

# Regional Skills Assessments

Oxford Economics Forecasts – Technical Note

October 2024

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## Introduction

In producing Regional Skills Assessments (RSAs) and their accompanying Data Matrix, Skills Development Scotland (SDS) draws on four key types of evidence:

- Published data;
- Real time data;
- Qualitative evidence; and
- Forecast data.

This technical note refers to the fourth of these sources – forecast data.

Skills Development Scotland (SDS) has a long-standing partnership with Oxford Economics who produce economic and labour market forecasts to inform a range of SDS products and services, including Sectoral and Regional Skills Assessments and the Data Matrix.

The forecasts used in our 2024/25 RSAs were produced by Oxford Economics in March 2024 using their Local Authority District Forecasting Model. Data has been provided for Scotland, Regional Outcome Agreement areas (ROAs), City Region and Growth Deal areas, local authorities as well as Rural Scotland.

This note is intended to provide information on the coverage, methodology and data sources underpinning the forecasts. The note is structured as follows:

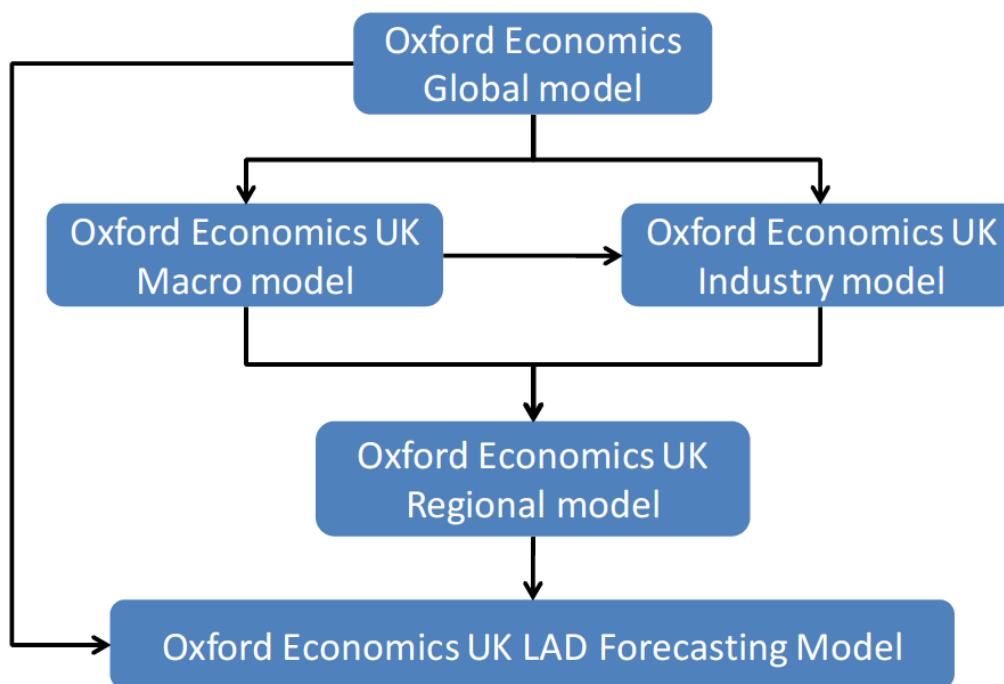
- An overview of the forecasting model;
- RSA Reports – explanatory notes on forecast data included in the RSAs; and
- Appendices:
  - Appendix A provides an overview of the geographic cuts of data;
  - Appendix B provides definitions for key sectors in Scotland; and
  - Appendix C provides definitions used for 'high-level', 'mid-level' and 'low-level' occupations.

## Model Overview

### Local Authority Forecasting Model

Oxford Economics Local Authority District (LAD) Forecasting Model sits within the Oxford suite of forecasting models. This structure is unique as it ensures global and national factors (such as developments in the Eurozone, Government fiscal policy and Brexit) have an appropriate impact on the forecasts for a local authority. This empirical framework (or set of 'controls') is critical in ensuring the local area forecasts are much more than just an extrapolation of historical trends and reflect external economic conditions. Rather, the trends in our global, national and sectoral forecasts have an impact on the local area forecasts.

