

# What's driving your regional economy?

A comprehensive analysis of the key local industry clusters in Basingstoke and Deane



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# Clusters and economic growth

Economic development hinges upon attracting, retaining and growing businesses, and sound economic strategy starts with identifying the industries those businesses should come from. The ONS Standard Industrial Classification (SIC), while a powerful means of organising business data, looks at business activity through the lens of product and process. But in today's connected economy, it is not isolated product and process that matter, but the connections from supply to demand. As Delgado et al. (2016) argue, "the agglomeration of related economic activity is a central feature of economic geography".<sup>1</sup>

Following a similar methodology, Emsi's UK cluster definitions help to capture those connections within a local economy: we have grouped industries using data on their tendency to co-locate in the same areas; their reliance on similar workforces; and their supply chain connections, in buying and selling to one another. The result is 49 coherent clusters which offer rich insights into the forces driving local economic development. Those clusters are then put into two groups:

- **35 tradable clusters** are made up of industries which tend to focus in particular regions, because their products and services can be delivered at distance – manufacturing and certain business and professional services make up much of this group.
- **14 local clusters** are composed of the industries which tend to be spread across all areas, serving local residents in ways which can only be done where they live: retail, health, schools, restaurants.

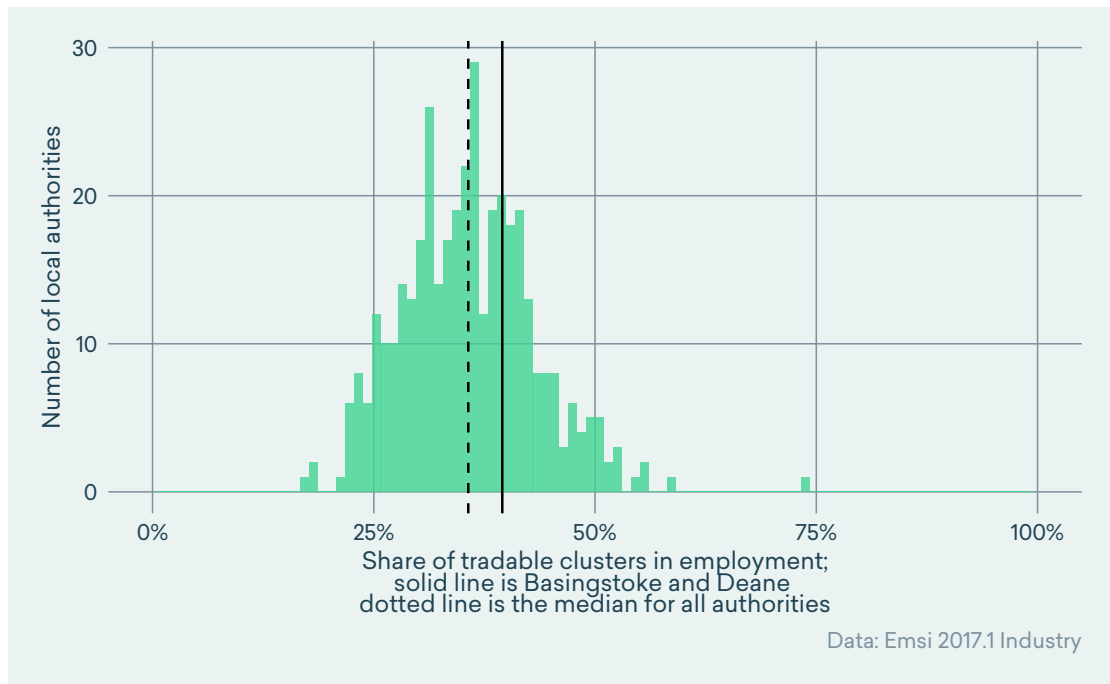
More jobs in tradable clusters typically mean greater connection with the national and global economy, and growth in tradable jobs tends to have positive 'multiplier' effects.<sup>2</sup> Local clusters are often highly labour-intensive and score highly in terms of local job numbers, while tradable clusters tend to feature greater levels of pay and productivity. At 39.5 per cent, Basingstoke and Deane has a relatively high share of employment in tradable clusters, at the 70th percentile among local authorities (Figure 1).

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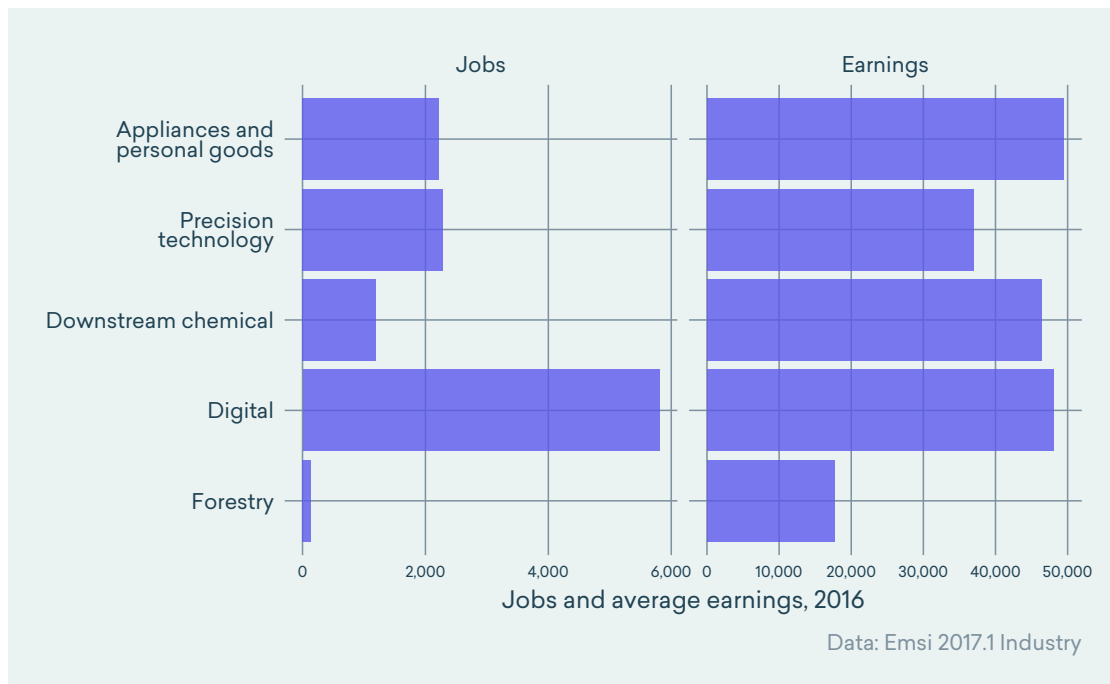
<sup>1</sup> Classic references to agglomeration are Marshall (1920) and Krugman (1991). For the role of clusters in measuring agglomeration, see *inter alia* Ellison and Glaeser (1997), Porter (1998) or Delgado et al. (2014).

<sup>2</sup> See e.g. Moretti (2010) and Faggio and Overman (2014).

**Figure 1:** Basingstoke's share of tradable industries



**Figure 2:** Basingstoke's Top 5 clusters by LQ, jobs and earnings 2016



# Leading clusters in Basingstoke and Deane

Figure 3 measures each cluster in terms of job numbers in 2016. Reflecting their labour-intensive nature, local clusters take a prominent role, accounting for 8 out of the top 10 highest employing clusters, and 82 per cent of jobs in that top 10. The highest employing cluster is health and care with 8,896 jobs (10.8 per cent of total employment), followed by education and childcare with 7,312 jobs.

