

# Sectoral Skills Assessments

Technical Note

June 2021

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# 1. INTRODUCTION

The SSAs are a product developed by the Evidence and Impact Team which look at current and future skills demand in key sectors across Scotland. The aim of the SSAs is to provide a high-level evidence base to inform future investment in skills, built up from existing datasets. The SSAs draw on evidence from four key sources:

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

The SSA technical note aims to provide you with technical and background information on the data provided within the SSAs.

## 2. OXFORD ECONOMICS

Skills Development Scotland (SDS) appointed Oxford Economics to provide labour market, sectoral, occupational and skills forecasts for Scotland, both nationally and regionally over the period to 2031. The results are used to assist in skills investment planning in Scotland at national and regional level. In particular, the output will be used to inform and populate demand statements for SDS' apprenticeship offer, Regional Skills Assessments (RSAs), the evidence base for Sector and Regional Skills Investment Planning (SIP) and local Labour Market Intelligence Tools.

The forecasts provided are produced by Oxford Economics' Local Authority District Forecasting Model. Results have been provided for Regional Outcome Agreement areas (ROAs), City Region Deal areas, local authorities as well as Scotland and the UK, with the key high-level messages summarised for each area in a short report.

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

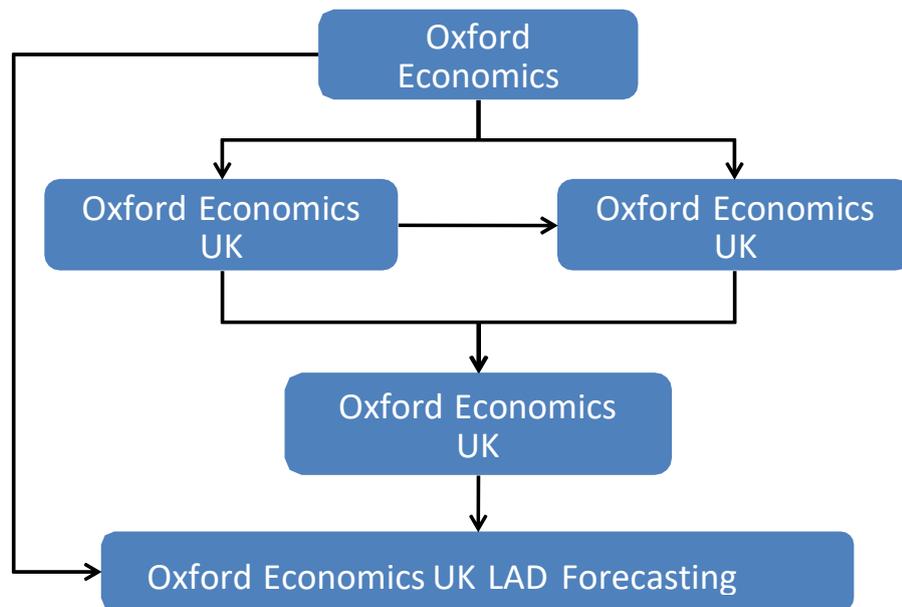
- Chapter 2 provides an overview of the model
- Chapter 3 provides details of data sources and forecast approach.
- Annex A sets out the definitions used for the Scottish key sectors

# 3. MODEL OVERVIEW

## 3.1 LOCAL AUTHORITY DISTRICT FORECASTING MODEL

Oxford Economics' Local Authority District 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, UK 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