**Fig. 1. Hierarchical structure of Oxford Economics' suite of models**



The Oxford Economics local forecasting model depends essentially upon three factors:

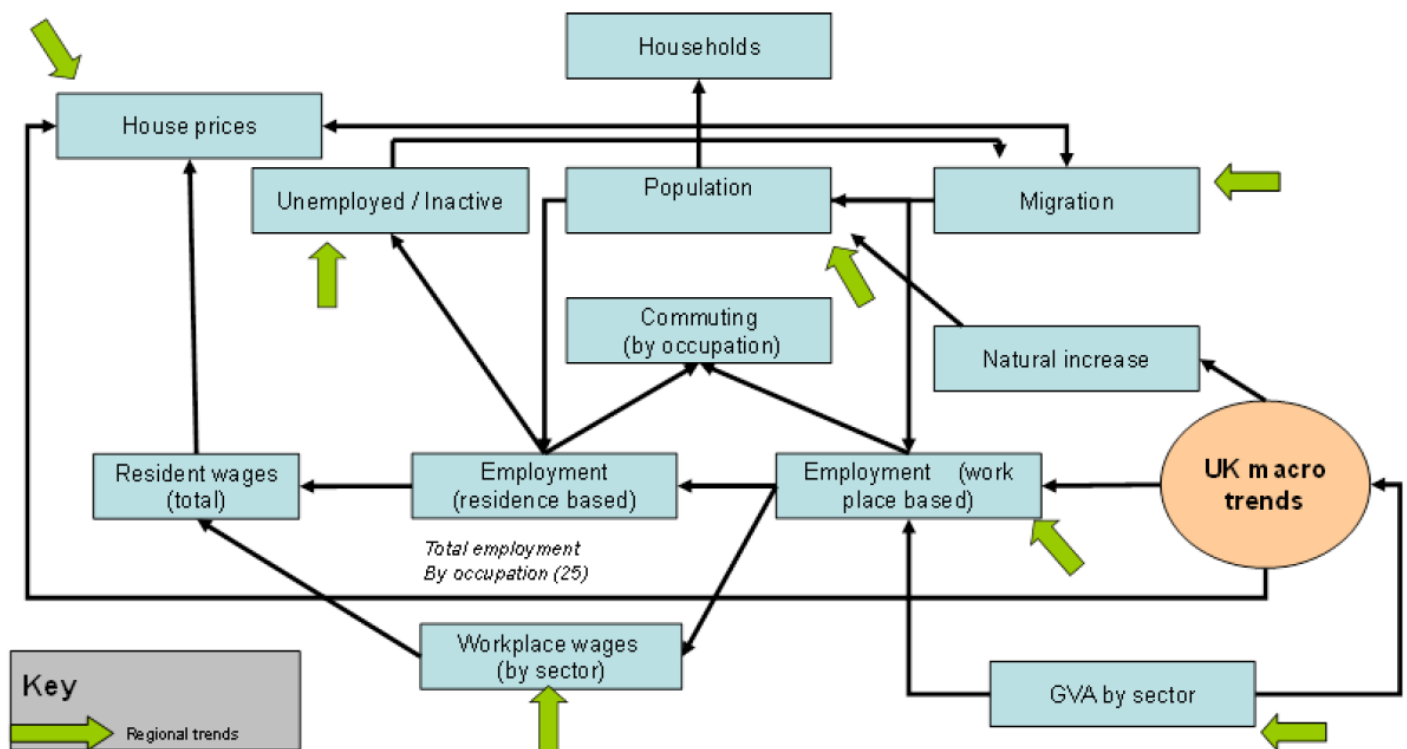
- **International, national and regional outlooks** - all the local area forecasts produced by Oxford Economics are fully consistent with broader regional, national and international models and forecasts. This ensures global events that impact on the performance of UK local economies, such as the strength of global trade, are fully captured in the forecasts for a local area. So too are national level growth and policies, whether that be the impact of monetary policy on consumer spending or government spending on locally provided public services;
- **Historical trends in an area**, which implicitly factor in supply side factors affecting demand, combined with Oxford Economics' staff knowledge of local areas and the patterns of local economic development. This ensures for example, that we recognise and factor into the forecasts any evidence of particularly high/low levels of competitiveness that local economies have in particular activities. It also means national policy programmes that have a particular local impact and that are very likely to happen are appropriately reflected in the forecasts; and

- **Fundamental economic relationships** which interlink the various elements of the outlook. Oxford Economics' models ensure full consistency between variables in a local area. For example, employment, commuting, migration and population are all affected by one another.