Jobs numbers can be misleading: these clusters employ many people in all communities. Location Quotients (LQ) provide a clearer signal on what drives local economic growth. By dividing the local job share of a cluster by the national average job share, LQs highlight relative specialisms in local economies. Typically, a Location Quotient above 1.2 is taken to indicate a significant concentration in employment in that cluster. 4 gives the LQ ranking of clusters in Basingstoke and Deane, demonstrating:

Appliances and personal goods is Basingstoke and Deane's most specialised cluster with a Location Quotient in 2016 of 3.61. Precision technology is second (LQ 3.25) and downstream chemical is third (LQ 2.28). One of the noteworthy features about a LQ ranking is that it measures local significance, not absolute job numbers; so appliances and personal goods employs much less than health and care; only 2.7 per cent of the workforce.

Clusters ranked top by LQ are much more likely to be tradable: 8 out of the top 10 clusters by LQ are tradable. Employment levels are generally low, with these leading tradable clusters employing 15,373 jobs, 18.6 per cent of total employment. While often not high in employment, as seen by a focus on the top 5 specialised clusters in Figure 2 (jobs, left panel), leading clusters – especially tradable ones – often exhibit high average wages.

Further analysis of clusters' tradability can be seen in 5, which compares clusters in Basingstoke and Deane by their 'Revealed Comparative Advantage' (RCA). RCA is measured similarly to Location Quotient, but offers the ratio of a cluster's share of Basingstoke and Deane's exports to that cluster's share in total exports. The difference to normal export analysis is that 'exports' are defined as sales to any area outside Basingstoke and Deane – so sales to a neighbouring district or to a foreign country count as exports. High RCA industries are those where Basingstoke and Deane clearly have a Comparative Advantage – they sell more elsewhere than is normal for a local authority district.

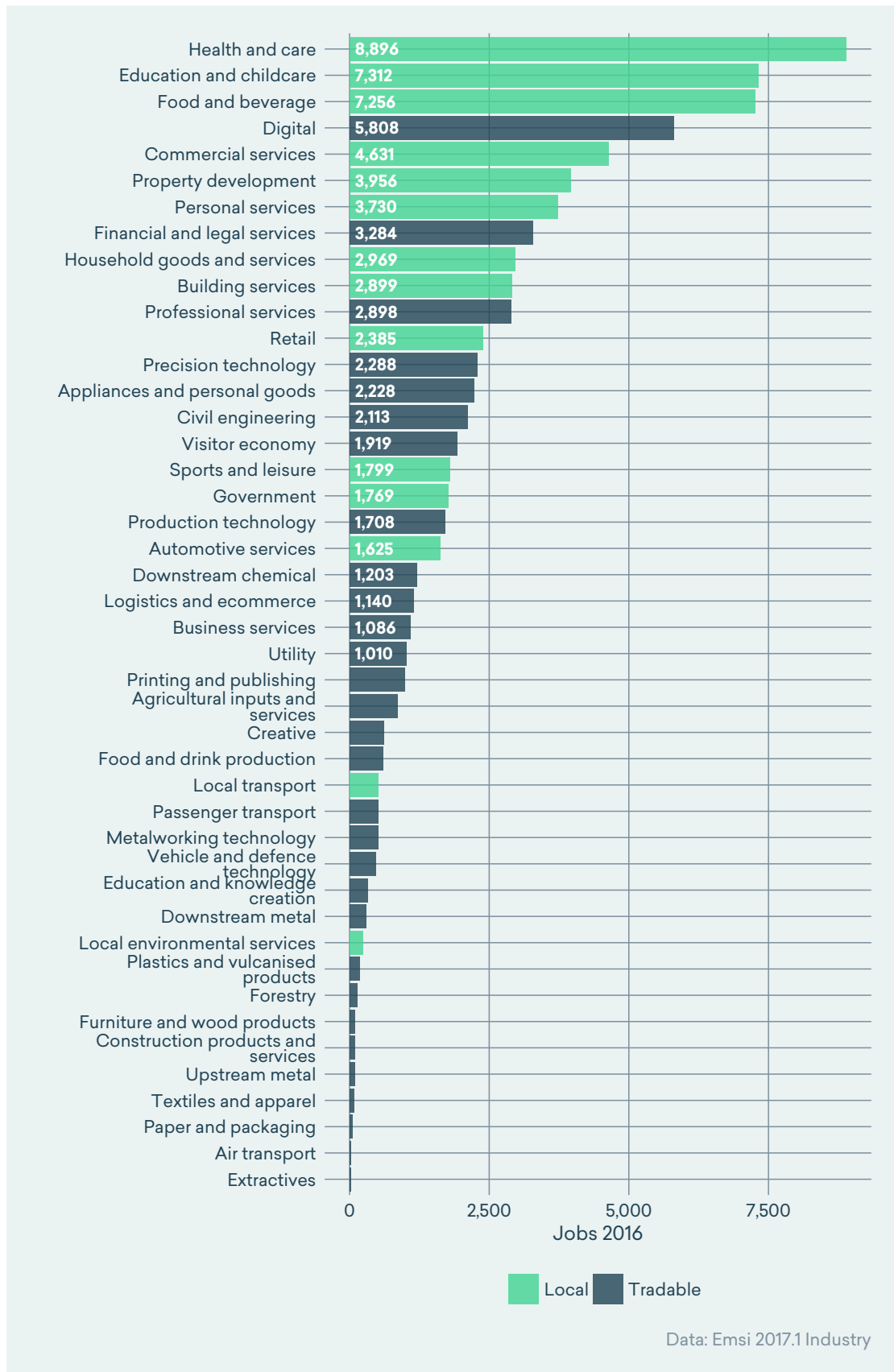
Figure 6 and 7 repeats the LQ analysis, but this time rather than comparing the cluster employment share with the Great Britain average, they compare it with the average at the parent Government Office Region (South East), Local Enterprise Partnership (Enterprise M3) and County (Hampshire CC) respectively. In each case, the Great Britain-level LQs are repeated (the smaller, faded

dots) to allow for comparison. Changing the context for LQ analysis can lead to a different sector proposition, by identifying where specialisms reflect wider regional strengths or where a cluster may be unremarkable nationally but important within the region.

