Regional Economic Engagement : Local Sector Briefing

Dorset: Advanced Engineering

Introduction

The Advanced Engineering (AdE) sectors of Dorset and its surrounding areas constitute an important 'beacon' of strong development in the local economy. They tend to be at the forefront of innovation and skills, engaged with important, high value added supply chains and 'shine a light of best practice' for other manufacturers and services across the County.

In broad terms, depending on the definition used[1], these activities account for 3.4% of Dorset employees and 1.2% of enterprises (2016). Locally, the industry has some medium-to-large, mostly tier 2 manufacturers, and other engineering firms covering many different activities, but all delivering to a high value business client base at home and abroad. This client base covers the range from defence products, through transport, to consumer goods.

AdE represents an 'island' of high value added with an important export component locally, offering a global context for investment-led growth. Given the lack of productivity and overseas engagement generally in the Dorset economy, and given the pressing need to improve on this record because of the trade adjustments now foreseen (BREXIT and Trump), AdE and other 'beacons' of growth will be a vital component of future economic activity.

AdE offers relatively well-paid jobs and good growth potential. Keeping and growing this capacity locally should be a prime ingredient for any development strategy and investment delivery in the years ahead.

[1] Engineers tend to define AdE in terms of the technical processes of production whereas economists tend to define it in terms of the sector or product produced.

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Economic Context

AdE is difficult to define because it includes a diverse range of products and industrial processes, within and between traditional sectors as they are recorded in the official statistics. For our purposes, AdE constitutes a range of manufacturing sectors, including

1) Aerospace
2) Motors and other transport (other transport)
3) High tech computers and instruments (technology)
4) Other electrical and mechanical machinery (equipment)

(Some commentators would not include all of sections 2 and 4 in AdE because they include fabricators that are not 'advanced' in technological or product terms. However, even 'basic' outputs might still be incorporated into high value AdE products and it is almost impossible to separate them out, statistically. Other analysts might include aspects of chemicals or pharmaceuticals in AdE.)

Manufacturing as a whole constitutes about 10% of UK output (GVA, 2015). This ratio has fallen steadily over recent years. The equivalent ratio for Dorset is about 12%. AdE can amount to about a third of total manufactures.

In the Dorset economy, AdE is not spread equally across the County. For example, whilst in total it amounts to nearly 11,000 employees (about 3.4% of total employees), the range is wide (see first table below) in terms of absolute numbers and local shares.

It is important to understand this breakdown in order to distinguish relative local/county wide importance. For example, Poole is clearly the centre of Dorset AdE in absolute terms (c4,000 employees) but Christchurch (7.8%) and Purbeck (6.8%) derive higher job shares from the sector.

AdE employees in Dorset (2016)

	Jobs	%		Jobs	%
Bournemouth	900	1.1	North Dorset	850	3.6
Poole	4000	5.2	Purbeck	1150	6.8
Christchurch	1500	7.8	West Dorset	750	1.5
East Dorset	1100	3.6	Weymouth & Portland	530	2.9

Source: ONS-NOMIS – rounded to avoid disclosure issues.

Another way to break down the AdE distribution is to look at enterprises (see next table below). On average, AdE accounts for only 1.2% of all Dorset enterprises, because they tend to be bigger units. So, the ranges within Dorset are narrower on this measure but the pattern is similar, with AdE less important to Bournemouth and North Dorset than in Poole, Christchurch and East Dorset.

AdE enterprises in Dorset (2015)

	No.	%		No.	%
Bournemouth	35	0.6	North Dorset	30	0.9
Poole	95	1.6	Purbeck	30	1.5
Christchurch	40	2.0	West Dorset	60	1.1
East Dorset	70	1.6	Weymouth & Portland	20	1.1

Source: ONS-NOMIS – rounded to avoid disclosure issues.

Sector Employment

Looking at AdE employment in more detail, on the basis of the four group sectors identified earlier, the Dorset conurbation (defined for this purpose as Bournemouth, Poole, East Dorset and Christchurch) and the County area (Purbeck, West Dorset, North Dorset and Weymouth and Portland) have the aggregated employment characteristics shown in the next table.

Aerospace amounts to 12% of the AdE total, other transport 26%, technology (17%) and equipment (44%). The conurbation provides 70% of the Dorset total employees for AdE and employment is particularly concentrated there in aerospace (95%).

Dorset: AdE Employee Jobs (2016, no.)

	conurbation	county	total
Aerospace	1235	60	1295
Other Transport	1765	1080	2845
Technology	1220	600	1820
Equipment	3305	1530	4835
Total	7525	3270	10795

Source: ONS – NOMIS – rounded to avoid disclosure issues.

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Spatial Employment

Compared with its neighbours, in absolute terms, Dorset's total number of AdE jobs is less. But, reflecting the relative scale of the economy as a whole, Dorset can argue that it has some concentration in these sectors.

The near 11,000 jobs in Dorset AdE (as table below) compare well with a similar number in Swindon and Wiltshire, nearly 26,000 in Devon and Somerset (Heart of the South West LEP), almost 15,500 In Enterprise M3, and just under 18,000 in Solent.

