Regional Skills Assessments (RSAs)

First launched in 2014, the RSA’s purpose is to provide a robust evidence base to support partners in strategic skills investment planning. They have evolved over time based on an independent review carried out in 2015 and feedback from partners.

To ensure an inclusive approach to their development, dissemination and utilisation, RSAs are produced by Skills Development Scotland (SDS) in partnership with Highlands and Islands Enterprise, Scottish Enterprise, Scottish Government, the Scottish Funding Council (SFC), the Scottish Local Authorities Economic Development Group and the South of Scotland Economic Partnership.

RSAs include the use of published data sets. Inevitably, when using published data there is a time lag but the data contained is the most up to date available at the time of writing. The section on the Supply of People in the region is an exception to this rule. Whilst 2018 estimates exist, we have used data for 2016 for consistency with the 2016 based population projections which are the latest available.

This year’s RSA is in three parts:
1. This report outlining Demand for Skills, Supply of People; and Skills Mismatches;
2. An infographic detailing key data for the area; and
3. A new interactive RSA Data Matrix that was launched in August 2019 that provides more detailed data.

In addition, we provide analysis by Key Sector. Key Sectors are central to our Skills Investment Planning approach. Each Key Sector has a tailored Skills Investment Plan (SIP) which gives a picture of the economic and labour market situation, trends in skills and qualification supply and employers’ perspectives on the big skills issues affecting sector growth. Regional SIPs have also been developed. SIPs and RSIPs are available on the SDS website.

Finally, in the sections which follow, the numbers and figures in the body of the text are rounded for ease of reference and readability and therefore may differ slightly from:
• The Oxford Economics data in the RSA Data Matrix; and
• The accompanying charts in the report which are also based on the Oxford Economics data.

This RSA report is for Forth Valley which covers the Clackmannanshire, Falkirk and Stirling local authorities.

1 [https://www.skillsdevelopmentscotland.co.uk/what-we-do/skills-planning/regional-skills-assessments/](https://www.skillsdevelopmentscotland.co.uk/what-we-do/skills-planning/regional-skills-assessments/)
4 SDS, Skills Investment Plans. [http://www.skillsdevelopmentscotland.co.uk/what-we-do/skills-planning/skills-investment-plans/](http://www.skillsdevelopmentscotland.co.uk/what-we-do/skills-planning/skills-investment-plans/)
5 [https://www.skillsdevelopmentscotland.co.uk/what-we-do/skills-planning/regional-skills-assessments/](https://www.skillsdevelopmentscotland.co.uk/what-we-do/skills-planning/regional-skills-assessments/)
1 Introduction
Introduction
We live in a world that is complex and is constantly evolving. Scotland’s businesses and people need the skills, knowledge and capabilities, not just to cope with this change but to thrive in it and influence it.

Scotland’s Economy
The latest ‘State of the Economy’ reported that Scotland’s economy continued its recent pattern of strong performance at the start of 2019 with the unemployment rate falling to record lows and strong growth in exports and output. Output growth increased in the first quarter to 0.5 per cent but this was driven partly due to temporary factors such as stockpiling and firms completing orders in anticipation of the original end March Brexit deadline. Short term outlooks for the economy will be dominated by Brexit uncertainty with the likelihood of subdued growth and the potential for more exposure to downturns in international demand and growth⁶.

Labour productivity grew by 0.5 per cent in Q4 2018 and by 3.8 per cent in 2018 as a whole – its fastest pace of growth since 2010⁷. Whilst positive, Scotland’s ranking among Organisation for Economic Co-operation and Development (OECD) countries is 16th of 37 countries, placing it in the second quartile. This ranking of 16th place has been unchanged since 2007⁸. Scottish Government has the aspiration of improving Scotland’s productivity to match the performance of the top quartile of OECD countries.

Boosting productivity is vital for our long-term prosperity

Scotland’s People
Scotland’s population has grown and is projected to grow in future. National Records of Scotland⁹ (NRS) confirms that Scotland’s population in 2018 was 5,438,100 and is expected to grow to 5.58 million in 2026 and to 5.69 million by 2041¹⁰. This estimate for growth is based on a continuation of EU migration at pre-Brexit levels which is not guaranteed.

Despite this past and projected growth, Scotland is facing an ageing demographic structure. Based on the population in 2016, just under one in five people (18 per cent) were aged 65 and over but by 2041, one in four people (25 per cent) are projected to be in this age group.