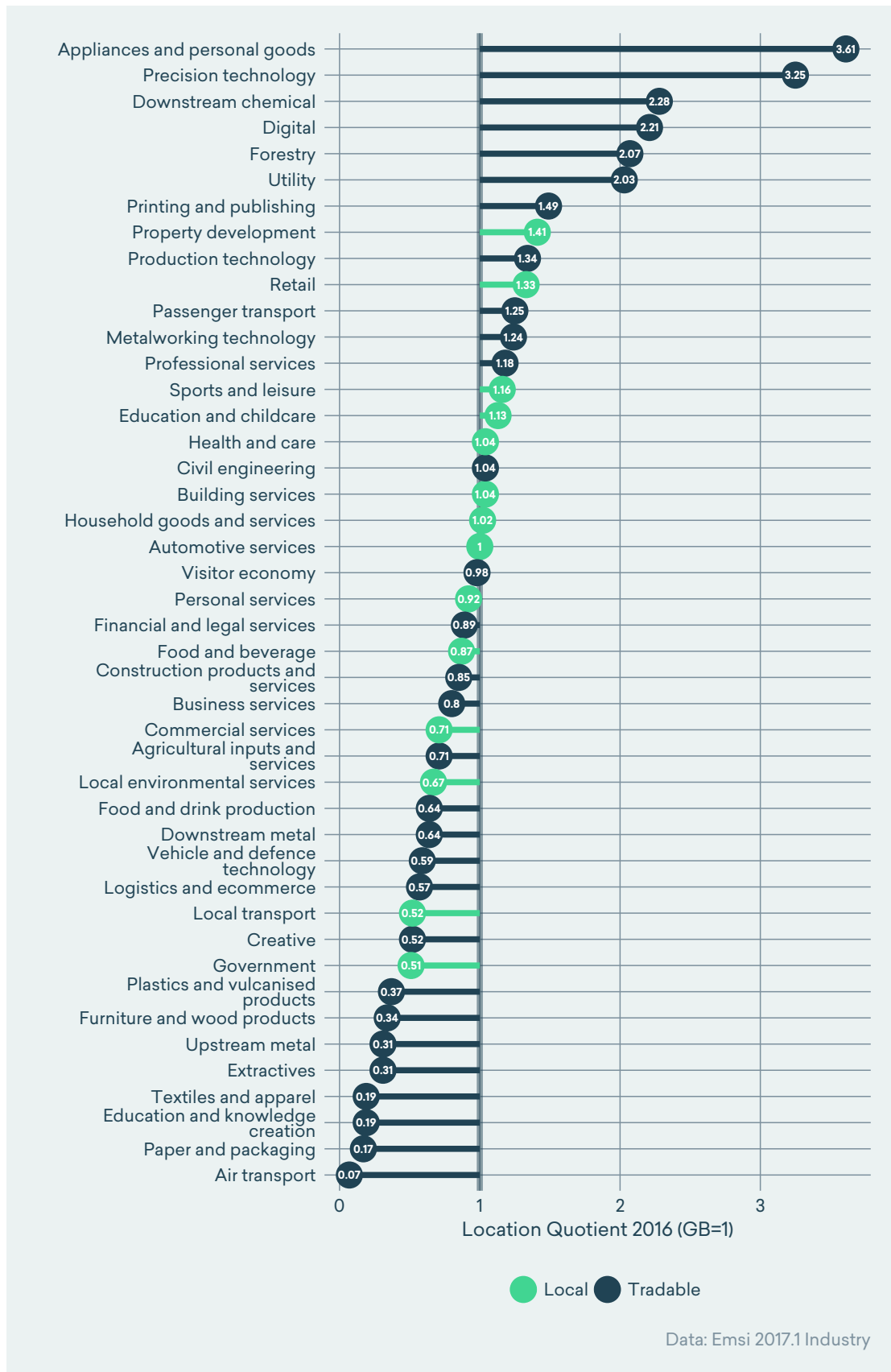
So for example, food and drink production moves from a location quotient of 0.64 when viewed nationally to an LQ of 1.59 when viewed at the Enterprise M3 LEP level, becoming a prominent specialism when viewed regionally. On the other hand, digital has a national LQ of 2.21 which becomes an LQ of 1.05 at the LEP level.

*A full ranking of clusters by their GB-level Location Quotient, along with cluster descriptions and 2016 jobs, LQ and average earnings, is provided after Figure 4.*

**Figure 3: Industry clusters ranked by job count**



**Figure 4:** Industry clusters ranked by GB Location Quotient 2016





**Figure 5: Industry clusters ranked by Revealed Comparative Advantage 2014**



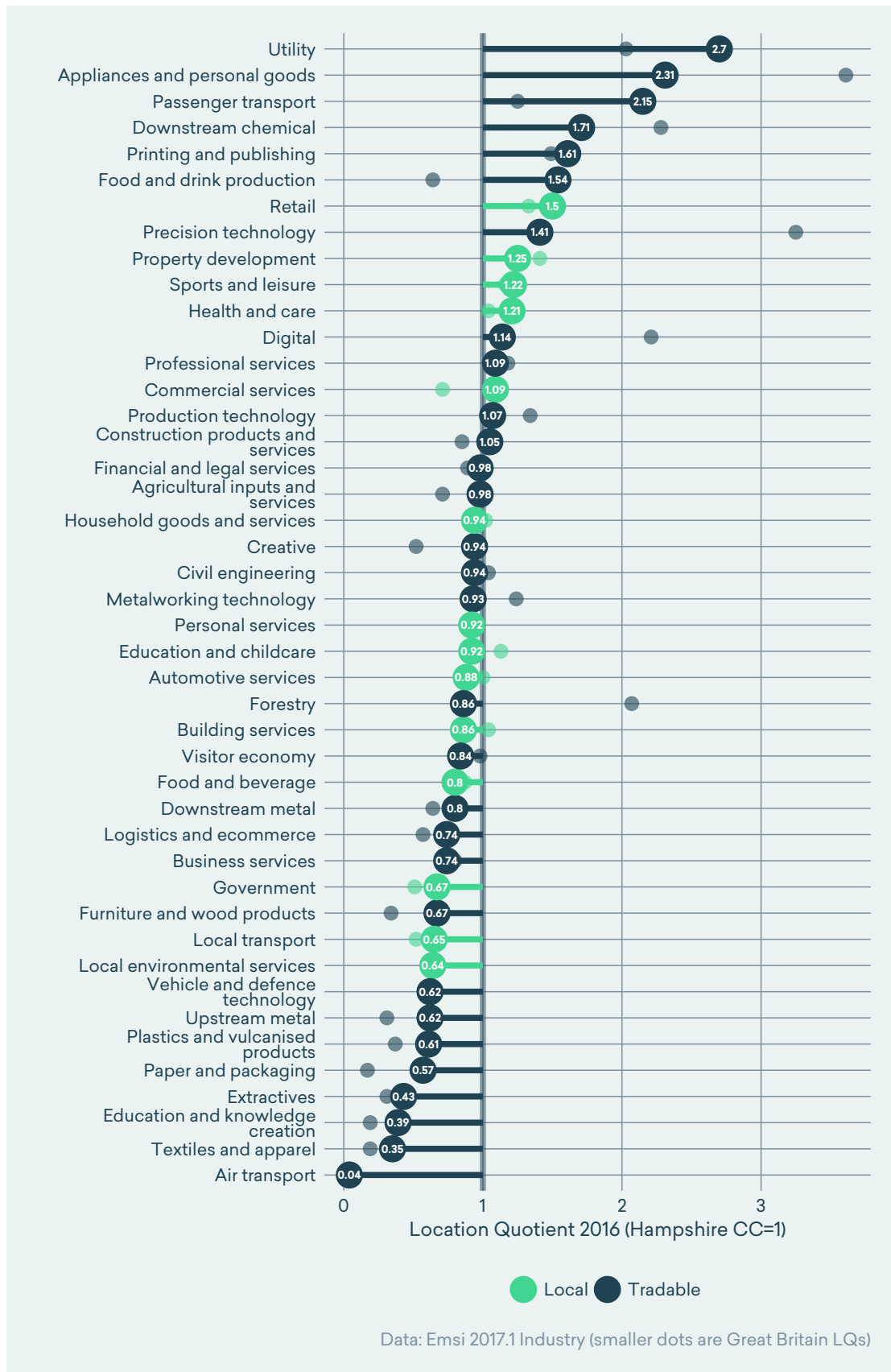
**Figure 6:** Industry clusters ranked by South East Location Quotient 2016



**Figure 7: Industry clusters ranked by Enterprise M3 Location Quotient 2016**



**Figure 8: Industry clusters ranked by Hampshire CC Location Quotient 2016**



# Cluster growth trends 2011-2016

As well as looking at Basingstoke and Deane's current leading industry clusters, we can also explore how these are likely to change in the years ahead. Emsi's job counts are tracked from 2003 and projected forward to 2024, allowing for analysis of how the mix of jobs will change over that time. For example, we can identify that over the past five years, health and care has been the biggest source of net new jobs, adding 2,118 through that time, while personal services has lost the most, with 3,552 net jobs lost.

