Coast to Capital

Metro Dynamics

Coast to Capital: Understanding an innovation ecosystem

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Introduction

Metro Dynamics was commissioned in June 2019 by Coast to Capital LEP to analyse the innovation ecosystem in the LEP area.

In the modern economy, innovation is the lifeblood of productivity growth. The invention of new products and the commercialisation of new processes allow businesses and organisations to grow, attracting investment from all over the world. Unfortunately, fostering innovation is less straightforward than understanding the need for it. It is less a question of resources, and more a question of environment: establishing the places where people can share ideas and creating the urban centres in which people want to live, study and work. These components develop an ecosystem in which innovation can materialise and grow.

The places which understand and nurture innovation have much to gain. Though it has valuable assets, understanding the innovation ecosystem in Coast to Capital is a challenge. The LEP suspected that there was no one innovation hotspot and instead there are distinct local environments, each with their own regional and national reach. The purpose of this analysis has been to understand where these networks are forming in Coast to Capital, where they are not, and the reasons behind it.

The report will be published in two parts. Part One provides a deep-dive analysis of the Coast to Capital economy, examining economic indicators, the problem of place and innovation metrics. The analysis covers specialist sector strengths and economic complexity; it investigates the disparity across the three primary economic areas; and it dissects the current state of the innovation ecosystem. The report defines the current strengths of and challenges to the economy, supported by data and by conclusions drawn from our engagement of local businesses and universities. Case studies used throughout draw attention to places where innovation is thriving or where there are developed strong innovation bases. These case studies demonstrate the components and institutions required for a successful innovation ecosystem.

Part Two of the report, which is this document, takes the conclusions drawn from the data analysis and local engagement to conceptualise an approach to the challenges facing the LEP. Those challenges include the skills shortage within Coast to Capital; the lack of ‘grow on’ space for businesses; and the importance of place, identity and culture. Coast to Capital has a complex and dynamic economy, which will inform the shape of our approach when developing key recommendations to tackle these challenges.

Our approach

We have followed a four-step approach to understand the state of innovation in the Coast to Capital economy. We began with a review of Coast to Capital’s existing material, and our own data analysis. We analysed key economic data and innovation metrics to understand what sectors local companies are innovating in and how this is changing over time. This included examining data on R&D tax credits claimed by local companies, the distribution of various innovation funding streams (such as UKRI funding, Innovate UK projects) and looking at national patents office data.

We have also produced an economic complexity analysis. Complexity is closely linked to prosperity and can help gauge an economy’s resilience and sub-sector specialisms. This in turn provides insight into which subsectors the economy could most effectively move into by building upon existing strengths. We have studied the spread of more economically complex industries in the wider LEP area, to understand the interconnections between the different sub areas. We investigated the three sub areas: Brighton, the Gatwick Diamond and the London Gatwick Corridor.

For the second stage of the work we prepared case studies of places with high-functioning innovation ecosystems, and places in the process of building them. We looked especially at the role of education institutions in this process, in order to understand the importance they play in creating a well-functioning innovation ecosystem.

For stage three, we conducted 22 interviews with key innovators from businesses and education institutions across the LEP area, giving us a broad overview of activity. As data analysis can only tell us so much, to really understand local conditions, we spoke to the people that work here. The results of this consultation forms a key part of the analysis within this report.

Finally, we developed a range of possible policy options to explore in workshops with LEP colleagues and the stakeholders engaged in our consultation sessions. These have been both data gathering and analytical exercises, but also represent the creation of an innovation and knowledge leadership group, which will help develop and push through the ideas which emerge from this report.

The Importance of Innovation

Innovation is a vital determinant of long-term economic prosperity. Globalisation has increased the pressures of competition - to thrive, businesses and institutions need to continually develop new processes and products.

Innovation – the application of new, novel and useful ideas to business products and processes – occurs when individual components work within institutional contexts to build new relationships and capabilities. It requires the deepening of existing capabilities, technological or social, within an organisation, and constitutes the commercial exploitation of this capacity.

Productivity growth is underpinned by the innovation associated with the creation of new, valuable commodities or services. Advances in production processes increase the value of output per worker, improving the competitiveness of beneficiary businesses or institutions.

Innovation is driven by a number of factors, but people and environment are key. People drive innovation by providing human capital, innovative thoughts and ideas, network connections to other firms and industries and by contributing to firms' innovation cultures. This makes investments in human capital, for instance via education and lifelong learning, essential.