If we examine dependency ratios¹¹ for Scotland’s population this shows a growing dependency ratio at Scotland level and indeed some areas – particularly some of Scotland’s rural areas – having much higher rates of dependency than the national average. At Scotland level, the dependency ratio will increase from 55 per cent in 2016 to almost 70 per cent in 2041. Put simply, for every 100 people of working age there will be 70 people dependent by 2041.

This suggests that the supply of labour might contract over the longer term if projections are realised. This points to a tighter labour market and greater competition for skilled labour in the future. Uncertainty regarding the implications of Brexit also remain, and any decisions taken on the free movement of people could exacerbate this further.

A tight labour market will result in more competition for skilled labour – Brexit could exacerbate this.

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⁹ National Records of Scotland (April 2019) Mid-2018 population estimates Scotland
¹⁰ All population projections in this RSA are based on 2016. 2018 based projections for Scotland are available from the NRS website. We have used 2016 to maintain consistency with what is available at sub-Scotland level. 2018 Based sub-Scotland estimates are expected to be published by NRS in March 2020.
¹¹ Dependency ratio is calculated by (a) the number of children aged 0-15 years, plus (b) The number of people of pension age and above – and comparing this total vis-à-vis the working age population.
Although we are seeing record levels in relation to high employment and low unemployment and relative economic prosperity since the recession, not everyone is benefitting equally in this prosperity:

- The gender pay gap for women working full-time in Scotland was 5.7 per cent in 2018.\(^\text{12}\)
- The unemployment rate was 4.2 per cent for working age people in Scotland, but this increases to 9.9 per cent for 16-24 year olds and to 10.8 per cent for males aged 16-24.\(^\text{13}\)
- The employment rate for people aged 16-64 was 74.5 per cent, but 57.4 per cent for people from an ethnic minority and 45.9 per cent for disabled people.\(^\text{14}\)

There are disparities in regional performance across Scotland. Based on an assessment of employment growth, productivity, earnings and unemployment, recovery since the recession has been stronger in Scotland’s urban areas and weaker in rural areas.

Since the recession we have seen a rise in ‘nonstandard’ jobs (such as part time and temporary employment), low wage growth and continued ‘in work’ poverty:

- Self-employment has risen by 22 per cent, compared to one per cent for full-time employment since the recession.\(^\text{15}\)
- Median weekly earnings (gross) grew by 19 per cent in the five years leading up to the financial crash in 2008. A slower rate of 11 per cent has occurred over the past five years.\(^\text{16}\)
- More than half a million (550,000) people in Scotland were living in relative poverty (after housing costs) in a household where at least one adult was in paid employment.\(^\text{17}\)

Both people and place are considerations when working towards a more inclusive labour market.

**Our growth needs to be inclusive**

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\(^{13}\) Annual Population Survey (April 2018-March 2019)

\(^{14}\) Annual Population Survey (April 2018-March 2019), EA core disabled has been used for the employment rate of disabled people.


All parts of Government will be expected to play a role in achieving these ambitious targets and SDS is to develop a Climate Emergency Skills Action Plan, as outlined in the Programme for Government. The development of appropriate skills will have a significant part to play in enabling this transition to a low carbon economy.

**Our growth needs to be sustainable**

**Scotland’s Resilience**

The world of work is constantly changing and the rate of change is rapid. Technological and societal disruptions are occurring at an increasing pace. Whilst we cannot predict the future, we can prepare for a future that is increasingly unpredictable. SDS has developed a Skills 4.0 model that focuses on developing ‘meta-skills’ to equip people with skills in resilience to thrive in a complex and ever-changing world (see Figure 1).

We need skills for resilience to thrive in a complex and ever-changing world

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**Figure 1:**

**Skills 4.0**

[Figure 1: Skills 4.0](https://www.skillsdevelopmentscotland.co.uk/what-we-do/skills-planning/skills4-0)
**Issues and Challenges**
A fit for purpose, skilled workforce will be essential to address the challenges facing Scotland (see Figure 2).

The development of skills that are fit for Scotland now and in the future is essential to achieving a high performing, inclusive and sustainable labour market. To meet these challenges, a step change in how we align skills provision to meet labour market demand is planned.