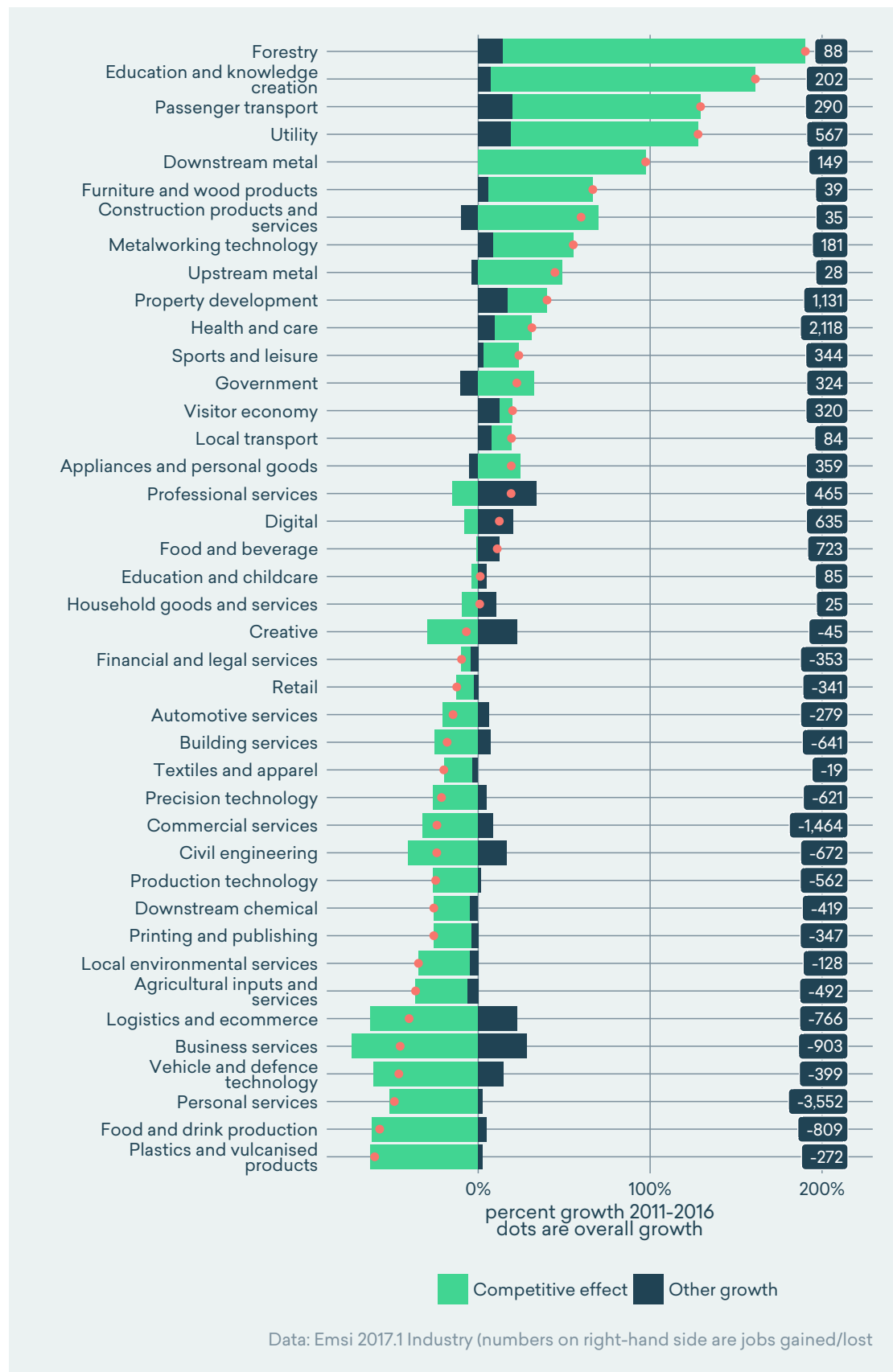
Because we have data for the entire British economy, we can also break down whether job gains and losses are attributable to national factors, or else to local competitive shifts. This 'shift-share' analysis compares what happens to jobs for a particular industry cluster by seeing how much overall cross-cluster job growth would generate, how much the existing mix of cluster employment within Basingstoke and Deane would change given national trends, and then the remainder, which can only reflect local factors.

Figure 9 sets out the results of this analysis, breaking down each cluster in terms of overall growth, and then the contributions of local factors ('Competitive effect') and other factors, such as national trends. Overall, we see the strongest relative growth in forestry, adding 190.3 per cent growth or 88 net new jobs.

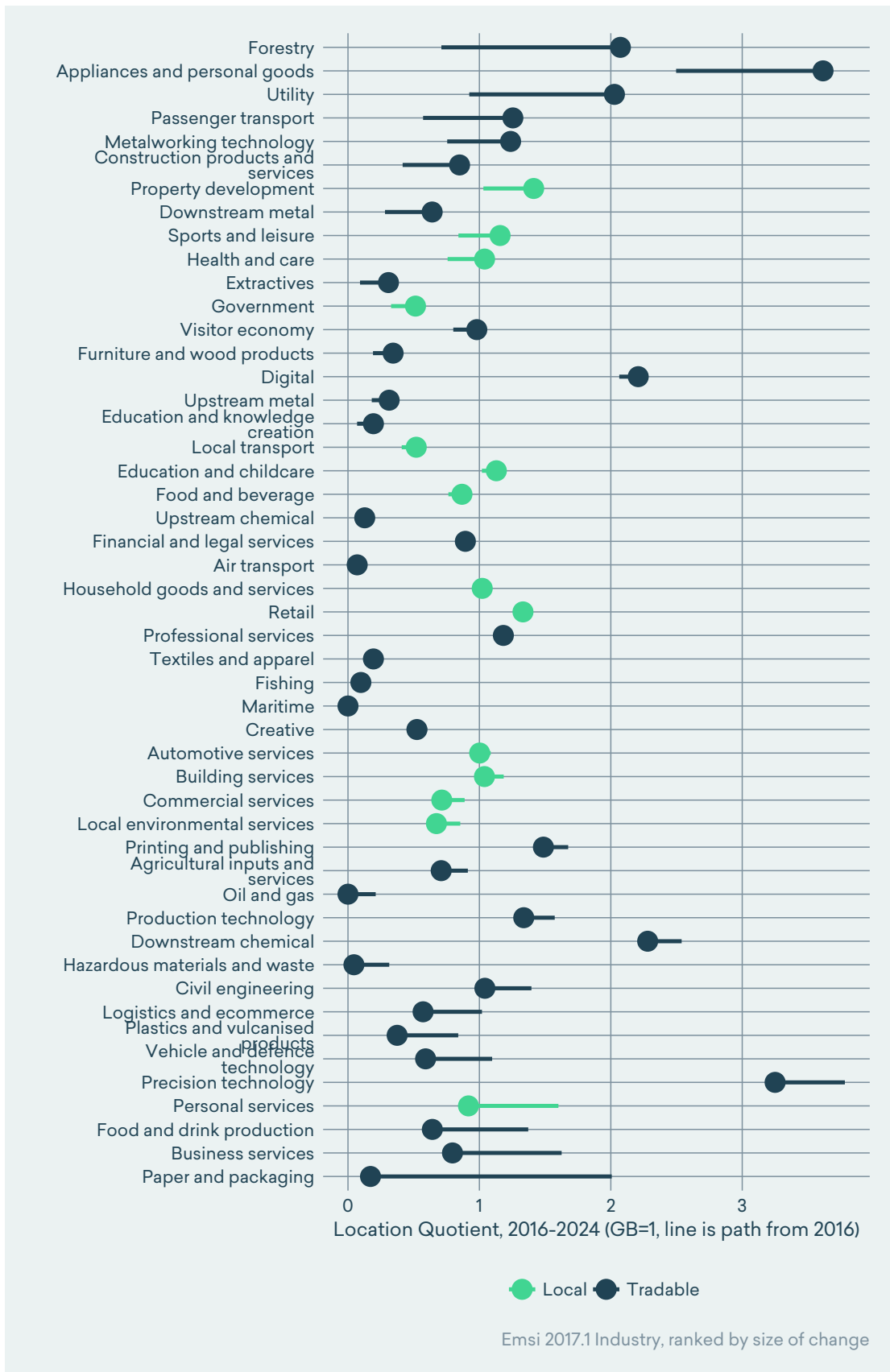
But the largest contribution from local factors comes from creative, where total growth of -6.9 per cent masks a 22.8 per cent growth rate from national and cluster mix factors, and a -29.7 per cent growth rate from local factors.