Place is also fundamental. Innovation does not just happen in vacuum: the places where businesses are based act as both the sites where innovation happens and as the driver in its creation. Places with innovative businesses benefit from innovation by growing faster, whether in output, employment or the development of their physical infrastructure. As for the places where innovation happens, it is self-perpetuating. As a place gains a reputation for innovativeness, agglomerative forces influence other companies to locate nearby and benefit from knowledge spillovers. Such agglomeration breeds further innovation and further business clustering.

Agglomeration allows places to attract innovative people and organisations important to places today. Many young entrepreneurs are increasingly drawn to living in city centres. Their changing tastes provide a challenge to places outside of city centres, which will need to reinvent themselves and their 'offers' to remain attractive. People will often make decisions about where to move based on the availability of relevant and attractive jobs. This means that developing attractive business infrastructure (transportation, facilities, financial incentives) can also encourage people to co-locate and then reinforce innovation. Places like Brighton, the Gatwick Diamond and Gatwick-London Corridor, must think creatively and ambitiously to develop their innovation ecosystems and harness the benefits of innovation.

Part Two: What to do

This research has found that it is implausible to sell Coast to Capital as one unique area when it is so polycentric; there are a variety of economies and urban areas that are distinctly different from one another. Each of these economies has its own layer of significance at a local level, whether it is the engineering and aerospace within the Gatwick Diamond, or the digital and creative sectors in Brighton.

One of the key challenges the LEP faces is understanding the differences between these areas and conceptualising how these geographies can link together to improve the innovation ecosystem as a whole.

The geography of Coast to Capital has been well documented throughout part one of this report. In summary:

Brighton: A hub of start-up businesses, with strengths in digital, creative and emerging technologies, supported by the talent pool from the Universities of Brighton and Sussex. Businesses struggle to scale-up due to the lack of available space and the high cost of renting, resulting in an abundance of smaller scale businesses competing for the limited scale-up space.

Gatwick Diamond: Home to Gatwick Airport, Manor Royal Business Park in Crawley and a host of small towns. Businesses excel in advanced engineering and electromedical manufacturing, however many are experiencing significant challenges around obtaining the necessary skills to fill vacancies. The area has fantastic connections to London, which results in many of the towns acting as commuter hubs.

South Coast: Home to some internationally successful businesses and University of Chichester, however lacks a distinct cluster of activity. The lifestyle in this region attracts both students and young families, who work locally or commute to London. Infrastructure means that travelling South to North is straightforward, but East to West is much more of a struggle.

Narrative

People from places with high levels of innovation are usually able to tell a story about why their place is special. In Manchester, civic and business leaders point to the city's recent renaissance and the leading role the city's institutions played in the economic regeneration. Cambridge's entrepreneurs, businesses and academic researchers understand that the culture of open collaboration makes their city the most successful place to grow an innovative business.

This influences the way locals and new arrivals behave. In Cambridge, businesses know they need only contact one of their peers to set up the beginnings of a partnership. In Manchester, academics looking to expand their discipline have an ally in the city when looking to open a new research institute or science park. Word spreads quickly, and nascent specialisms become established ones. In short, businesses and organisations fully understand each other; they know what strengths they have and how to work together in tandem.

Coast to Capital has less of a clear narrative. Perhaps an inevitable result of the diversity of the area, the disparate economies do not share a particular story about what this place has to offer. Whilst the business leaders of Crawley, or a start-up CEO in Brighton, could say without faltering what is good about their place and what it can offer, there is not currently a narrative for Coast to Capital as a whole. This makes building a coherent innovation strategy for the area difficult: its constituent parts are pulling in different directions.

A unifying narrative for Coast to Capital could help to address this. If the different parts of the area could understand how to improve their levels of innovation, and if businesses and institutions across the patch prioritise this as a common objective, they can then work together to increase inward investment, innovation and tackle the common challenges faced.

Coast to Capital should take the lead in crafting this narrative. By making the case for the qualities and strengths of the area, understanding its diversity and showing that this is an investment opportunity, it can pull its assets into one clear story.

While we have argued that Coast to Capital is a disparate area, comprised of many distinct types of place, a carefully crafted narrative can overcome the differences, weaving a compelling story about the area's offer. This diversity should be acknowledged but also celebrated as an asset, increasing investment potential, highlighting the existing opportunities for local businesses and building knowledge of what works for different areas.

If Coast to Capital LEP can create and lead a plan to increase innovation opportunity, other partners will follow of their own accord. That plan should identify desired outcomes, set clear goals and suggest how those goals will be achieved. By focusing on innovation, and the requirements to grow the innovation ecosystem, it can galvanise businesses to take steps of their own. As the organisation overseeing the area as a whole, Coast to Capital LEP can set the tone: doing so should lead to spontaneous activity from businesses and institutions.