Our 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

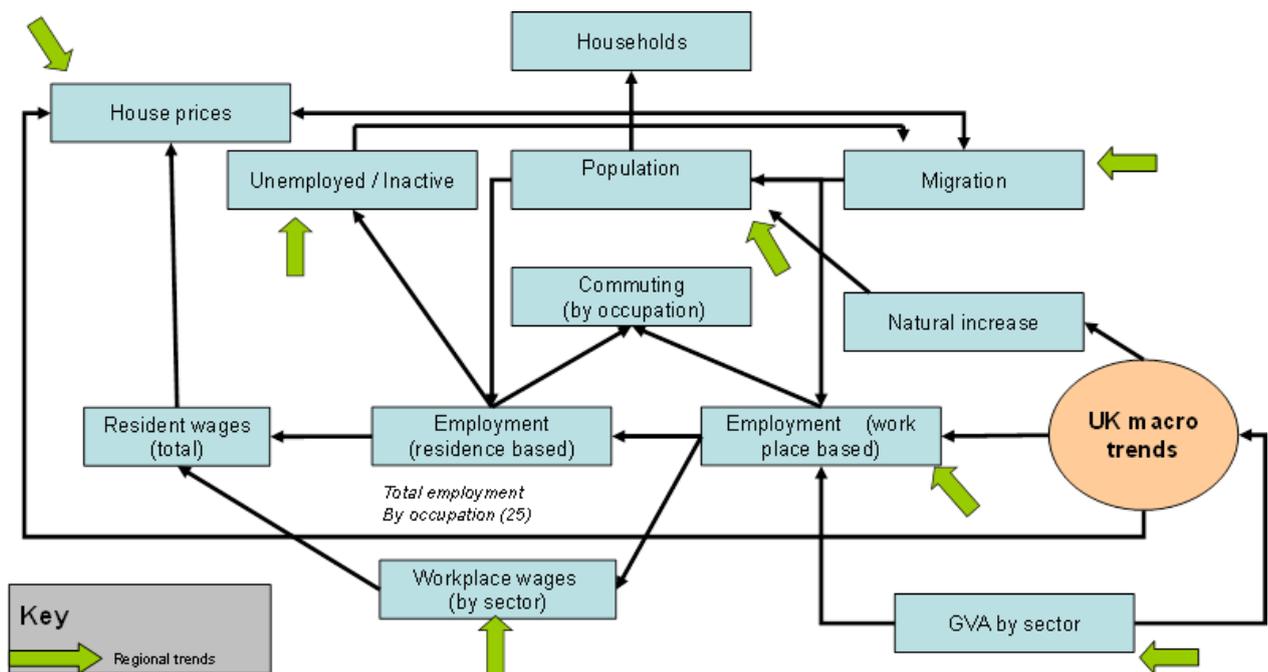
activities. It also means national policy programs that have a particular local impact and that are very likely to happen are appropriately reflected in the forecasts; and

- **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 our models are economically driven, with all aspects of the economy interlinked as we believe that this is the best way to estimate the future outlook for the area. Given that 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, making it a more attractive location for migrants. This would 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**



## GEOGRAPHY

The results have been provided for:

- UK
- Scotland
- Regional Outcome Areas (ROAs)
- City Region Deal areas.
- Local Authorities
- South of Scotland, and
- National Parks.

ROAs, City Region Deal areas and South of Scotland have been calculated using the local authority forecasts. Details of the definitions used for these geographies are provided below:

### Regional Outcome Areas

	<b>Regional Outcome Agreement Area</b>	<b>Local Authorities Covered</b>
1	Aberdeen & Aberdeenshire	Aberdeen City, Aberdeenshire
2	Ayrshire	East Ayrshire, North Ayrshire, South Ayrshire
3	Borders	Scottish Borders
4	Dumfries & Galloway	Dumfries & Galloway
5	Edinburgh & Lothians	East Lothian, Edinburgh, Midlothian
6	Fife	Fife
7	Forth Valley	Clackmannanshire, Falkirk, Stirling
8	Glasgow	East Dunbartonshire, East Renfrewshire, Glasgow
9	Highlands & Islands	Argyll & Bute, Eileanan Siar, Highland, Moray, Islands, Shetland Islands
10	Lanarkshire	East Dunbartonshire, North Lanarkshire, South Lanarkshire
11	Tayside	Angus, Dundee, Perth & Kinross
12	West	West Renfrewshire, Inverclyde, Renfrewshire, West Dunbartonshire
13	West Lothian	West Lothian