The consequence of growth through local competitive factors is a projected change in the Location Quotient. If, for example, creative is performing in excess of national trends (and this can either mean faster growth, or slower decline), then the share of jobs locally will rise relative to that nationally, and so the LQ will also grow. We can see the effects of this in Figure ??, with shifting LQs reflecting those competitive effects.

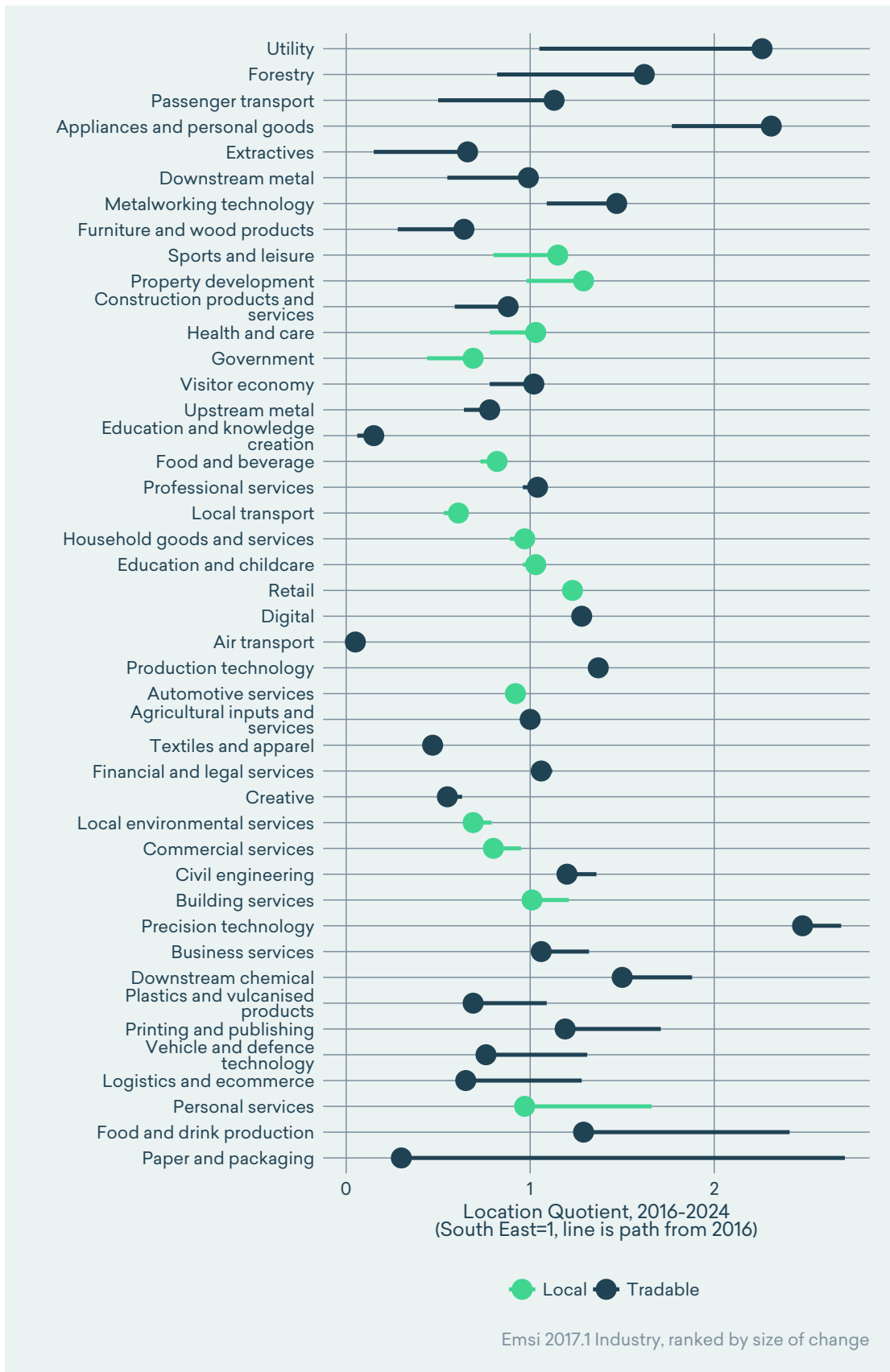
**Figure 9: Industry clusters ranked by change 2011-2016 shift-share analysis**