**Figure 2: Drivers for change**

<table>
<thead>
<tr>
<th>Scotland’s Economy</th>
<th>Scotland’s People</th>
<th>Scotland’s Climate Change Emergency</th>
<th>Scotland’s Resilience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boosting productivity is vital for our long-term prosperity</td>
<td>A tight labour market</td>
<td>Our growth needs to be sustainable</td>
<td>We need skills for resilience to thrive in a complex and ever-changing world</td>
</tr>
</tbody>
</table>

**Scotland’s Skills Issues**
- We need innovative workplaces and skills to boost productivity with employers and employees as active participants in the skills system
- We need to maximise Scotland’s indigenous talent and attract new talent to fill jobs in future. We need to enable all of Scotland’s people to share in the nation’s prosperity
- We need to develop fit for purpose skills to enable Scotland to achieve its ambitious target for greenhouse gas emissions
- We need to develop sector specific skills for the economy and skills for resilience – ‘meta skills’

**To support this we will need:**
- Greater flexibility and responsiveness in skills provision to better align with the needs of employers and the Scottish economy
- Investment in upskilling and reskilling throughout individual’s careers to respond to a rapidly changing environment
- More personalised, relevant and flexible work-based pathways

Source: Skills Development Scotland
Scotland’s Skills Alignment Ambition

Skills Alignment (one of the workstreams in the Scottish Government’s Future Skills Action Plan) is focused on improving the skills system in Scotland.

Its purpose is “to ensure that Scotland’s people and businesses are equipped with the right skills to succeed in the economy, not just now but in the future.” To achieve this end, a new joint planning process is in development to align the relevant functions of SDS and the SFC (see Figure 3).

To lead this process a Director of Skills Alignment has recently been appointed and three pilot projects have been established to test approaches in:
- Regions – Glasgow College region; and
- Sectors – Early Years and Child Care and Financial and Professional Services.

Having a robust evidence base is crucial if we are to ensure a fit for purpose skills system. SDS and partners are working to develop evidence on the key strategic issues and challenges for Scotland. This and the evidence contained in the RSAs will help inform Step 1 of this model – the Demand Assessment.

Figure 3: Five-step Skills Alignment model

1. Demand Assessment
2. Provision Planning
3. Outcome Agreements/Commissioning
4. Performance Management/Monitoring
5. Review and Evaluation

Source: Skills Development Scotland
Forth Valley’s Economy
**Forth Valley’s Economy**

**Current Economic Performance**
Gross Value Added (GVA) is a measure of the value of goods and services produced in an area and is an indicator of the economy’s health.

GVA in Forth Valley in 2019 was £7.1bn, five per cent of Scotland’s output (£138.8bn).

This share of GVA ranks Forth Valley as the one of the smallest contributing RSA regions to the Scottish economy.

In 2019, the highest value sectors in Forth Valley were:
- Manufacturing, £1.1bn;
- Wholesale and Retail Trade, £0.8bn;
- Real Estate Activities, also £0.8bn;
- Human Health and Social Work, £0.7bn; and
- Construction, £0.6bn.

**Past Economic Performance**
From 2009 to 2019 the Forth Valley economy, measured by GVA, grew by 1.0 per cent on average each year. This was a slower rate of growth than Scotland, which over the same period experienced 1.4 per cent growth on average each year.

**Future Economic Performance**
GVA in Forth Valley is forecast to grow by 1.5 per cent on average each year from 2019 to 2029. This rate of growth is below what is forecast for Scotland (1.7 per cent) and the UK (2.0 per cent).

Economic growth across Scotland is expected to be relatively modest in the short term, as businesses show their reluctance to invest while operating under Brexit-related uncertainties. Slower GVA growth in Scotland is largely explained by its industrial mix, and specifically, the most dynamic sectors such as high value business services and digital sectors being underrepresented in Scotland compared to the UK.

GVA growth in Forth Valley is expected to be driven by the Real Estate sector from 2019 to 2029, the GVA produced by the sector is expected to increase by £172.4m. The GVA output from the Real Estate sector is however inflated by owner-occupier imputed rent. Imputed rent captures, economically, the value of the service homeowners are providing to themselves by owning and living in their own home19.

In addition to Real Estate, sectors forecast to have the greatest increases in GVA output are:
- Professional, Scientific and Technical Activities, £114.1m;
- Wholesale and Retail Trade, £113.6m;
- Human Health and Social Work, £112.7m; and
- Manufacturing, £101.8m.