## City Region Deal Areas

	City Region Deal Areas	Local Authorities Covered
1	Edinburgh & South East Scotland	Edinburgh, Midlothian, East Lothian, West Lothian, Fife, Borders
2	Glasgow City Region	Glasgow, North Lanarkshire, South Lanarkshire, East Renfrewshire, East Dunbartonshire, West Dunbartonshire, Renfrewshire, Inverclyde
3	Stirling and Clackmannanshire	Stirling, Clackmannanshire
4	Islands	Eileanan Siar, Orkney, Shetland

## Additional Areas

	Areas	Local Authorities Covered
1	South of Scotland	Dumfries and Galloway, Scottish Borders

## 3.2 TIME PERIODS

The model is constructed on an annual basis. Historic data for most variables has been collected for 20 or more years to provide a basis for estimating interrelationships between variables and future trends. Forecasts are currently set up for the period up to 2031 consistent with existing available global, national and regional forecasts.

## 3.3 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.

Our forecast assumes the relaxation of restrictions following the roadmap set out by the government in late-February. This involves non-essential retail and outdoor hospitality reopening in mid-April, hotels and indoor hospitality being permitted to open in mid-May and then all remaining restrictions falling away on 21 June. The lifting of restrictions on social consumption, and associated boost to confidence, should trigger a strong consumer-led recovery, with the Budget providing further short-term stimulus.

Though the UK and EU struck a basic free trade agreement, the switch from EU membership to the new relationship introduced significant new frictions on UK-EU trade. This will result in some degree of trade destruction, limiting improvements in total factor productivity, and will reduce the attractiveness of the UK as a destination for Foreign Direct Investment (FDI). Scarring from the pandemic will exert a further drag, albeit smaller than Brexit, with long-term unemployment set to rise and low levels of business investment reducing the degree of capital deepening. But while the UK is likely to grow at a slower pace than over the past decade, we still expect it to outperform many western European economies.

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 the geography gets smaller. 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.

## **VARIABLES COVERED**

The list below provides a summary of the variables provided. Chapter 3 provides detailed information on the data used within the model and the linkages between variables:

- Gross Value Added (GVA)
- Productivity;
- Employment;
- Unemployment;
- Economic activity;
- Occupational change;
- Broad industry and sectoral change;
- Total requirement including expansion and replacement demand;
- Employment by gender, status and age;
- Population by age; and
- Demand for qualifications.

# 4. DATA SOURCES AND FORECAST APPROACH

## DATA SOURCES AND FORECAST APPROACH

The section below sets out details of the data sources used as well as an overview of our methodology.

### 4.1 TOTAL EMPLOYMENT (JOBS)

#### Total employment (jobs)

Total employment estimates have been provided on both a 1-digit and 2-digit basis. The results include employees in employment, the self-employed and Her Majesty's Forces, and are measured on a workplace basis. The results are fully consistent with Workforce Jobs (WFJ) data available from the Office for National Statistics (ONS). Total employment data is published for Scotland; however, such information is not available for the local authorities. These will be constructed using the components below.

Note total employment is a jobs and not people measure (i.e. one person can have more than one job and would be counted more than once in this indicator).

**Employees in employment:** The Business Register and Employment Survey (BRES) is the starting point for constructing the employment forecasts. BRES is the most comprehensive source of employment data, both geographically and sectorally.

There are a number of steps in constructing regional employee jobs, due to changes in sectoral classifications across the various sources, and restrictions on data availability over particular periods of time. Initially, we take employee jobs data for each sector directly from the BRES over the years 2009-19, which reflects recent methodological changes to the BRES in accounting for working proprietors. This relates to September figures and is based upon SIC 2007 sectors. In 2008, levels of employee jobs are constructed by extrapolating back the trend in the old BRES. Data from the ABI and AES is used to construct the data back to 1991.

This constructed dataset is then controlled to the UK employee jobs series from WFJ, by applying sectoral adjustment factors which converts the data to annual average values (seasonally adjusted). This is measured on a workplace basis.