Leadership

Coast to Capital lacks the central leadership to drive and increase innovation within the economy. As a polycentric area, its businesses do not currently openly share a common agenda for innovation.

Unlocking the innovation potential of Coast to Capital requires its institutions, businesses and places to pull together towards a common goal. Clear and effective leadership can foster such coordination. For example, in Manchester, leaders at the city council understood the opportunities of the city, and enabled businesses and universities to work together and make the most of the city's academic strengths.

Businesses and institutions already understand the need for collaboration to focus on innovation and address local challenges. This idea of enlightened self-interest requires leadership, where organisations with diverse needs collaborate to achieve an outcome which may not have an immediate benefit to their organisation. Different stakeholders need to talk in a conducive environment, where they can openly discuss and influence the character of the final intervention.

To increase the level of innovation within in the Coast to Capital area, leaders need to be empowered to pull different organisations together around a common goal. In doing so, a combined effort will help achieve a coherent and robust plan, with appropriate goals, grounded in evidence. This understanding of mutual benefit encourages organisations to invest time and resource, with the knowledge that in the long-term, their business will prosper.

Innovation & Place

The conditions of several of Coast to Capital's places, and to a large extent their character, is an important factor in which innovation which occurs. Innovative places tend to be attractive places to live and work, with spaces for people from different organisations to meet, collaborate and form partnerships Often, these places offer the lifestyle benefits which attract young highly skilled people.

Manchester built on its status as a student city to commercialise the specialisms of its university departments. Civic leaders invested in research centres and science parks, helping to give research potential physical representation. The city itself acts as a magnet for talent to fuel this ecosystem. Graduates from Manchester's universities are more likely to remain in the city after graduation, even when they cannot immediately access a graduate level job. This pulling power means that Manchester is able to retain the skills it helps to create, providing a pool of people from which local firms can draw. More than this, these people act as a draw for others, in that they help to perpetuate the city's status as a hub of youth culture and creative activity.

Similarly, Cambridge's reputation as a student and start-up town has influenced the character of the city, and vice versa. As a small and compact city, with many cafes, pubs and restaurants, not to mention the university and college facilities, it is full of places where researchers and businesses can collaborate. Having the knowledge that there is a supportive environment for young entrepreneurs, as well as the advisors, research partners and investors to maintain them, is a crucial part to the continuous success of Cambridge.

Coast to Capital does not have to look outside of its own area to understand the effect of this type of environment. Brighton is a thriving hub of small business activity and creative and technological innovation. The city is attractive, with a thriving nightlife, a cultural scene and its seaside environment. It has the education institutions to bring in young people, and the cultural and recreational draw to keep them there. As a compact urban centre, people are able to commute to work quickly and easily, saving them the expense of buying a car.

Achieving such quality of place across the Coast to Capital area will require flexibility and an understanding of how each different place performs and what it is lacking. The lead should be taken by people who live and work in these places to identify attributes which hold back innovation, whether it is a lack of social space, an unattractive public realm, or a substandard amount of affordable housing. Coast to Capital LEP needs to work with the places which are falling behind to create plans to transform these urban centres into places that talented people want to live, and to set up the spaces where this innovation can thrive.

Innovation, Space and Premises

Brighton's culture is unique to the city. Whilst trying to recreate this elsewhere would be extremely difficult, there is an opportunity to learn from how those people and businesses work together, apply that knowledge to a different place and establish grounding for a new innovation ecosystem. The identity of a place is fundamental in achieving this; however the space and premises must be available in order to create this environment.

Coast to Capital is in a position where many businesses undertaking R&D are experiencing similar challenges. One universal challenge is a lack of space. The innovative start-ups in Brighton are restricted by the lack of available space within the city; the Gatwick Diamond has a shortage of suitable, affordable industrial standard premises; and the businesses along the coast and in rural areas struggle to develop on greenspace and face high costs of land.

This is both a challenge and an opportunity. By reframing the space challenges as an opportunity to bring companies together, Coast to Capital could take an obvious challenge and create new hubs of innovation. Our engagement has investigated how to instigate collaboration between businesses to encourage innovation, highlighting the fundamental importance of having the 'right space'. Wired Sussex's Fusebox is a perfect example of this, creating a space where businesses can share knowledge and develop products collectively.