When compared to GVA output in 2019, it can be seen that most of the sectors that had the greatest GVA output in 2019 are expected to have the greatest actual growth from 2019 to 2029.

Percentage change provides an alternative viewpoint for considering the future GVA contribution from sectors. This approach captures sectors that might make smaller GVA contributions but are forecast to grow at a faster rate. In Forth Valley, Professional, Scientific and Technical Activities and Administrative and Support Services are expected to have the greatest rate of GVA growth from 2019 to 2029 (2.6 per cent growth in both sectors). Information and Communication is also expected to have fast rate of growth from 2019, averaging 2.4 per cent each year up to 2029.
Fiscal policy is likely to remain tight over the forecast period and, as a result, will weigh on the economic growth prospects for the Public Sector. Public Administration and Defence Activities is expected to contract by -0.8 per cent each year from 2019 to 2029 in Forth Valley. However, Education and Human Health and Social Work are forecast to have GVA growth, growing by 0.3 per cent and 1.4 per cent per year over the forecast period respectively (see Figure 4). For Human Health and Social Work, this will be a result of increased demand for these services due to changes in the region’s population structure.

**Figure 4**
Forecast average annual GVA change by Industry (%) (2019 - 2029), Forth Valley

Source: Oxford Economics
The key sectors contributing most to GVA growth in Forth Valley from 2019 to 2029 are expected to be Financial and Business Services, Health and Social Care, Construction and Engineering (see Figure 5). These sectors are expected to have a higher overall contribution to growth as they have a relatively large presence in the regional economy already.

**Figure 5**
Forecast absolute GVA growth by Key Sector (£m) (2019 - 2029), Forth Valley

Source: Oxford Economics
Looking instead at percentage change for the key sectors for 2019 to 2029, Child-Day Care Activities is forecast to be the fastest growing. It is forecast to grow 3.9 per cent each year on average. This strong outlook reflects the Scottish Government’s childcare policy to double the number of hours of funded childcare by 2020. However, its small size in absolute terms means that its impact on overall growth is limited.

Relatively fast growth is also forecast in the Digital, Creative Industries and Life Sciences sectors. However, like Child-Day Care Activities their overall contribution will be lower due to their smaller size relative to the much larger, dominant key sectors in the region currently (see Figure 6).

Figure 6
Forecast average annual GVA growth by Key Sector (%) (2019 - 2029), Forth Valley

Source: Oxford Economics
**Productivity**

Productivity is the measure of goods and services produced per unit of labour input. Productivity has been calculated by dividing total regional GVA by total regional employment (measured by jobs).

The productivity of a region is influenced by the industrial mix that is present. Within the same industries productivity may differ from business to business.

Office for National Statistics (ONS) analysis tells us that:

> GVA per worker [productivity] is generally lower in the accommodation and food service activities, administrative and support services activities, and wholesale and retail trade industries than in most other industries. The production sector, by contrast, has relatively high productivity.

Among the service sectors, the professional, scientific and technical activities, financial and insurance activities, and the information and communication sector also tend to have relatively high-productivity. Therefore, a relatively high aggregate productivity in a region may sometimes be a reflection of a relatively large share of more productive industries in that location.

In 2019, productivity in Forth Valley was £50,800. This was above the Scottish average of £50,400 (see Figure 7).

From 2009 to 2019, productivity in Forth Valley grew by 0.4 per cent on average each year. This rate of growth was slower than what occurred across Scotland. Average annual productivity growth across Scotland was 1.3 per cent over the period. The equivalent for the UK was 0.8 per cent.

Productivity in Forth Valley is forecast to grow at an average of 1.3 per cent per year from 2019 to 2029. This is below the growth rate expected for Scotland as a whole (1.4 per cent), and below that of the UK (1.5 per cent).

![Figure 7: Productivity (2019)](image-url)

Source: Oxford Economics

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Employment in Forth Valley
Employment in Forth Valley

Current Employment

Total employment in Forth Valley (measured by jobs) was estimated to be 140,500 in 2019, five per cent of Scottish employment.

The employment rate for the working age population (aged 16-64) in Forth Valley was 74.3 per cent, which was below the rate for Scotland (74.5 per cent).

Compared to Scotland, the region had below average employment rates for:

- Males, 77.9 per cent compared to 78.1 per cent;
- Females, 70.9 per cent compared to 71.1 per cent;
- Disabled people, 43.7 per cent compared to 45.9 per cent; and
- Ethnic minorities, 56.0 per cent compared to 57.4 per cent.