The starting point in producing total employment forecasts is the determination of workplace-based employees in employment in each of the broad 19 SIC2007 based sectors, consistent with the regional and UK outlooks. At local authority level some of the sectors are driven predominantly by population estimates, others by total employment in the area and the remainder relative to the regional performance (largely exporting sectors). All sectors are also influenced by past trends in the local area. Taken in totality, employment is cross referenced with a number of variables (including population, relative

performance across similar areas, historical cyclical performance and known policy) for checking and validation purposes. Where necessary, manual adjustments are made to the projected trends to reflect this validation process. The methods of sectoral projection are as follows, each of which are forecast based upon recent trends:

- Agriculture - share of Scotland
- Mining and quarrying - share of Scotland
- Manufacturing - share of Scotland
- Electricity, gas, & steam - share of Scotland
- Water supply; sewerage, waste management - share of Scotland
- Construction - location quotient based upon total employment
- Wholesale and retail trade - location quotient based upon consumer spending
- Transportation and storage - location quotient based upon consumer spending
- Accommodation and food service activities - location quotient based upon consumer spending
- Information and communication - share of Scotland
- Financial and insurance activities - share of Scotland
- Real estate activities - location quotient based upon total employment
- Professional, scientific and technical activities - location quotient based upon total employment
- Administrative and support service activities - location quotient based upon total employment
- Public administration and defence - location quotient based upon population
- Education - location quotient based upon population
- Human health and social work activities - location quotient based upon population
- Arts, entertainment and recreation - location quotient based upon consumer spending
- Other service activities - location quotient based upon consumer spending.

The sectoral employee and self-employment estimates (as outlined below) are aggregated along with data on employees in Her Majesty's Forces, (available down to local authority district level from the Ministry of Defence), to arrive at total employment by 19 broad sectors. We assume no change in the employee levels within Her Majesty's Forces over the forecast.

### **Self-employment (jobs)**

Self-employment data for Scotland is taken from Workforce jobs. The data is available by broad SIC2007 sector. Data for the local authorities is Census based (and scaled to the regional self-employed jobs estimates) and sectoral estimates are constructed using the employees in employment sectoral structure. The sectors are forecast using the growth in the sectoral employees in employment data and the estimates are scaled to the regional estimate of self-employment by sector.

## **Employment by key sectors (jobs)**

The sector level data provided for employment, described above, has the benefit of aggregating to total employment. However, this sector breakdown does not allow a sufficiently precise examination of Scotland's key sectors. Such sectors are seen as being particularly important in helping to drive economic growth and competitiveness in the local economy. And for that reason, it was necessary to undertake additional work to accurately measure the size and performance of these sectors.

Results for the following sectors have been provided (details of the definitions used as set out in Annex A).

- Chemical sciences
- Creative industries
- Construction
- Energy
- Engineering
- Food and drink
  - of which, primary production
  - of which, manufacturing
- Financial and business services
  - of which, Financial and professional services
    - of which, Financial services
    - of which, Professional services
- Health and social care
  - of which, social care
  - of which, health
- Child-day care activities
- ICT/digital
- Life sciences
- Tourism

The key sector estimates have been derived using a sub-model, driven by and entirely consistent with the main model. The sub-model provides historical data and forecasts for workplace-based employment. It uses the BRES data to split the broad sector forecasts into their detailed sub-sectors to allow the construction of key sectors.

## **Employment by status and gender (jobs)**

The Business Register and Employment Survey (BRES) provides data on employment by status for Scotland and its local authority districts. Shares of part-time employees (which are trend forecasts linked to national projections) have been applied to the workplace total employment estimates described above. Full-time employment is simply total employment minus the part-time employment. The forecasts are controlled to ensure consistency with national and regional forecasts.