A company based in Crawley, Co-Tribe, brings together all types of businesses in a shared space, ranging from very experienced business owners to young entrepreneurs, teaching and learning together. With successful developments in Redhill, Trowbridge and Slough, it takes the lessons learned from Brighton workspaces and applies them in smaller, traditional towns.

The collaboration we have seen in the Viticulture sector, businesses working with what would traditionally be 'competitors' in order to establish best business practises, has built an industry from the ground up and now relies on these interactions to thrive.

The Escalator Programme that Coast to Capital has developed, brings together a variety of small businesses for a peer-to-peer mentoring scheme. This has encouraged a new network of local businesses to come together and share knowledge around topics like finance, leadership and business growth. By providing a space for this programme, Coast to Capital has established lasting connections amongst local businesses and generated new collaboration within a local economy.

Thales, a global business that designs and manufactures for Aerospace, Defence, Security and Transportation, have developed their own innovative space, working in an entirely different way to the rest of the business, driving research in a start-up style of environment. This accentuates the message that space is essential in creating an innovative environment.

The University of Brighton had an outpost situated in Crawley, with the purpose of driving engagement with businesses outside of Brighton. However, this was unsuccessful, partly due to the type of office space and partly due to underutilisation. Learning from this, establishing a new, collaborative space, that is supported by key businesses, can attract people and innovation from all three of the Coast to Capital geographies.

Therefore, whilst space and premises are a challenge, there remains an opportunity to provide a new space that caters to forward-thinking businesses. Whilst those in Brighton struggle to grow within the city, an alternative space could be designed outside of Brighton & Hove. By understanding the 'right' kind of innovation space and working with businesses who would benefit most, there is scope to establish a new innovation asset within Coast to Capital.

Innovation and Skills

Skills remain a fundamental issue for businesses within the Coast to Capital area, one that needs to be addressed now and not pushed off to the future. Companies are struggling to hire people with technical skills, turning to apprenticeship schemes in order to craft the skills they require. However, apprenticeships alone cannot support the skill requirements of a business; change is necessary to ensure these businesses obtain the personnel they need, otherwise they will leave the area. This has begun already, with R&D being shifted overseas and factories withdrawn and constructed elsewhere. It is a current, not a future problem that needs to be addressed imminently.

Skills shortages are not unique to one particular business or sector, but impact both local and global businesses. Our consultation has found that this challenge directly relates to 'identity and place'. The Gatwick Diamond is becoming a very attractive base for aviation related businesses and remains an important centre for engineering-based activities. However, it is relatively less attractive to young people who desire the cosmopolitanism of London or Brighton.

The lack of skills, particularly in the Gatwick Diamond, seemingly relates to the absence of a higher education institute. There are no institutions providing a secure, consistent talent pool,

meaning businesses either rely on a local population, who do not have the appropriate skills, or they must attract talent from further afield.

Our case studies, outlined in part one of this report, presented areas that have struggled and dealt with these exact challenges: Milton Keynes is the 8th most active city in the UK for innovation, however, like Coast to Capital, it struggles to retain the young talent pool required by local firms. The lack of higher education presence was the primary factor hindering businesses from obtaining the talent required. The city has now funded a STEM-based specialist university that emphasises placement of students with local businesses in order to provide the skills the local economy requires.

Similarly, Hereford's specialist New Model in Technology Engineering institute was developed to address the outmigration of young people and a national skills shortage of engineers. This was established in conjunction with two major universities and multiple engineering companies. The University of Sheffield was at the heart of the development of the advanced manufacturing research centre, reaching out and collaborating with companies to undertake R&D. In a region experiencing the impacts of deindustrialisation, this helped bring skilled jobs to the area.

Manchester turned to its higher education institutions during the 2000s to tackle a declining economy, using its scientific and technological strengths to aid the development of the city. It is now well established as a science innovation hub. Cambridge also has a world-class university that is indispensable to the development of the highly successful innovation ecosystem, highlighting the impact higher education can have on improving innovation.

In the Netherlands, Eindhoven had a declining economy in the 1990s, with companies transferring manufacturing bases or simply going bust. The city then turned to innovation to drive economic growth, bringing together government, higher education and businesses to establish institutions focused on innovation and technical development.

At the core of each of these developments is a university or a specialist education institute working with local businesses to drive change. The problems of skills and identity that Coast to Capital is experiencing are neither unique nor new. Many local businesses have stated that universities are not central or involved enough in the local economy, with the data also supporting this.