The employment rate for young people (aged 16-24) was higher in Forth Valley compared to Scotland, 60.0 per cent compared to 58.3 per cent.

The region’s overall employment rate means that approximately one in four of the region’s working age population were unemployed (2.7 per cent) or economically inactive (23.6 per cent). Inactivity includes people who are studying, retired or looking after their family or home.

Across Scotland and within the region full-time jobs were most numerous, 96,600 jobs (69 per cent) were full-time in Forth Valley in 2019. This was a greater, but close, percentage share compared to Scotland where 68 per cent of jobs were full-time. Within the region three fifths of full-time jobs (58,300; 60 per cent) were held by males, and the remaining 40 per cent were held by females (38,300 jobs).

Part-time jobs accounted for a lower percentage share of employment in the region compared to Scotland, 31 per cent compared to 32 per cent. Overall there were 43,900 part-time jobs in Forth Valley, females accounted for more than three quarters (33,800; 77 per cent). Whilst males accounted for 23 per cent, 10,000 jobs (see Figure 8).

Figure 8
Employment by gender and full-time/part-time (2019), Forth Valley

Source: Oxford Economics

21 Equalities Act (EA) Core Disabled
22 Employment rate figures from Annual Population Survey, April 2018 – March 2019
23 Employment rate, unemployment rate and economic inactivity rate may not sum to 100 due to rounding.
In Forth Valley, the largest employing sectors, and their regional share of employment, in 2019 were (see Figure 9):

- Wholesale and Retail Trade, 15 per cent;
- Human Health and Social Work, 15 per cent; and
- Manufacturing, nine per cent.

Real Estate Activities, the sector that made the third greatest GVA contribution in 2019 (irrespective of the imputed rent consideration) accounted for a small share of regional employment. The sector accounted for 1,700 jobs, a one per cent share.

Source: Oxford Economics
Large sectors are an important source of jobs, however regions also have sectoral strengths that make them unique. It means that smaller sectors can be more important than their size suggests as they are more concentrated in the region compared to the national average. In Forth Valley, Manufacturing was the greatest specialism with the percentage of employment in this sector (1.4 times greater than the Scottish average). Other sectors that had above average concentrations in Forth Valley were Construction and Transportation and Storage (1.3 and 1.2 times more concentrated respectively).

Of the key sectors, Health and Social Care, as might be expected given the sectoral insight above, was the largest in Forth Valley in 2019. The sector accounted for 20,500 jobs. Construction was the second largest with a total of 14,100 jobs (see Figure 10).

**Figure 10**  
Employment by Key Sector and share of total employment (2019), Forth Valley

Source: Oxford Economics
Sectors tell us about the industries that people work in, and occupations provide insight on the type of jobs people do. In 2019, more than two fifths of all people (41 per cent) in Forth Valley worked in ‘higher level’ occupations, 32 per cent were ‘mid-level’ and 27 per cent were ‘lower level’. Compared to Scotland, the occupational structure of Forth Valley had a greater percentage of the workforce in ‘mid-level’ occupations and fewer elsewhere. Scotland had a greater percentage in ‘higher level’ (45 per cent) and ‘lower-level’ (30 per cent) occupations but fewer in ‘mid-level’ (25 per cent) occupations.

A detailed look at the occupational structure shows that the largest occupations in the region in 2019 were (see Figure 11):

- Clerical and Services Elementary Occupations, ten per cent;
- Administrative Occupations, eight per cent;
- Caring Personal Service Occupations, seven per cent; and
- Corporate Managers, seven percent.

**Figure 11**
Employment by occupation and share of total employment (2019), Forth Valley

Source: Oxford Economics
Past Employment
Employment in Forth Valley increased by 5.7 per cent from 2009 to 2019. This was largely caused by growth in prominent, large employing sectors including:
• Administration and Support Services, 2,000 jobs;
• Professional, Scientific and Technical Activities, 1,400 jobs; and
• Transportation and Storage, 1,300 jobs.

Whilst these sectors experienced job growth, other sectors contracted. The greatest absolute decline occurred in the Public Administration and Defence sector in Forth Valley. Compared to 2009, there were 1,400 fewer jobs in the sector in 2019. Decline also occurred in Wholesale, Retail and Trade (-1,400 jobs) and Agriculture, Forestry and Fishing (-300 jobs).