Dorset & Neighbouring LEPs AdE Employees (2016, % of total economy)

	Dorset	HoSW	Sw+Wilts	Solent	Ent M3
Aerospace	0.4	0.8	0.1	0.8	0.3
Oth transport	0.9	1.3	1.8	0.6	0.4
Technology	1.2	0.9	1.1	1.3	0.9
Equipment	0.9	0.7	0.6	0.8	0.6
Total	3.4	3.8	3.6	3.5	2.1
Total No.	10795	25860	10925	17825	15455

Source: ONS – NOMIS - rounded to avoid disclosure of particular firms

The real issue is whether Dorset performs well in terms of quality as well as quantity. This cannot be derived from the raw data but from experience dealing with local firms, the summary must be that performance is "middling" – e.g. a low share but good quality in aerospace compared with rivals and a high share in some of the technology areas.

Business Demography

Regionally, AdE tends to constitute a few medium-sized firms together with a number of smaller providers. In Dorset, the former group is typified, amongst others, by Cobham and Meggitt in aerospace and BAe, Atlas Electronik and Aish Technologies in defence.

There is a mix of ownership and trading patterns, with some being part of/subsidiary to larger international entities, some more or less orientated to overseas primes and some providing products to a range of 'industrial or product' sectors, such as aircraft, other aerospace, military equipment, marine engineering, construction and consumer products.

AdE companies cover a range of high-tech products, often supplied at a global or national level. Their decisions about local investment in particular activities within a global or national context (on-shoring, offshoring and near-shoring), can have a major impact on the value added in the local economy, its workforce/skills requirements, and its trends of growth in output and incomes over time.

Moreover, they operate as a 'beacon' of best practice for other companies to imitate. This enables other entrepreneurial business spin-offs to start, to grow and to develop. They can be a 'catalyst' for technical process and product change. To summarise, Dorset does not have everything in the spectrum of AdE but what it has is good quality, a healthy business creation and growth culture exists and constructive and destructive innovation is underway.

Risks to Local AdE

Maintaining a vibrant AdE sector is vital to the Dorset economy. There are potential risks, however, because global, high tech manufacturing can be 'footloose', moving to where market, technological, fiscal and other environmental or political factors are relatively attractive. Many of these factors, especially on broad policy matters such as relative corporate tax rates, are beyond the influence of those engaged in local economic development.

Where possible, however, the key is to maintain local 'stickiness' of investment in productive capacity by providing the infrastructure and connectivity, skilled workforce, and broader business and social environment that encourages major employers, rapidly growing enterprises and their supply chains to stay and to grow.

Investment is encouraged by certainty, competitiveness, agglomeration and openness: the demonstration that a locality is 'open for business' by being able to attract net productive, new inward investment and skilled migration.

Right now, a major risk to these elements of "stickiness" for Dorset is the uncertainty for investment intentions created by the forthcoming negotiations to remove the United Kingdom from the European Union and by the change of presidential administration in the United States. There are dangers that some AdE players will re-orientate future real investment away from this county/country to elsewhere in the EU or America, or further afield, especially if protectionist sentiments gain traction in some of these major markets.

Concluding Remarks

Dorset has significant AdE activities, largely matching those of the economy overall (and our neighbours) in share and scale terms but with some important specific specialisms and characteristics, notably a tendency towards more externally orientated constituents (such as aerospace in the eastern conurbation).

This spread creates a mutually reinforcing flow of workers and services, within and without, the local area that is highly responsive to 'events' in the broader economy and the policy background.

It also reveals a degree of 'beacon' and 'catalytic' behaviour – the former shining a light on industrial 'best practice' for others in the industry and beyond to imitate and the latter providing a stimulus to creative and disruptive change. These are both key dynamics of growth in a modern economy.

The Dorset economy benefits from its AdE activities. Actors in local development would do well to encourage the retention and expansion of AdE capacity because it is a generator of high value activity and jobs.

Local public and business partners may not easily influence some of the global or national pressures that drive the process of growth and development in this sector. They can help, however, to create the conditions for relative 'stickiness' amongst key workers and decision makers by promoting an environment for sustainable growth, especially in terms of infrastructure for growth, skills provision and support for innovation, entrepreneurship and export engagement.

Dorset's physical location is supportive in terms of its environment, wealth and networking. This helps to maintain a pool of talent and to drive investment forward.

There are some weaknesses, however, ranging from intense competition from other UK and overseas centres, particularly in aerospace. Dorset could usefully develop its agglomeration characteristics further (from connectivity to community), in order to promote a viable 'cluster' of locally, nationally and globally successful businesses: one that is networked to the wider AdE supply chains yet is resilient to change in its own right.

AdE is a sector where market, technical and policy change is frequent and, working closely with local development specialists, is vital to structural cohesion. This is particularly relevant in the area of skills and training, where gaps and mismatches are often cited as factors restricting local expansion.

Finally, the UK decision to leave the EU casts a shadow over parts of AdE. Already, major manufacturers, including Airbus, have spoken about orientating future investment and/or moving some activities away from UK sites/supply chains. If implemented, such decision would have negative implications for the existing local supply chain, casting a shadow over the prospects for further inward investment in the medium term (especially given the danger of a protectionist presidency in the United States).

There is always a balance to be struck between indigenous and externally driven growth. The key is to build integrated 'stickiness' between the two with an approach to local economic development that ties major companies to an area, e.g. supporting local capacity to be efficient and effective in relation to external and internal competitors and indispensible to head office decision makers, whilst allowing the preponderance of smaller, local operations to innovate and grow within both the local and wider geographies.

Against this background, it is important for the local development community to work with local firms to understand where damage may occur to external trade and supply patterns (post BREXIT and Trump). Initiatives to prevent, limit and mitigate against the possibility of unfavourable shifts in investment and capacity may become more important.

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