All Oxford Economics models are economically driven, with all aspects of the economy interlinked as they believe that this is the best way to estimate the future outlook for the area. Given changes in economic conditions drive labour market performance, which in turn affects migration patterns and housing demand/make-up, economic based forecasts are essential. For example, if employment or productivity changes in one sector, there are implications for all sectors of the economy through indirect (supply chain) and induced impacts. The employment creation will then put downward pressure on unemployment, while encouraging increased commuting into the economy, and making it a more attractive location for migrants. This would effectively drive up population and housing demand (and put more demand on public services).

The main internal relationships between variables are summarised in Figure 2. Each variable is related to others within the models. Key variables are also related to variables in the other Oxford Economics models.

**Fig. 2. Main Relationships between variables**



## Time Periods

The model is usually constructed on an annual basis. Historic data for most variables has been collected for 20 or more years to provide a basis for estimating inter-relationships between variables and future trends. Forecasts are currently set up for the period up to 2034 consistent with existing available global, national and regional forecasts.

## Using the Model

The model provides projections on a 'policy neutral' basis. Unconfirmed, aspirational or policies at planning/development stage are not included. Though forecasts are built primarily around the economic relationships above, the use of local knowledge and published material on local development is required to augment the results of the formal modelling process.

According to Oxford Economics, GDP growth will stay relatively soft over the medium term due to three factors.

Although the UK and EU struck a basic free trade agreement, Oxford Economics claim the switch from EU membership to the new relationship introduced significant new frictions on UK-EU trade. Oxford Economics believe this will result in some degree of trade friction, limiting improvements in total factor productivity, and will reduce the attractiveness of the UK as a destination for Foreign Direct Investment (FDI). In addition, Oxford Economics also point to other influences which are likely to affect future forecasts, including demographics and the country's ageing population, and the post pandemic increase in economic inactivity (particularly due to ill-health) and its related implications for current and future labour market participation.

Oxford Economics' baseline aligns closely with the IEA's Stated Policies Scenario (STEPS). It reflects policy commitments that are backed up by measures and believed to be sufficiently detailed. For example, the UK have stated its intention to achieve carbon neutrality by mid-century but those ambitions are not yet sufficiently backed by policies such as carbon pricing and investment.

As with all forms of forecasting, there are margins of error associated with the results which get larger over time. Furthermore, the quality of data decreases as geographies get smaller and we work closely with OE to ensure that data at these lower levels meet thresholds for quality and robustness. Models of this form under current data quality levels are most helpful for identifying trends, growth rates and relativities either across or within areas. The long-term trends are therefore important, and users are encouraged to use the time series information and not rely on 'point-in-time' estimates.

In addition, forecast data should not be compared to earlier releases e.g. comparing forecast figures in the most recent RSAs to those included in the reports published last year. The most recent forecasts have incorporated the most up-to-date data plus historical revisions which can cause forecasts to fluctuate over time. Therefore users of the data are encouraged to consider the general direction of travel and the forecast trends.

The remainder of this note provides detailed information on the data used within the model and the linkages between variables.

## Regional Skills Assessment – variables covered

The list below provides a summary of the variables used within the reports.

### Gross Value Added (GVA)/Output

GVA data by sector is published on a nominal basis by the Office for National Statistics for Scotland and the local authorities. These are converted to real prices using the chain linked volume measures which are available for Scotland, NUTS2 regions, NUTS3 regions and local authority districts.

The GVA forecast is driven by sectoral employment in each area and Scottish productivity forecast adjusted by relative earnings. At the Scotland level, GVA is driven by sectoral employment and sectoral productivity relative to UK.

GVA forecasts by key sector are driven by key sector employment and local estimates of productivity adjusted by relative detailed sectoral earnings.

## **Productivity**

Productivity is calculated as GVA per job.

## **Total Employment (People)**

The RSAs include a calculation of current employment of people i.e. workforce size based on Oxford Economics analysis of the Annual Population Survey (APS) that provides data on employment by occupation for Scotland and its local authorities.