Data on employment by gender is published for Scotland as part of the ONS Workforce Jobs (WFJ) release. Shares of female employment (which are trend forecasts linked to

national projections) are applied to the workplace employment estimates described above. Male total employment is simply the total of employment minus female employment. Locally, employment by gender data is not published. Rather, we have applied the gender shares for Scotland adjusted to reflect the Census of Population to the employment forecast for each area.

## **4.2 EXPANSION, REPLACEMENT AND TOTAL REQUIREMENT (JOBS)**

### **Expansion demand by industry (jobs)**

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 and key sectors.

### **Replacement demand by industry (jobs)**

Replacement demand represents how many more people will be required at each level 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. Some 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 such as manufacturing still require new staff / advertise vacancies. Leaver rates by occupation are calculated from the Labour Force Survey for Scotland. These rates are applied across all geographies. The number of leavers by 1-digit industry are apportioned to key sectors using employment shares from BRES.

### **Total requirement by industry (jobs)**

Replacement demand and expansion demand are summed to produce total demand by industry and key sector (jobs based).

## **4.3 TOTAL EMPLOYMENT (PEOPLE)**

### **Employment by industry (people)**

The data for employment from the Business Register and Employment Survey (BRES) measures jobs rather than individuals. Given the need to focus on people, we convert the number of jobs into numbers of employed people. One person can have more than

one job but working people would only be counted once in this indicator.

To produce a people-based employment forecast, we use the Annual Population Survey (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.

### **Self-employment (people)**

Self-employment data for Scotland and its local authority districts are available from the APS. The series are projected in line with self-employment jobs.

### **Employment by status and gender (people)**

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.

- 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 such as manufacturing still require new staff / advertise vacancies. Leaver rates by occupation are calculated from the Labour Force Survey for Scotland. These rates are applied across all geographies.

The results are also provided for the 3-digit occupation classification for Scotland. These are derived using leaver rates by 3-digit occupation from the Labour Force Survey for Scotland. These rates are applied across the 3-digit occupations for Scotland. The forecasts are controlled to ensure consistency with the 2-digit occupations.

### **Total requirement by occupation (people)**

Replacement demand and expansion demand are summed to produce total occupation demand (people based). The results are also provided for the 3-digit occupation classification for Scotland.

### **Employment by occupation and qualification (people)**

The Annual Population Survey (APS) provides data on employment by qualification for Scotland and its local authority districts. The forecasts are derived using a matrix of qualification by occupation calculated using the Labour Force Survey for Scotland. The share of each qualification category within each occupation is forecast and is applied to the occupation employment data for each local area, to give an estimate of qualifications in each occupation. The results are adjusted to reflect the APS data for each local area.

### **Employment by key sector and qualification (people)**

Employment by key sector and qualification for Scotland and its local authority districts is produced using a matrix of qualifications by broad sector calculated using the Labour Force Survey for Scotland. The share of each qualification category within each broad sector is forecast. The shares of the relevant broad sector are applied to the key sector employment data for each local area, to give an estimate of qualifications in each key sector. The results are adjusted to reflect the APS data for each local area.

## **4.4 EXPANSION, REPLACEMENT AND TOTAL REQUIREMENT (PEOPLE)**

### **Expansion demand 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.

### **Replacement demand by qualification (people)**

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 crosstabulation is run on this sample for each of the last three years and a three-year average is taken. 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.

### **Total requirement by qualification (people)**

Replacement demand by qualification and expansion demand by qualification are summed to produce net occupation demand by qualification (people based).

### **Expansion demand 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 and key sectors.

### **Replacement demand by industry (people)**

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.

### **Total requirement by industry (people)**

Replacement demand and expansion demand are summed to produce total demand by industry and key sector.

## **4.5 EMPLOYMENT AND POPULATION BY AGE**

### **Employment by age**

The Annual Population Survey (APS) provides data on employment by age for Scotland and its local authority districts. The forecasts are derived using a matrix of employment by sector and age. The share of each age band within each sector is applied to the sectoral employment forecast for each area, to produce an estimate of employment by age band. The results are adjusted to ensure the employment rate by age looks sensible.

