skill generation, higher value-added activity, innovational spin-offs, defence export revenue and supply chain impacts, as well as acting as a catalyst for development ‘levelling-up’ across all nations of the UK.

This heightened focus on prosperity foregrounds tensions between operational sovereignty and budgetary constraints, as reflected in the recent tortuous debate over the Fleet Solid Support ships (FSS) programme. In 2019, the House of Commons Defence Committee heavily criticised the government’s initial decision to categorise the ships as ‘non-combatant’ on two grounds: first, rather than issuing an open competition tender, enabling lower-cost bids from overseas state-subsidised companies, the government should have taken a longer-term view that a very substantial part of any money spent in the UK is returned to the Exchequer through VAT, corporate taxes, income taxes and a healthier local economy which might outweigh any savings made by foreign construction and, if necessary, provide the extra in-year funding the MoD may need for construction; 78 and, second, even if the
post-Brexit deal retained aspects of EU regulation, the FSS ‘warships’ could still have been built in UK yards because under Article 346 they would have qualified for exemption on national security grounds. Subsequently, the government relented and announced that the FSS ships were warships and would be integrated in UK dockyards.

The parameters of the proposed revised IP framework as outlined in the DSIS reflect similar characteristics of what is termed ‘industrialisation strategy’, representing a recognition that imperfections, such as high levels of governmental interventionism, exist in the defence market, and thus the best way forward is via ‘second-best’ pragmatism, rather than classical market liberalisation. Industrialisation strategy offers a broad rubric that goes well beyond offset, enveloping other commercial arrangements, including subcontract work and joint ventures. The strategy offers a ‘holistic’ approach, devoid of obligatory reciprocal imperatives. Under commercial arrangements, the recipient country’s requirement for in-country work would not include rigid offset percentage targets, penalties or offset premiums, and any agreed reciprocal investment would need to be acceptable to both the vendor and recipient country offset authority. Compared to offset, the mutually agreed reciprocal investment/workshare is embroidered into the procurement bid, and forms part of the primary defence contract.

Industrialisation strategy has become common practice in the Middle East and Europe, although arguably Australia’s policy framework has the highest profile. Indeed, the Australian model offers an interesting case study of the abandonment of a prescriptive inward offset policy that was replaced by a variety of policies designed to promote indigenous industrial priority capabilities. Australia’s forward-thinking defence industrial framework is not based on rigid mandates, but via a partnership with the offshore defence vendor, characterised by high levels of flexibility, a complete absence of prescription (no targets, penalties or credits), and yet contractual certainty. While Canberra offers no official guidelines or parameters regarding reciprocal vendor investment, bids must incorporate opportunities to maximise local industrial involvement and, where appropriate, eventual export opportunity. Significantly, there is a civil component to the model, with three broad-
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based economic objectives identified as efficient Australian resource use, raised productivity and sustainment of local industry capabilities. Strategic civil priority industry sectors include cyber security, food and agribusiness, medical technologies, mining equipment and energy resources. The targeted level of local participation is flexible, but for defence programmes there are reports that between 50% and 60% has been achieved on the Future Frigate Programme and the Air Warfare Destroyer.85

Building on the UK’s earlier proven IP policy experience, a tailored version of Australia’s flexible partnership approach looks eminently sensible, and in theory should work more effectively in the UK, possessing a more robust and resilient defence industrial base. While perfect solutions to effective defence procurement and associated workshare agreements are notoriously elusive, the Australian model, as argued by Brinley Salzmann, director of ADS, has been shown to drive and encourage the creation of stable, long-term partnerships, enabling local firms to try to break into the supply chains of major international offshore prime contractors – and is thus widely perceived to be much more advanced than standard and traditional offset-type policies, whose commercial and industrial benefits can often prove to be short-term and fleeting.86

Conclusion

Adam Smith’s classical theoretical perfect market construct is far removed from the realities of the 21st-century global defence economy. Today, the global defence market operates at the extremes of market imperfection, with almost every major decision involving weapons expenditure, production and export requiring government oversight and approval. Of course, there are significant civil–military overlaps, but all forms of transfer of knowledge and technology, including the ‘grey’ activities of dual-use systems, must be carefully managed by the authorities. While the defence industry is small relative to national income and aggregate employment, its size belies the sector’s strategic importance, given that it operates on the cusp of high technology, with the potential of contributing to the wider economy. In a targeted way, IP-induced investment can offer technological and prosperity benefits. IP simply represents another incremental market imperfection, and to reduce the risks of resource misallocation, corruption and incremental cost, policies are required that promote transparency and competition as occurs in the broader commercial sector.

There is thus merit in launching a revised IP framework, noting that the original policy generated over £10 billion worth of inward investment over a 13-year period. Long-term mutually beneficial defence industrial partnerships were forged with powerful US OEMs, culminating in substantial contributions to UK prosperity. Building on this momentum, the UK’s post-Brexit intention to explore the potential of implementing a revised IP policy is a sensible step forward. The Australian ‘industrialisation strategy’ reflects a loosening of the prescriptive constraints of traditional offset by removal of non-competitive practices and associated costs, with technology transfer requirements captured via ‘voluntary’ agreements within the primary defence contract. Strategic civil and dual-use IP investments are eligible, and while wider economic benefits apply, the model stops short of social value considerations. In the UK context, emulating the Australian approach would arguably achieve stakeholder goal congruence by simultaneously advancing UK corporate shareholder value, defence-industrial sovereignty, and economic prosperity, which, when combined, will act to strengthen broad-based national security.

Ron Matthews holds the Chair in Defence Economics at the Centre for Defence Management and Leadership, Cranfield University at the UK Defence Academy. He publishes widely on defence economics and has a global reputation in the field of defence offset.

Jonata Anicetti is a PhD candidate at the European University Institute (Italy), where he studies recent trends in defence offsets. He has an interest in international security, defence and globalisation.

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indicates that offshore vendor investment commitments now apply to all defence contracts above AU$4 million with the aim of stimulating broader economic benefits.

85. Defence Connect, ‘50% Industry Participation Target for SEA5000 Slammed’, 30 January 2018, <https://www.defenceconnect.com.au/maritime-antisub/1827-50-industry-participation-target-for-sea-5000-slammed>, accessed 20 October 2020.

86. Email correspondence with Brinley Salzmann, 28 September 2021.