Information is also included for terms of employment or 'status' (i.e. full time / part time). The APS provides data on employment by status for Scotland and its local authority districts. The series are projected in line with the jobs-based employment forecasts by status and gender.

## **Employment by Industry (People)**

To produce a people-based employment forecast, Oxford Economics use APS data which is available by sector (on a workplace basis). It is driven by the numbers of full-time and part-time employees by sector in each area. Individuals are assumed to hold only one full-time job each. Part-time jobs are assumed to account for half a full-time job. The self-employed people are added to the full-time employees plus half of the part-time employees to arrive at an estimate of workplace-based employment.

Please note, Employment by Key Sector (people) is also available through the Data Matrix. Forecast data is provided for the sectors listed below (details of the definitions used are set out in Appendix B).

- Chemical Sciences
- Creative Industries
- Construction
- Energy
- Engineering
- Food and Drink – Primary Production
- Food and Drink – Manufacturing
- Financial and Professional Services
- Health Care
- Social Care
- Childcare
- Digital Technologies
- Life Sciences
- Tourism

The results for the sectors listed above are calculated using shares from the Business Register and Employment Survey (BRES) of each component of key sector to broad sector. These shares are applied to the broad sector results, to produce an estimate of the occupations within each of the sectors listed.

## **Employment by Occupation (People)**

The APS provides data on employment by occupation for Scotland and its local authorities. The forecasts are derived using a SIC/SOC (Standard Industrial Classification/Standard

Occupational Classification) matrix. The ratio of occupations within each sector for 2001 and 2011 is calculated from the Census. For all other years, Oxford Economics use the Labour Force Survey for Scotland. The share of each occupation by sector is forecast based upon trends and are applied to the sectoral employment data for each local area, to give an estimate of occupations within each sector. The results are adjusted to reflect the APS data for each local area. The occupations by sector are then aggregated to give occupations by 25 minor occupation groupings. Therefore, the overall economy occupational structure is heavily dependent upon sectoral composition and future trends can be largely explained by sectoral trends.

### **Total Requirement – Expansion and Replacement Demand (People)**

Expansion demand refers to the net change in total employment over the forecast period and thus the results can be positive or negative.

Replacement demand represents how many more people will be required due to people leaving the workforce. There are many reasons why people leave the labour market - with retirement perhaps the prime example – and need to be replaced. Whilst replacing the vacant position creates additional labour demand, it has no net effect on total employment. Reasons for leaving employment include:

- Unemployment;
- Inactivity;
- Out migration;
- Retirement;
- Death; and
- Leaving for another job in a different occupational group or sector.

This ‘replacement’ category is much larger than expansion demand and explains why even declining sectors still require new staff/advertise vacancies.

Replacement demand and expansion demand are summed to produce total requirement.

### **Total Requirement by Qualification (People)**

Expansion demand refers to the net change in total employment by qualification over the forecast period and thus the results can be positive or negative. The results are presented for each of the 6 SCQF qualification groupings.

For replacement demand, the net occupation demand figures are applied to an occupation by highest level of qualification matrix to produce an estimate of the likely skills requirements over the forecast period. The matrix is generated using the Labour Force Survey. The data is filtered to select only those people who were in employment one year ago and who changed their job. A cross-tabulation is run on this sample for each of the last three years and taking a three-year average. Rather than use the current qualification structure of all employed people, the qualification structure of ‘inflows’ is used to try and capture the fact that entry requirements to occupations have increased over time. In other words, it is entirely possible that current corporate managers who are approaching retirement may have climbed up the career ladder without having any formal qualifications whereas, to become a corporate manager now will most likely require a degree or similar formal qualification.

Replacement demand by qualification and expansion demand by qualification are summed to produce total requirement.



### **Total Requirement by Industry (People)**

Expansion demand refers to the net change in total employment by industry over the forecast period and thus the results can be positive or negative. The results presented are jobs based for each of the 1-digit industries.

For replacement demand, leaver rates by industry are calculated from the Labour Force Survey for Scotland. These rates are forecast and applied across all geographies. The number of leavers by 1-digit industry are apportioned to key sectors using employment shares from BRES. Replacement demand and expansion demand are summed to produce total requirement.

### **Total Requirement by Occupation (People)**

Replacement demand and expansion demand are summed to produce total occupation demand (people-based).