### **Population by age**

The population data is taken from the Mid-Year Population estimates. The forecast is constructed using the migration forecast and the natural increase assumptions. Natural increase for local areas is forecast using trends in the 2018 based Sub National Population Projections.

The migration forecast is linked to the demand in the economy. If the employment rate within an area is falling too fast, migration reacts as the model assumes that people would not be attracted into this area to live, given that the employment prospects are weak. This ensures that the relationship between the labour market outlook and the demographic forecast is sensible. This series is scaled to be consistent with the migration forecast for Scotland from the UK Regional Model.

The population forecast is then split into 5-year age bands using shares of population by age from the 2016 based Sub National Population Projections.

## **4.6 GVA AND PRODUCTIVITY**

### **Output (GVA)**

GVA data by sector is published on a nominal basis by the Office for National Statistics for Scotland and its local authority districts. 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 the Scottish productivity forecast adjusted by relative earnings. At the Scotland level, GVA is driven by sectoral employment and sectoral productivity relative to the UK.

### **Output (GVA) by key sector**

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.

Productivity is the measure of goods and services produced per unit of labour input. COVID-19 has impacted on productivity across the UK in several ways and it has created new challenges in how productivity is accurately measured. The Office for National Statistics (ONS) highlight that measures based on output per job or worker are expected to experience large declines. Whereas falls in output per hour could be less pronounced.

This is because interventions like the Coronavirus Job Retention Scheme (CJRS) impact the underpinning data. Under this scheme individuals on furlough are categorised as being employed but working no hours. If a worker or jobs-based productivity measure is used, the input (one worker or job) remains the same but output declines as no work is taking place. Whereas if hours worked was used both input and output would decline. This demonstrates the possible divergences observed in productivity measures during COVID times.

These data considerations mean that caution is needed when interpreting the productivity data presented and it must be considered in the context of other data and insight. Despite the challenges it remains advisable to report on productivity as it is a measure that can help us to understand regional variances and challenges.

The Oxford Economics forecasts of productivity shown here have been calculated by dividing total regional GVA by total regional employment (measured by jobs). We use this data as it provides a forecast figure to help estimate the current impact of the pandemic on productivity and longer-term trajectories post-pandemic. An equivalent based on hours worked is not available.

## **4.7 UNEMPLOYMENT AND INACTIVITY**

### **ILO unemployment**

ILO unemployment data is taken from the Annual Population Survey via NOMIS. The latest year of available data is 2019.

Unemployment is projected based on regional trends and a measure of overall labour market tightness (relative employment rate) in the local area. It is not at present directly affected by migration though they do impact indirectly through the employment rate (which has working age population as its denominator).

The unemployment rate is presented as a percentage of the economically active.

### **Economic activity rate**

The economically active rate is calculated as the sum of the unemployed and resident employment.

Resident based employment is a measure of the number of people living in an area who are in work. Resident employment data is taken from the Annual Population Survey. The latest year of available data is 2019. Given that this data is survey based and tends to be very volatile, data is 'smoothed' by taking a 3-year average.

Residence employment is based on a commuting matrix taken from the 2011 Census. This matrix tells us where employed residents of an area work. Using this information each available job (see workplace employment people based above) is allocated to a resident of a given authority. This method assumes the proportions of commuting do not change over time. The number of economically active is presented as percent of population aged 16 and above.

## 5. Other Core Data Sources

### 5.1 GENDER PAY GAP AND LIVING WAGE

The data presented in the SSAs for both Fair Work and the Gender Pay Gap is extracted from the Annual Survey of Hours and Earnings (ASHE), released in December 2020. For further information on ASHE methodology, please visit the [website](#).

### 5.2 FURLOUGH

The furlough data presented in the SSAs is from HMRC, released in May 2021. For further information on furlough data, please visit the HMRC [website](#).