**Figure 10: Industry cluster change in GB Location Quotient, 2011-2016**

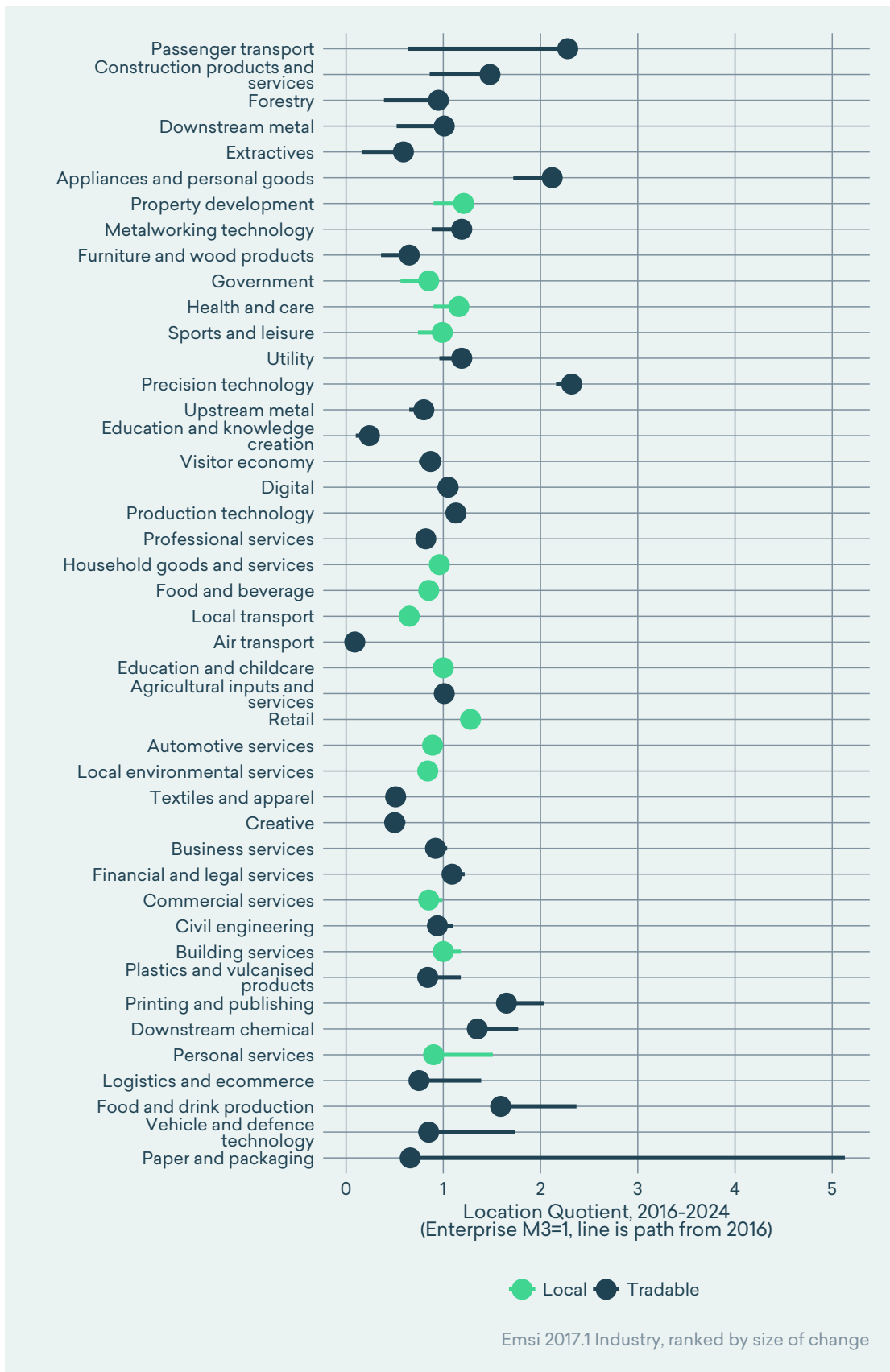


**Figure 11: Industry cluster change in South East Location Quotient, 2011-2016**

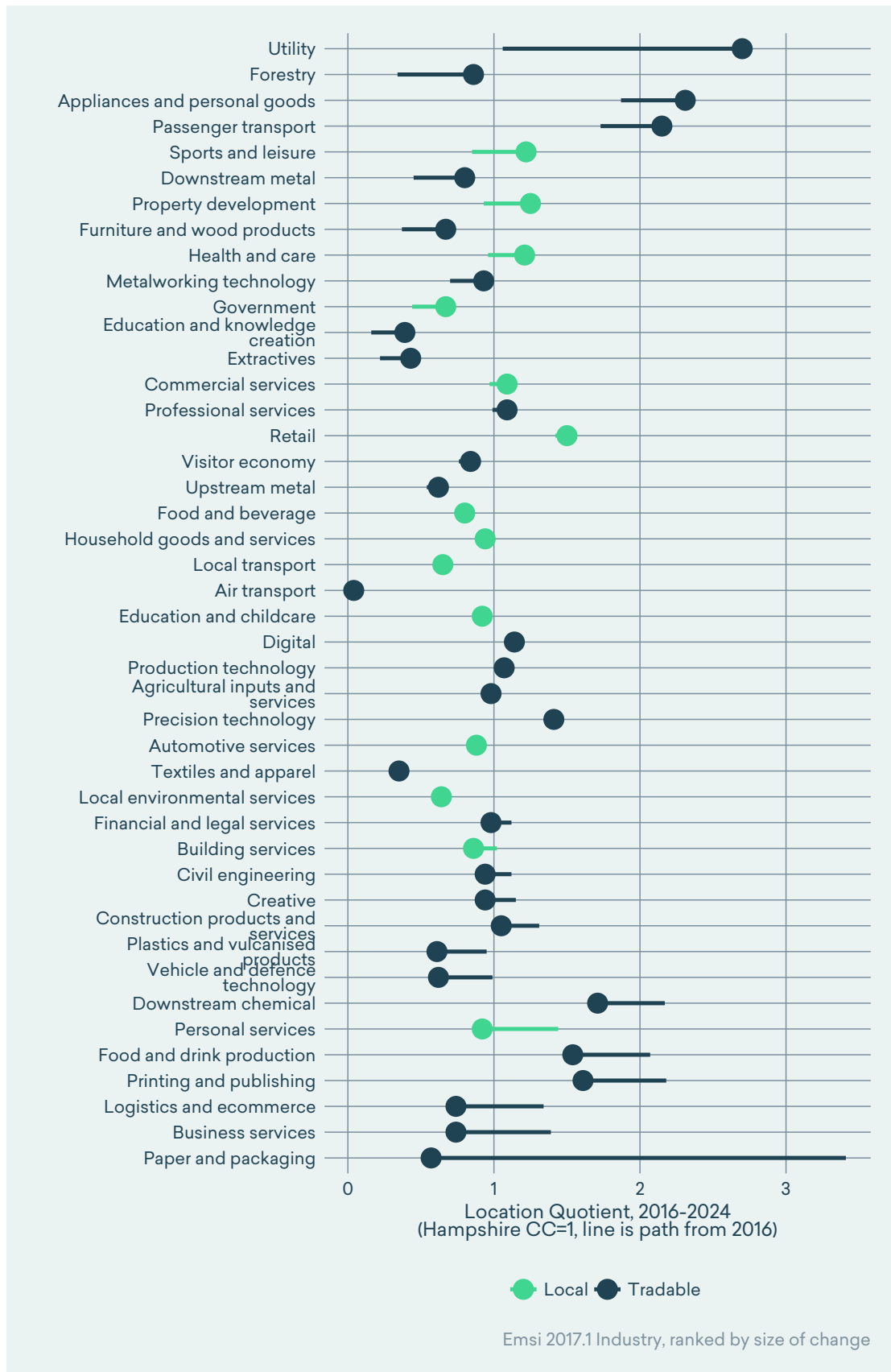




**Figure 12:** Industry cluster change in Enterprise M3 Location Quotient, 2011-2016



**Figure 13: Industry cluster change in Hampshire CC Location Quotient, 2011-2016**



## Cluster data

Cluster	Jobs	LQ	Earnings
APPLIANCES AND PERSONAL GOODS: A tradable cluster including the manufacturing, wholesale and repair of electrical and electronic goods, including household appliances, computers, telephones, as well as heating and lighting, and a range of personal goods including sporting goods, kitchenware, toys, and watches and jewellery.	2,228	3.61	49,493
PRECISION TECHNOLOGY: A tradable cluster for the manufacture, repair and supply of precision equipment including wires, fibre optics, optical equipment, musical instruments, medical instruments, as well as technical testing and analysis.	2,288	3.25	36,933
DOWNSTREAM CHEMICAL: A tradable cluster for the production and supply of finished chemical products, including pharmaceuticals, soaps, detergents, household and personal sanitary products, glues and explosives.	1,203	2.28	46,329
DIGITAL: A tradable cluster including telecommunications, software, and computer services, including data processing and hosting, and the development and management of web portals.	5,808	2.21	48,001
FORESTRY: A tradable cluster for the management and use of forests, including the sawmilling and planing of wood.	134	2.07	17,654
UTILITY: A tradable cluster for the production, distribution and trading of gas, electricity and water, and the construction of electrical utility projects.	1,010	2.03	44,365
PRINTING AND PUBLISHING: A tradable cluster around the creation and production of printed media including newspapers, books, journals, periodicals and directories.	994	1.49	34,172
PROPERTY DEVELOPMENT: A local cluster focused on the purchase, development and sale of real estate, including new developments and removal services.	3,956	1.41	31,948
PRODUCTION TECHNOLOGY: A tradable cluster for the production, supply and maintenance of machinery and equipment for use in production processes, including industrial equipment, material handling equipment, and power generation equipment.	1,708	1.34	39,646

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Cluster	Jobs	LQ	Earnings
RETAIL: A local cluster of retail services including shops for clothing, books and media, computers and accessories, perfumes and cosmetics.	2,385	1.33	21,901
PASSENGER TRANSPORT: A tradable cluster for the provision of passenger transport services by road, rail and inland water, and the repair and maintenance of transport equipment.	514	1.25	40,001
METALWORKING TECHNOLOGY: A tradable cluster for the manufacture and supply of tools and machines to form, treat and machine metals.	509	1.24	31,604
PROFESSIONAL SERVICES: A tradable cluster around professional management and supporting services, including corporate head offices, management consultancy, public relations and human resources services.	2,898	1.18	34,404
SPORTS AND LEISURE: A local cluster including cinemas, sports clubs, sports facilities, the sale of sporting equipment, and casinos and other gambling activities.	1,799	1.16	21,486
EDUCATION AND CHILDCARE: A local cluster of school-age education (nursery, primary and secondary), child day care and training for the workplace.	7,312	1.13	23,164
BUILDING SERVICES: A local cluster around the preparation, completion and finishing of building sites, including the provision of supporting skilled trades (including electricians, plastering, plumbing, heating and air conditioning, painting, flooring, wall covering, glazing and roofing), and the manufacturing and supply of equipment and materials.	2,899	1.04	30,219
CIVIL ENGINEERING: A tradable cluster of technical construction services, including those concerned with major transport and utility infrastructure, including architecture, engineering consultancy, demolition, sewerage and renting and leasing of supporting equipment.	2,113	1.04	40,595
HEALTH AND CARE: A local cluster of activities delivering medical, dental and residential care to patients, including general practice and dispensing chemists.	8,896	1.04	23,188
HOUSEHOLD GOODS AND SERVICES: A local cluster for the retail and wholesale of a range of household goods including furniture, carpets, lighting, audio-visual, cosmetics, hardware, appliances and others, as well as services to the household such as gardening and shoe repair.	2,969	1.02	23,615
AUTOMOTIVE SERVICES: A local cluster around the retail sale and support of motor vehicles including maintenance and repair, wholesale and retail sale of parts and accessories and the retail sale of automotive fuel.	1,625	1.00	31,085

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Cluster	Jobs	LQ	Earnings
VISITOR ECONOMY: A tradable cluster for the management of various historic, artistic, cultural and leisure facilities, including hotels, amusement parks, and performing arts venues.	1,919	0.98	20,793