### **Employment by CESAP Sector and Occupation (People)**

Employment by CESAP sector and occupation are driven by broad sector by occupation results. Shares of CESAP to broad sector employment are estimated from BRES and applied to broad sector by occupation estimates. Results are controlled to CESAP employment for each local area.

## Appendix A: Spatial Cuts of Data

Oxford Economics forecasts have been developed using Local Authorities as building blocks and then aggregating this into various spatial levels.

In the RSAs, data has been provided for Regional Outcome Areas (ROAs), City Regions, Growth Deals, Rural Scotland and at national level – Scotland

**Details of the local authorities used for ROAs, City Regions, Growth Deals and Rural Scotland are outlined below:**

	<b>Area</b>	<b>Local Authorities</b>
<b>ROAs</b>	Aberdeen City and Shire	Aberdeen City, Aberdeenshire
	Ayrshire	East Ayrshire, North Ayrshire, South Ayrshire
	Borders	Scottish Borders
	Dumfries and Galloway	Dumfries and Galloway
	Edinburgh and Lothians	East Lothian, Edinburgh, Midlothian
	Fife	Fife
	Forth Valley	Clackmannanshire, Falkirk, Stirling
	Glasgow College Region	East Dunbartonshire, East Renfrewshire, Glasgow
	Highlands and Islands	Argyll and Bute, Na h-Eileanan Siar, Highland, Moray, Orkney Islands, Shetland Islands
	Lanarkshire	East Dunbartonshire, North Lanarkshire, South Lanarkshire
	Tayside	Angus, Dundee, Perth and Kinross
	West	East Renfrewshire, Inverclyde, Renfrewshire, West Dunbartonshire
	West Lothian	West Lothian
<b>South of Scotland</b>	South of Scotland	Dumfries and Galloway, Scottish Borders
<b>Rural Scotland</b>	Rural Scotland	Rural Scotland is based on the Scottish Government's Rural and Environment Science and Analytical Services (RESAS) classification of rural areas. The 15 local authorities included are those classified as either 'mainly rural' or 'islands and remote rural': Aberdeenshire, Angus, Argyll and Bute, Clackmannanshire, Dumfries and Galloway, East Ayrshire, East Lothian, Na h-Eileanan Siar, Highland, Moray, Orkney Islands, Perth and Kinross, Scottish Borders, Shetland Islands, and South Ayrshire
<b>City Regions</b>	Edinburgh and South East Scotland City Region Deal	Edinburgh, Midlothian, East Lothian, West Lothian, Fife, Scottish Borders
	Glasgow City Region	Glasgow, East Dunbartonshire, East Renfrewshire, Inverclyde, North Lanarkshire, Renfrewshire, South Lanarkshire, West Dunbartonshire
	Inverness and Highland City Region Deal	Highland
	Stirling and Clackmannanshire City Region Deal	Clackmannanshire, Stirling
<b>Growth Deals</b>	Argyll and Bute	Argyll and Bute
	Falkirk	Falkirk
	Islands	Na h-Eileanan Siar, Orkney Islands, Shetland Islands
	Moray	Moray

## Appendix B: SIC Definitions for Key Sectors

The Standard Industrial Classifications can be found [here](#). The SIC definitions for the SDS Key Sectors are as follows:

### Construction

SIC Code	Description	Attributable Activity
02.2	Logging	20%
08.11	Quarrying of ornamental and building stone, limestone, gypsum, chalk and slate	70%
08.12	Operation of gravel and sand pits; mining of clays and kaolin	70%
16.23	Manufacture of other builders' carpentry and joinery	40%
20.30/1	Manufacture of paints, varnishes and similar coatings, mastics and sealants	25%
20.30/2		25%
22.11	Manufacture of printing ink	20%
	Manufacture of rubber tyres and tubes; retreading and rebuilding of rubber tyres	20%
22.19		20%
22.23	Manufacture of other rubber products	35%
23.32	Manufacture of builders' ware of plastic	85%
23.41	Manufacture of bricks, tiles and construction products, in baked clay	60%
23.42	Manufacture of ceramic household and ornamental articles	60%
23.43	Manufacture of ceramic sanitary fixtures	60%
23.44	Manufacture of ceramic insulators and insulating fittings	60%
23.49	Manufacture of other technical ceramic products	60%
23.51	Manufacture of other ceramic products	25%
23.52	Manufacture of cement	25%
23.61	Manufacture of lime and plaster	90%
23.62	Manufacture of concrete products for construction purposes	90%
23.63	Manufacture of plaster products for construction purposes	90%
23.64	Manufacture of ready-mixed concrete	90%
23.65	Manufacture of mortars	90%
23.69	Manufacture of fibre cement	90%
25.11	Manufacture of other articles of concrete, plaster and cement	60%
25.12	Manufacture of metal structures and parts of structures	60%
25.21	Manufacture of doors and windows of metal	40%
25.29	Manufacture of central heating radiators and boilers	40%
25.3	Manufacture of other tanks, reservoirs and containers of metal	40%
26.11	Manufacture of steam generators, except central heating hot water boilers	35%
41.10		100%
41.20/1	Manufacture of electronic components	100%
41.20/2	Development of building projects	100%
42.11	Construction of commercial buildings	100%
42.12	Construction of domestic buildings	100%
42.13	Construction of roads and motorways	100%
42.21	Construction of railways and underground railways	100%
42.22	Construction of bridges and tunnels	100%
42.91	Construction of utility projects for fluids	100%
42.99	Construction of utility projects for electricity and telecommunications	100%
43.11	Construction of water projects	100%
43.12	Construction of other civil engineering projects n.e.c.	100%
43.13	Demolition	100%
43.21	Site preparation	100%
43.22	Test drilling and boring	100%
43.29	Electrical installation	100%
43.31	Plumbing, heat and air-conditioning installation	100%
43.32	Other construction installation	100%

43.33	Plastering	100%
43.34/1	Joinery installation	100%
43.34/2	Floor and wall covering	100%
43.39	Painting	100%
43.91	Glazing	100%
43.99/1	Other building completion and finishing	100%
43.99/9	Roofing activities	100%
46.13	Scaffold erection	50%
46.63	Specialised construction activities (other than scaffold erection) n.e.c.	50%
46.73	Agents involved in the sale of timber and building materials	50%
71.11/1	Wholesale of mining, construction and civil engineering machinery	100%
71.11/2	Wholesale of wood, construction materials and sanitary equipment	50%
71.12/1	Architectural activities	50%
71.12/2	Urban planning and landscape architectural activities	50%
71.12/9	Engineering design activities for industrial process and production Engineering related scientific and technical consulting activities Other engineering activities (not including engineering design for industrial process and production or engineering related scientific and technical consulting activities)	50%
74.90/2	Quantity surveying activities	100%

### Creative Industries

SIC Code	Description	Attributable Activity
31.09	Manufacture of other furniture	100%
16.29	Manufacture of other wood products	100%
32.12	Manufacture of jewellery and related products	100%
32.13	Manufacture of imitation jewellery and related articles	70%
23.41	Manufacture of ceramic household and ornamental articles	100%
23.49	Manufacture of other ceramic products	100%
23.13	Manufacture of hollow glass	30%
23.19	Manufacture of other glass	100%
13	Manufacture of textiles	100%
14	Manufacture of wearing apparel	35%
15	Manufacture of leather and related products	35%
18.20/1	Reproduction of sound recording	15%
32.2	Manufacture of musical instruments	15%
18.20/2	Reproduction of video recording	100%
18.11	Printing of newspapers	100%
18.129	Other printing (not labels)	25%
18.13	Pre press and media services	20%
47.78/1	Retail sale in commercial art galleries	20%
47.79/1	Retail sale of antiques and antique books	25%
59.2	Sound recording and music publishing activities	100%
59.11/1	Motion picture production activities	75%
59.11/2	Video production activities	100%
59.12	Motion picture, video and television programme post-production activities	100%
59.13/1	Motion picture distribution activities	100%
59.13/2	Video distribution activities	100%
59.14	Motion picture projection activities	100%
58.21	Publishing of computer games	100%
62.01/1	Ready-made interactive leisure and entertainment software development	100%
59.11/3	Television programme production activities	100%
59.13/3	Television programme distribution activities	100%
59.12	Motion picture, video and television programme post-production activities	100%
60.1	Radio broadcasting	100%
60.2	Television programming and broadcasting activities	100%