### 5.3 REDUNDANCIES

Partnership Action for Continuing Employment ([PACE](#)) is the Scottish Government's initiative dedicated to helping individuals and employers with advice and support when faced with redundancy. SDS is the lead agency in PACE which offers employees free, impartial advice on dealing with the practical and emotional sides of redundancy. PACE advisers help people recognise their skills, explore their options and prepare for their next move.

### 5.4 MODERN APPRENTICESHIPS

MA statistics are published by SDS on a quarterly basis. For further information on MA statistics, including how the statistics are produced, please visit the SDS [website](#).

### 5.5 BURNING GLASS

Real-time jobs data are compiled by scanning the internet daily using bots that seek out job postings on job boards, corporate websites, and other places where job ads are posted. For example, Burning Glass technology scans more than 40,000 sources, and at any given time, tracks about 3.4 million unique, currently active openings.

Real-time data represent an important complement to traditional survey-based labour market data, such as those produced by government agencies. Job postings data provide a timely view on current market conditions. Fresh data is especially important in market areas experiencing rapid change.

In addition, real-time data can break down the job market to a precise level of detail. Traditional labour market data are structured around broad job categories, and all jobs within those categories are presumed to be identical in terms of the skills, experience, and education they require. By contrast, real-time job market data can be much more specific, reflecting how jobs differ within and across sectors and geographies.

For further information on Burning Glass Technologies, please visit the Burning Glass [website](#)

# ANNEX A: SIC Definitions of Scotland's Key Sectors

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

Creative industries		Attributable Activity
73.11	Advertising agencies	100%
73.12	Media representation	100%
71.11	Architectural activities	100%
90.03	Artistic creation	70%
47.78/1	Retail sale in commercial art galleries	100%
31.09	Manufacture of other furniture	100%
16.29	Manufacture of other wood products	30%
32.12	Manufacture of jewellery and related products	100%
32.13	Manufacture of imitation jewellery and related articles	100%
23.41	Manufacture of ceramic household and ornamental articles	35%
23.49	Manufacture of other ceramic products	35%
23.13	Manufacture of hollow glass	15%
23.19	Manufacture of other glass	15%
47.79/1	Retail sale of antiques and antique books	100%
95.24	Repair of furniture and home furnishings	100%
13	Manufacture of textiles	25%
14	Manufacture of wearing apparel	20%
15	Manufacture of leather and related products	20%
74.1	Specialised design activities	25%
71.12/1	Engineering design activities for industrial process and production	100%
74.1	Specialised design activities	75%
90.01	Performing arts	100%
90.02	Support activities to performing arts	100%
90.04	Operation of arts facilities	100%
78.10/1	Motion picture, television and other theatrical casting	100%
59.2	Sound recording and music publishing activities	100%
18.20/1	Reproduction of sound recording	100%
32.2	Manufacture of musical instruments	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%
18.20/2	Reproduction of video recording	100%
59.11/1	Motion picture production activities	100%
59.11/2	Video production activities	100%
59.12	Motion picture, video and television programme post-production activities	25%
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	75%
60.1	Radio broadcasting	100%
60.2	Television programming and broadcasting activities	100%
90.03	Artistic creation	30%
58.11	Book publishing	100%
58.13	Publishing of newspapers	100%
58.14	Publishing of journals and periodicals	100%
58.19	Other publishing activities	100%
18.11	Printing of newspapers	100%
18.129	Other printing (not labels)	100%
18.13	Pre press and media services	100%
63.91	News agency activities	100%
91.01	Libraries and archive activities	100%
58.29	Other software publishing	100%
62.01/2	Business and domestic software development	100%
62.02	Computer consultancy activities	100%