There is an opportunity for the LEP to work through its own Skills 360° Board and a consortium of businesses to, as a collective, commit to being the driving force behind the skills transformation. This collective would aim to understand the root causes of the skills shortages and how research and development can be at the heart of a solution. The Skills 360° Board are already dedicated to addressing skills challenges within Coast to Capital, integrating their approach with the businesses consulted in this analysis, would help establish a comprehensive understanding of the challenges businesses face and facilitating a solution collaboratively.

The involvement of a university or education institute could also tackle the challenge of place. Milton Keynes, once viewed similarly to Crawley, has transformed from what was once deemed a business park city to an innovation hub. Hereford experienced vast outmigration of young people but both of these areas have been drawing in young, skilled people after establishing higher education centres.

For a university to become embedded within the economy, similar to Milton Keynes or Hereford, it should be established in an area where it would have the greatest impact. Within the Gatwick Diamond, Crawley provides a great opportunity. Alongside its excellent infrastructure connections, it is included in the £95m Government funding released for Heritage High Streets. Funding will be made available for physical maintenance of historic buildings, stimulating commercial investment in historic high streets, education projects and skills programmes. The Government has identified 69 high streets that could benefit from this

funding, with London and the South East region allocated £14.3 million. Crawley has been identified as one of the key high streets for development. In addition to this funding, Crawley has been invited to bid for up to £25m from the recent Towns Fund, which is aimed at developing innovative regeneration plans for towns across GB.

The new funding opportunities for Crawley, combined with a collaborative effort between business, the LEP and education, present an opportunity to tackle the skills problem in a way that will benefit the economy inclusively.

Recommendations

Recommendation 1: Co-develop a local skills strategy
Coast to Capital should utilise their Skills 360° Board in association with the businesses engaged in this report, to co-develop an approach that understands and addresses the short and long-term skills issues. This approach will outline the specific skills requirements for businesses, the resources and funding needed to deliver these requirements and how the LEP, the Skills 360° Board and business can develop a solution collaboratively.

Recommendation 2: Link higher education with local businesses
Greater support of the local Gatwick Diamond economy is central to boosting innovation in Coast to Capital as a whole. Our engagement has established that there is a noticeable lack of a higher education presence in this area, limiting the talent pool from which companies can draw skilled labour. The case studies in this report have outlined the importance of linking education with local work experience to enhance regional innovation. In addition to the Skills 360° Board, a university embedding themselves into the economy to co-create courses with local businesses to offer work placement opportunities, would support the delivery of in demand technical skills.

Recommendation 3: Improve the attractiveness of place
Whilst the south coast is an attractive proposition to live and work, this is not the case in the north of Coast to Capital. With the types of investments coming to Crawley, there needs to be a greater focus on supporting the area in becoming a more attractive place to live. Through working with the council, the LEP can begin a conversation on how to improve the attractiveness of Crawley as a place, bringing people and talent to the area whilst supporting the innovation ecosystem.

Recommendation 4: Establish a research institute in the Gatwick Diamond
The lack of a higher education institute within the Gatwick Diamond limits the research potential of the area, as there is no central innovation hub to draw from. An institution that could attract people and businesses into the region, enabling new ideas to be brought to market, would reinvigorate innovation within the Gatwick Diamond. A research specific institute, whether a catapult or university, would anchor the area as a centre of innovation, complementing the existing research being undertaken by companies in places like Manor Royal. This is a long-term goal to establish a key innovation asset within the Gatwick Diamond, which would bring large companies, start-ups and skills together to enrich the entire Coast to Capital innovation ecosystem.

Appendix

Standard Industrial Classification (SIC) codes

SIC codes classify business establishments by the type of economic activity that they engage in. This is a standard framework for collection, tabulation, presentation and analysis of data. The framework structures economic activity by different levels using a numerical system of labelling. The table below sets out the structure in more detail with an example:

Level	Code	Example
Section	Letter	C Manufacturing
Division (SIC2)	Integer	10 Manufacture of food products
Group (SIC3)	Integer with 1 decimal point	10.1 Processing & preserving of meat & production of meat products
Sub-group (SIC4/5)	Integer with 2-3 decimal points	10.11/10.110 Processing & preserving of meat

Within each section (broad sector groups), there are a number of divisions; within each division, there are a number of groups; and within each group, there are a number of sub-groups. With each lower level, there is greater specificity and granularity around the nature of the economic activity.

SIC codes at any level can be combined to create bespoke sectoral definitions, where activity in a sector may be spread between multiple sections or divisions.