58.11	Book publishing	100%
58.13	Publishing of newspapers	25%
58.14	Publishing of journals and periodicals	100%
58.19	Other publishing activities	100%
63.91	News agency activities	100%
58.29	Other software publishing	100%
62.01/2	Business and domestic software development	100%
62.02	Computer consultancy activities	100%
73.11	Advertising agencies	100%
73.12	Media representation	75%
71.11	Architectural activities	100%
74.1	Specialised design activities	100%
71.12/1	Engineering design activities for industrial process and production	30%
74.1	Specialised design activities	100%
74.20/1	Portrait photographic activities	100%
74.20/2	Other specialist photography (not including portrait photography)	100%
74.20/9	Other photographic activities (not including portrait and other specialist photography and film processing) n.e.c.	100%
78.10/1	Motion picture, television and other theatrical casting	100%
85.52	Cultural education	100%
90.03	Artistic creation	100%
90.01	Performing arts	100%
90.02	Support activities to performing arts	100%
90.04	Operation of arts facilities	100%
90.03	Artistic creation	100%
91.01	Libraries and archive activities	100%
95.24	Repair of furniture and home furnishings	100%

## Digital Technologies

SIC Code	Description	Attributable Activity
18.20/3	Reproduction of computer media	100%
26.11	Manufacture of electronic components	100%
26.12	Manufacture of loaded electronic boards	100%
26.20	Manufacture of computers and peripheral equipment	100%
26.30	Manufacture of communication equipment	100%
26.40	Manufacture of consumer electronics	100%
26.8	Manufacture of magnetic and optical media	100%
27.31	Manufacture of fibre optic cables	100%
58.21	Publishing of computer games	100%
58.29	Other software publishing	100%
61.1	Wired telecommunications activities	100%
61.2	Wireless telecommunications activities	100%
61.3	Satellite telecommunications activities	100%
61.9	Other telecommunications activities	100%
62.01	Computer programming activities	100%
62.02	Computer consultancy activities	100%
62.03	Computer facilities management activities	100%
62.09	Other information technology and computer service activities	100%
63.11	Data processing, hosting and related activities	100%
63.12	Web portals	100%
63.99	Other information service activities n.e.c.	100%
95.11	Repair of computers and peripheral equipment	100%
95.12	Repair of communication equipment	100%

## Childcare

SIC Code	Description	Attributable Activity
85.1	Pre-primary education	100%
88.91	Child day-care activities	100%

## Energy

SIC Code	Description	Attributable Activity
05	Mining of coal and lignite	100%
06	Extraction of crude petroleum and natural gas	100%
09	Mining support service activities	100%
19	Manufacture of coke and refined petroleum products	100%
20.14	Manufacture of other organic basic chemicals	100%
35	Electricity, gas, steam and air conditioning supply	100%
36	Water collection, treatment and supply	100%
38.22	Treatment and disposal of hazardous waste	100%
71.12/2	Engineering related scientific and technical consulting activities	100%
74.90/1	Environmental consulting activities	100%

## Engineering

SIC Code	Description	Attributable Activity
24	Manufacture of basic metals	100%
25	Manufacture of fabricated metal products, except machinery and equipment	100%
26	Manufacture of fabricated metal products, except machinery and equipment	100%
27	Manufacture of computer, electronic and optical products	100%
28	Manufacture of electrical equipment	100%
29	Manufacture of machinery and equipment n.e.c.	100%
30	Manufacture of motor vehicles, trailers and semi-trailers	100%
33	Manufacture of other transport equipment	100%
71	Repair and installation of machinery and equipment	100%
72.19	Architectural and engineering activities; technical testing and analysis Other research and experimental development on natural sciences and engineering	100%
13.94	engineering	100%
38.31	Manufacture of cordage, rope, twine and netting Dismantling of wrecks	100%

## Financial and Professional Services

SIC Code	Description	Attributable Activity
64.1	Monetary intermediation	100%
64.3	Trusts, funds and similar financial entities	100%
64.9	Other financial service activities, except insurance and pension funding	100%
65	Insurance, reinsurance and pension funding, except compulsory social security	100%
66	Activities auxiliary to financial services and insurance activities	100%
69	Legal activities and accounting activities	100%
70.2	Management consultancy activities	100%
82.91	Activities of collection agencies and credit bureaus	100%