Construction		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	Manufacture of printing ink	25%
22.11	Manufacture of rubber tyres and tubes; retreading and rebuilding of rubber tyres	20%
22.19	Manufacture of other rubber products	20%
22.23	Manufacture of builders' ware of plastic	35%
23.32	Manufacture of bricks, tiles and construction products, in baked clay	85%
23.41	Manufacture of ceramic household and ornamental articles	60%
23.42	Manufacture of ceramic sanitary fixtures	60%
23.43	Manufacture of ceramic insulators and insulating fittings	60%
23.44	Manufacture of other technical ceramic products	60%
23.49	Manufacture of other ceramic products	60%
23.51	Manufacture of cement	25%
23.52	Manufacture of lime and plaster	25%
23.61	Manufacture of concrete products for construction purposes	90%
23.62	Manufacture of plaster products for construction purposes	90%
23.63	Manufacture of ready-mixed concrete	90%
23.64	Manufacture of mortars	90%
23.65	Manufacture of fibre cement	90%
23.69	Manufacture of other articles of concrete, plaster and cement	90%
25.11	Manufacture of metal structures and parts of structures	60%
25.12	Manufacture of doors and windows of metal	60%
25.21	Manufacture of central heating radiators and boilers	40%
25.29	Manufacture of other tanks, reservoirs and containers of metal	40%
25.3	Manufacture of steam generators, except central heating hot water boilers	40%
26.11	Manufacture of electronic components	35%
41.10	Development of building projects	100%
41.20/1	Construction of commercial buildings	100%
41.20/2	Construction of domestic buildings	100%
42.11	Construction of roads and motorways	100%
42.12	Construction of railways and underground railways	100%
42.13	Construction of bridges and tunnels	100%
42.21	Construction of utility projects for fluids	100%
42.22	Construction of utility projects for electricity and telecommunications	100%
42.91	Construction of water projects	100%
42.99	Construction of other civil engineering projects n.e.c.	100%
43.11	Demolition	100%
43.12	Site preparation	100%
43.13	Test drilling and boring	100%
43.21	Electrical installation	100%
43.22	Plumbing, heat and air-conditioning installation	100%
43.29	Other construction installation	100%
43.31	Plastering	100%
43.32	Joinery installation	100%
43.33	Floor and wall covering	100%
43.34/1	Painting	100%
43.34/2	Glazing	100%
43.39	Other building completion and finishing	100%
43.91	Roofing activities	100%
43.99/1	Scaffold erection	100%
43.99/9	Specialised construction activities (other than scaffold erection) n.e.c.	100%
46.13	Agents involved in the sale of timber and building materials	50%
46.63	Wholesale of mining, construction and civil engineering machinery	50%
46.73	Wholesale of wood, construction materials and sanitary equipment	50%
71.11/1	Architectural activities	100%
71.11/2	Urban planning and landscape architectural activities	50%
71.12/1	Engineering design activities for industrial process and production	50%
71.12/2	Engineering related scientific and technical consulting activities	50%
71.12/9	Other engineering activities (not including engineering design for industrial process and production or engineering related s	50%
74.90/2	Quantity surveying activities	100%

Financial and Business Services		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%
69.1	Legal activities	100%
69.2	Accounting, bookkeeping and auditing activities; tax consultancy	100%
70.2	Management consultancy activities	100%
71.129	Other engineering activities (not including engineering design for industrial process and production or engineering related s	100%
73.2	Market research and public opinion polling	100%
74.3	Translation and interpretation activities	100%
78.109	Activities of employment placement agencies (other than motion picture, television and other theatrical casting) n.e.c.	100%
78.3	Other human resources provision	100%
82.1	Office administrative and support activities	100%
82.2	Activities of call centres	100%
82.30	Organisation of conventions and trade shows	100%
82.91	Activities of collection agencies and credit bureaus	100%
82.99	Other business support service activities n.e.c.	100%
<b>of which, Financial and Professional Services</b>		
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%
<b>of which, Financial Services</b>		
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%
<b>of which, Professional Services</b>		
69	Legal activities and accounting activities	100%
70.2	Management consultancy activities	100%
82.91	Activities of collection agencies and credit bureaus	100%
<b>Health and Social Care</b>		
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%
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%
<b>of which, Social care</b>		
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%
<b>of which, Health</b>		
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%

<b>ICT/Digital</b>		<b>Attributable Activity</b>
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%

<b>Life Sciences</b>		
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%