PERSONAL SERVICES: A local cluster of services including social work, funerals, fitness facilities, hairdressing, travel agencies, postal delivery, as well as membership organisations, churches and trade unions.	3,730	0.92	22,364
FINANCIAL AND LEGAL SERVICES: A tradable cluster of financial, insurance, legal and supporting activities.	3,284	0.89	38,607
FOOD AND BEVERAGE: A local cluster supply, selling and serving food and beverages, including pubs, restaurants and mobile food services, food and drink wholesale and retail, as well as local food production including bakeries.	7,256	0.87	16,285
CONSTRUCTION PRODUCTS AND SERVICES: A tradable cluster of the manufacturing and preparation of construction materials including brick, plaster, concrete, fibres and mortars.	94	0.85	21,969
BUSINESS SERVICES: A tradable cluster of administrative and other business services ranging from translation to debt collection, including conventions and trade shows, call centres, and business and professional membership organisations.	1,086	0.80	30,316
AGRICULTURAL INPUTS AND SERVICES: A tradable cluster for the production and wholesale of the range of crop and livestock farming, as well as supporting activities including the manufacture and supply of machinery and feeds, and veterinary services.	858	0.71	20,892
COMMERCIAL SERVICES: A local cluster of various commercial services ranging from cleaning and facilities to event catering, security, photography, accounting, stationery and document preparation.	4,631	0.71	20,887
LOCAL ENVIRONMENTAL SERVICES: A local cluster managing the collection and disposal of non-hazardous waste, including sorting, recycling and other treatment.	240	0.67	35,880
DOWNSTREAM METAL: A tradable cluster for the production and supply of finished metal products, including doors, windows, bearings, gears, packaging, cutlery, tools, locks, hinges, fastenings, coins, and bicycles.	302	0.64	32,155
FOOD AND DRINK PRODUCTION: A tradable cluster around the processing, manufacture and preserving of food, drink and tobacco products, including the operation of dairies and distilleries, the productions of oils and fats, and the wholesale of some products.	603	0.64	35,720
VEHICLE AND DEFENCE TECHNOLOGY: A tradable cluster around the production of motor vehicles, railways, fighting vehicles, aircraft, spacecraft and weapons and ammunition, and supporting parts.	465	0.59	40,895

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Cluster	Jobs	LQ	Earnings
LOGISTICS AND ECOMMERCE: A tradable cluster for the collection, storage and distribution of goods by road and rail, including direct retail sale online or via mail, including the rental and leasing of trucks.	1,140	0.57	29,924
CREATIVE: A tradable cluster covering a range of creative production activities, including those in motion picture, television and radio, but also the development and management of media content, advertising, design, and market research.	610	0.52	31,842
LOCAL TRANSPORT: A local cluster of transport services including urban and suburban bus and rail, taxis, car and van hire, and driving schools.	516	0.52	26,498
GOVERNMENT: A local cluster around the administration of local and central government services.	1,769	0.51	30,245
PLASTICS AND VULCANISED PRODUCTS: A tradable cluster around the production of plastics, rubbers, glass, ceramics and related products and materials.	179	0.37	29,952
FURNITURE AND WOOD PRODUCTS: A tradable cluster around the manufacture, supply and repair of furniture and wood products, including kitchens, office furniture, parquet floors, and others.	98	0.34	26,945
EXTRACTIVES: A tradable cluster for the mining, quarrying and extraction of ores, aggregates and other natural resources (except oil and gas), including support and operational activities.	19	0.31	34,740
UPSTREAM METAL: A tradable cluster for the production, supply and casting of metals in different forms, including precious metals.	92	0.31	34,270
EDUCATION AND KNOWLEDGE CREATION: A tradable cluster around further and higher education, including especially research and development across the social and natural sciences.	328	0.19	49,967
TEXTILES AND APPAREL: A tradable cluster for the manufacturing, preparation and supply of textiles, clothes, footwear, luggage, carpets and rugs.	78	0.19	28,130
PAPER AND PACKAGING: A tradable cluster around the manufacture of paper and packaging materials, and their use in packaging goods.	45	0.17	32,938
AIR TRANSPORT: A tradable cluster focused on transporting freight and passengers by air and space, including the renting and leasing of supporting equipment.	24	0.07	39,632

## Appendix: Emsi data

Emsi provides the most detailed and localised labour market intelligence available in the UK, which in turn creates a robust base upon which to create uniquely localised and detailed employment projections. Emsi brings together different data sources to create a robust composite dataset that provides detailed labour market intelligence on hundreds of industries and occupations at the lowest geographic levels. By joining together these datasets, Emsi can provide unique insights into the relationship between industry trends and associated occupational requirements.