## Food and Drink (Manufacturing)

SIC Code	Description	Attributable Activity
10	Manufacture of food products	100%
11	Manufacture of beverages	100%



## Food and Drink (Primary Production)

SIC Code	Description	Attributable Activity
01	Crop and animal production, hunting and related service activities	100%
03	Fishing and aquaculture	100%

## Health Care

SIC Code	Description	Attributable Activity
86.1	Hospital activities	100%
86.21	General medical practice activities	100%
86.22	Specialist medical practice activities	100%
86.23	Dental practice activities	100%
86.9	Other human health activities	100%

## Life Sciences

SIC Code	Description	Attributable Activity
21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	100%
26.6	Manufacture of irradiation, electromedical and electrotherapeutic equipment	100%
32.5	Manufacture of medical and dental instruments and supplies	100%
72.11	Research and experimental development on biotechnology	100%
72.19	Other research and experimental development on natural sciences and engineering	100%

## Chemical Sciences

SIC Code	Description	Attributable Activity
20.11	Manufacture of industrial gases	100%
20.12	Manufacture of dyes and pigments	100%
20.13	Manufacture of other inorganic basic chemicals	100%
20.14	Manufacture of other organic basic chemicals	100%
20.15	Manufacture of fertilisers and nitrogen compounds	100%
20.16	Manufacture of plastics in primary forms	100%
20.17	Manufacture of synthetic rubber in primary forms	100%
20.20	Manufacture of pesticides and other agrochemical products	100%
20.30/1	Manufacture of paints, varnishes and similar coatings, mastics and sealants	100%
20.30/2	Manufacture of printing ink	100%
20.41/1	Manufacture of soap and detergents	100%
20.41/2	Manufacture of cleaning and polishing preparations	100%
20.51	Manufacture of explosives	100%
20.52	Manufacture of glues	100%
20.53	Manufacture of essential oils	100%
20.59	Manufacture of other chemical products n.e.c.	100%
21.1	Manufacture of man-made fibres	100%
21.2	Manufacture of basic pharmaceutical products	100%
	Manufacture of pharmaceutical preparations	100%

## Social Care

SIC Code	Description	Attributable Activity
87.1	Residential nursing care activities	100%
87.2	Residential care activities for learning disabilities, mental health and substance abuse	100%
87.3	Residential care activities for the elderly and disabled	100%
87.9	Other residential care activities	100%
88.1	Social work activities without accommodation for the elderly and disabled	100%
88.91	Child day-care activities	100%
88.99	Other social work activities without accommodation n.e.c.	100%

## Tourism

SIC Code	Description	Attributable Activity
55.1	Hotels and similar accommodation	100%
55.2	Holiday and other short-stay accommodation	100%
55.3	Camping grounds, recreational vehicle parks and trailer parks	100%
56.1	Restaurants and mobile food service activities	100%
56.3	Beverage serving activities	100%
79.12	Tour operator activities	100%
79.9	Other reservation service and related activities	100%
91.02	Museum activities	100%
91.03	Operation of historical sites and buildings and similar visitor attractions	100%
91.04	Botanical and zoological gardens and nature reserve activities	100%
93.11	Operation of sports facilities	100%
93.19/9	Other sports activities (not including activities of racehorse owners) n.e.c.	100%
93.21	Activities of amusement parks and theme parks	100%
93.29	Other amusement and recreation activities	100%



## Appendix C: SOC Definitions for ‘higher-level’, ‘mid-level’ and ‘low-level’ occupations

In the RSAs, we have referred to ‘higher-level’, ‘mid-level’ and ‘low-level’ occupations. Please see below which occupations, defined by the Standard Occupation Code (SOC) 2010, are included in each level.

Occupations	SOC 2010
‘Higher-level’	1: Managers, Directors and Senior Officials
	2: Professional Occupations
	3: Associate Professionals and Technical Occupations
‘Mid-level’	4: Administrative and Secretarial Occupations
	5: Skilled Trades Occupations
	6: Caring, Leisure and Other Service Occupations
‘Low-level’	7: Sales and Customer Service Occupations
	8: Process, Plant and Machine Operatives
	9: Elementary Occupations