Strengths and limitations
The structure of SIC codes enables detailed analysis into specific sectoral strengths. In this report, SIC2 codes have been selected, as these are detailed enough to give a sense of distinctive strengths in the economy, but are still relatively high level and broad enough to be clearly linked back to sectors. SIC5s have been selected for the more in-depth analysis into specific sub-sectoral specialisms, as these are the most detailed and granular level available. SIC codes are well designed to capture and categorise economic activity in established sectors, such as manufacturing. One of their main limitations is their ability to capture activity in new, growing or rapidly evolving sectors, such as digital, creative or energy, as the classifications are not detailed enough.

Another limitation is that many sectors interlink, but this again is hard to capture by SIC code. For example, a key part of agri-food is logistics, but the current structure of SIC codes mean that without using a model, it is impossible to identify the number of jobs in logistics related to agri-food, as opposed to other forms of production.

This is where it is helpful to draw on specific strands of research or qualitative evidence from engagement with businesses.

Sector Specialisms

Location Quotient (LQ) analysis is used to understand specialisation patterns in the sectors in a local economy. In this context, specialisation refers to the concentration of a specific industry in the local economy relative to the country as whole.

LQs are ratios for each sector between the local share of employment and share of employment in GB. GB is assigned an LQ of 1.0 and the local economy is compared against this. Higher LQs correspond to higher levels of specialisation, with an LQ above 1.0 indicating that the area is *more specialised* in that sector than GB as a whole.

The high LQ values in table 1 display the top 20 specialist SIC2 sectors. This analysis identifies sectors and sub-sectors which the local economy has a distinctive and unique strength in. This is a key piece of analysis since building on existing sectoral strengths is likely to increase the chances of economic success.

We identified that Coast to Capital is specialised in a range of advanced and high value sectors: advanced engineering and manufacturing; creative, digital and information technology; financial and professional services; and health and life sciences.

SIC5 Sub-Sectors

We can drill down into this analysis further, assessing the next level of sub-sectors – SIC5. Below is a table listing the top 20 SIC5 codes, ranking according to their LQ score. Please note than the SIC2 table in the report is based on sub-sectors that have over 1000 jobs, SIC5s are based on over 500 jobs due to the nature of the smaller, more niche sub-sectors; this is considered a high number of jobs at this SIC code level.

	SIC5 sub-sector	LQ	Jobs
1	Manufacture of irradiation, electromedical and electrotherapeutic equipment	13.50	1,500
2	Wholesale of watches and jewellery	9.98	1,750
3	Operation of rail passenger facilities at railway stations	8.55	600
4	Manufacture of soap and detergents	6.41	900
5	Non-scheduled passenger air transport	6.17	1,875
6	Service activities incidental to air transportation	5.34	6,500
7	Scheduled passenger air transport	5.21	7,500
8	Manufacture of consumer electronics	5.03	500
9	Credit granting by non-deposit taking finance houses and other specialist consumer credit grantors	4.91	4,250

10	Life insurance	4.22	3,500
11	Manufacture of bodies for motor vehicles (except caravans)	3.95	600
12	Wholesale of flowers and plants	3.71	650
13	Wholesale of other intermediate products	3.46	1,375
14	Manufacture of electronic instruments and appliances for measuring, testing, and navigation	3.41	3,750
15	Tour operator activities	2.80	2,000
16	Wholesale of grain, unmanufactured tobacco, seeds and animal feeds	2.77	550
17	Distribution of gaseous fuels through mains	2.74	800
18	Holiday centres and villages	2.52	1,500
19	Ready-made interactive leisure and entertainment software development	2.38	750
20	Other processing and preserving of fruit and vegetables	2.38	1,250

The LQ codes are generally much higher and therefore more specialised than the overall GB values, primarily because they are much more specific economic sectors. This can also help inform why particular SIC2 sub-sectors are so specialist.

For example, Air Transport has is the highest SIC2 LQ value at 5.28. In the table above, there are three sub-sectors related to Air Transport that are 5x more specialised than GB: Non-scheduled passenger air transport, service activities incidental to air transportation and scheduled passenger air transport.

Similarly for the SIC2 Manufacture of computer, electronic and optical products, which has an LQ of 2.6, this can be reflected in the SIC5 LQ analysis. The Manufacture of irradiation, electromedical and electrotherapeutic equipment has the highest LQ, 13.5 times more specialist than GB, showing an extremely high strength in this sector. Combining this with the Manufacture of consumer electronics (5.03) and Manufacture of electronic instruments and appliances for measuring, testing, and navigation (3.41), represents the strength in this sector.

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