Emsi builds the data from 9 different government data sources, each describing different aspects of the labour market that in isolation only tell part of the story or contain inherent weaknesses, but when modelled together provide a more holistic and robust view of the labour market. This combination – some 20 million data points added each year – provides the platform for employment forecasts to be created that describe locally-specific employment trends, and which are updated annually as more up-to-date data is made available through the government sources.

Combining data from these sources creates something entirely unique, allowing gaps in individual sources to be filled in, providing employment forecasts at a level of detail that makes labour market data useful to a broad range of local, regional, and national organisations. Linking this with skills and competency intelligence helps to understand shifts in training priorities associated with a changing labour force.

Emsi data together delivers not only depth in terms of local detail, industry detail, and occupational detail, but applications in a range of different directions, with data on demographics, age, educational attainment, competency, earnings and staffing patterns. All data are reported in current (SIC 2007 / SOC 2010) classifications.

Our data includes consistent series back to 2003 and projected forward to 2024 and are updated annually. We deploy them through tools such as Analyst to help economic strategists and FE and HE planners to investigate the current and projected labour market and Career Coach to present a micro view for young people considering different occupations in their future.

We also have it available as a general resource which we can use as a tool in our consulting work. While we have the knowledge and capability to tackle any of the leading labour market intelligence sources – such as those produced by the ONS and UKCES – our own data's power lies not only in its granularity, but in its accessibility. Because of the work we do to process, prepare and validate our data, Emsi can answer complex labour market queries from our data in high volume and at high speed.

# Bibliography

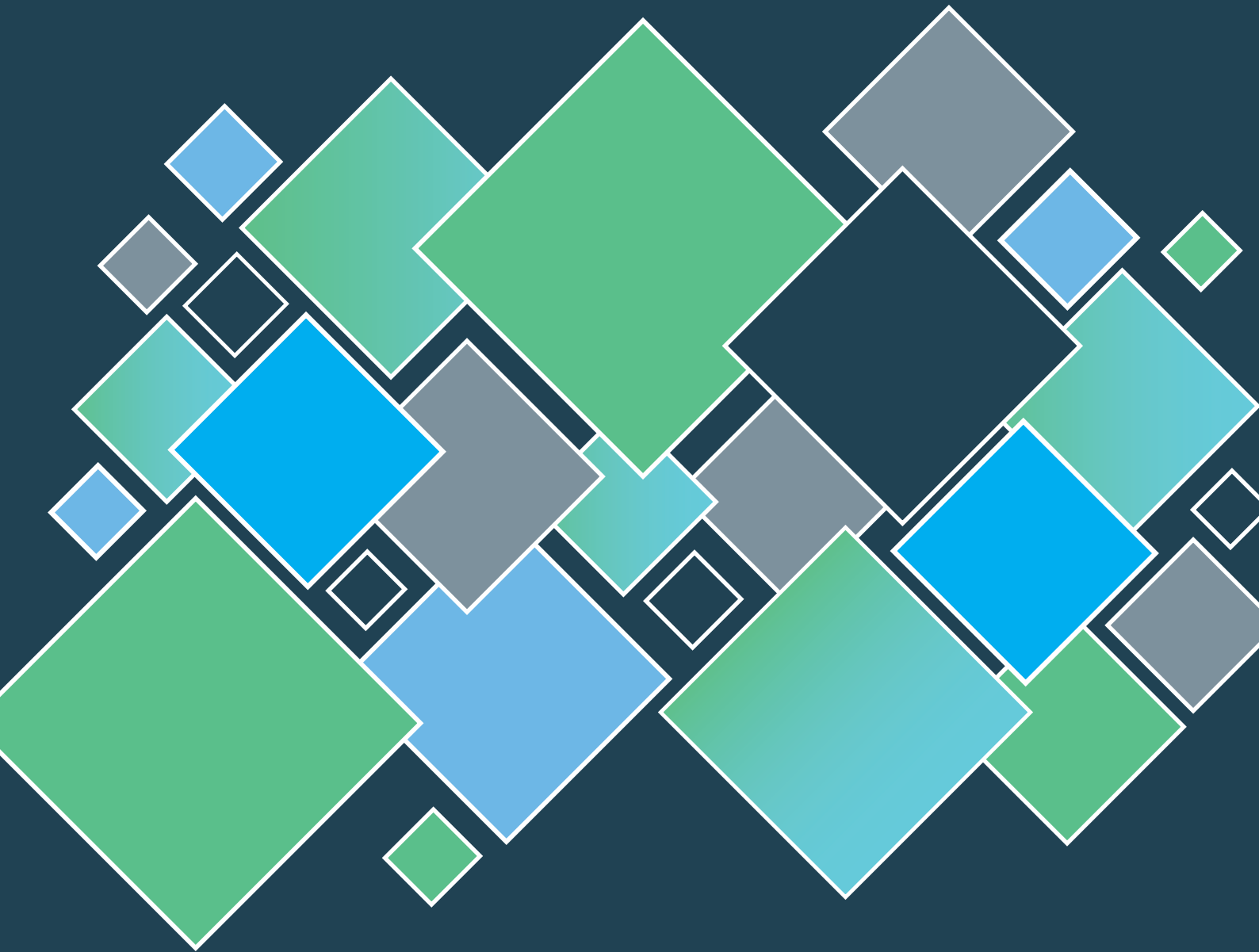
- Delgado, M., Porter, M. E., and Stern, S. (2014). Clusters, convergence, and economic performance. *Research Policy*, 43:1785–1799.
- Delgado, M., Porter, M. E., and Stern, S. (2016). Defining clusters of related industries. *Journal of Economic Geography*, 16(1):1–38.
- Ellison, G. and Glaeser, E. L. (1997). Geographic concentration in US manufacturing industries: A dartboard approach. *Journal of Political Economy*, 105:889–927.
- Faggio, G. and Overman, H. (2014). The effect of public sector employment on local labour markets. *Journal of Urban Economics*, 79:91–107.
- Krugman, P. (1991). Increasing returns and economic geography. *Journal of Political Economy*, 99:483–499.
- Marshall, A. (1920). *Principles of Economics*. Macmillan, London.
- Moretti, E. (2010). Local multipliers. *American Economic Review: Papers and Proceedings*, 100:1–7.
- Porter, M. E. (1998). Clusters and competition: New agendas for companies, governments and institutions. In Porter, M. E., editor, *On competition*, pages 197–299. Harvard Business School Press, Boston, MA.











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