Beyond the sectors, other shifts in the region’s labour market have occurred. Part-time employment and full-time employment increased, by 600 jobs and 7,000 jobs respectively, from 2009 to 2019. Female employment also increased during this period, by 7,700 jobs, whilst male employment stayed the same.

Employment Forecast
The employment growth that has occurred in Forth Valley in the past is forecast to continue. From 2019 to 2029 employment growth of 2.0 per cent is forecast in the region. This equates to 0.2 per cent change year to year, and 2,800 jobs in total over the forecast period.

Compared to Scotland, this is a slower rate of growth. A three per cent increase in employment, or 0.3 per cent growth annually, over the forecast period is expected for Scotland. The growth rate for the UK is greater still, a five per cent increase, or 0.5 per cent annual change, is forecast.

The employment forecast for the local authorities within Forth Valley shows a variable outlook. Stirling and Falkirk are forecast to have a net increase in the number of jobs over the forecast period (0.3 per cent each year and 0.1 per cent each year respectively). However, employment decline is forecast in Clackmannanshire (-0.1 per cent per year).

Over the period to 2029, full-time employment is expected to increase in Forth Valley with 1,700 more full-time jobs in 2029 compared to 2019. Both male and female full-time employment will increase, by 900 and 800 jobs respectively. Part-time employment is also expected to increase by 1,100 jobs. Female part-time employment is forecast to increase by 600 jobs, as well as male part-time employment which is forecast to increase by 500 jobs (see Figure 12).

Figure 12
Forecast employment change, by gender and full-time/part-time (2019 - 2029), Forth Valley

<table>
<thead>
<tr>
<th></th>
<th>Full-time</th>
<th>Part-time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>900</td>
<td>500</td>
</tr>
<tr>
<td>Female</td>
<td>800</td>
<td>600</td>
</tr>
</tbody>
</table>

Source: Oxford Economics
Although employment is forecast to increase in Forth Valley from 2019 to 2029, sectors will have varying performance. The greatest growth in jobs is forecast in Administration and Support Services, with 1,600 more jobs expected in the sector by 2029 compared to 2019. Other sectors forecast to have growth in excess of 900 over the forecast period are Construction (1,200 jobs) and Professional, Scientific and Technical Activities (1,000 jobs).

Employment growth is also forecast in Forth Valley’s public services sector. Public Administration and Defence is forecast to contract by 700 jobs over the forecast period due to continued pressure on public finances. However, this will be offset by growth of 700 jobs in the Health and Social Work sector and a further 100 jobs in Education by 2029.

Job losses in Forth Valley are also forecast in some sectors, most notably in the production sector. Manufacturing is the sector forecast to have the greatest number of job losses from 2019 to 2029. During the forecast period a decline of 2,100 jobs is anticipated. This reflects the general trend of more capital intensive and higher value-added activity in the sector, which requires less labour-intensive methods (see Figure 13).

24 Comprising Public administration and defence, Education, and Human health and social work.

Figure 13
Forecast employment change by Industry (2019 - 2029), Forth Valley

Source: Oxford Economics
The growth and contraction of employment by sector means that private services are expected to account for a larger share of jobs in Forth Valley over the forecast period. The percentage is forecast to rise from 52 per cent in 2019 to 53 per cent in 2029. The Construction sector is also forecast to increase from eight per cent to nine per cent over the forecast period. In 2019 public services and primary industries accounted for 28 per cent and two per cent of employment respectively. This share is expected to be maintained in 2029. Manufacturing is expected to decline by one percentage point over the forecast period to from nine per cent to eight per cent in 2029.

Looking ahead, the outlook for the key sectors largely echoes the broad sector trends summarised above – with Construction forecast to have the greatest growth (1,200 jobs). Health and Social Care and Financial and Business Services are both forecast to grow by 700 jobs from 2019 to 2029 in Forth Valley.

A number of other key sectors will experience growth over the forecast period, including:
- Tourism, 600 jobs;
- Child-Day Care Activities, 500 jobs;
- Creative Industries, 100 jobs; and
- Digital, 100 jobs.

Food and Drink is the key sector forecast to have the greatest employment decline in Forth Valley, with 300 fewer jobs in 2029 compared to 2019 expected (see Figure 14).

N.B. ‘private services’ comprise the following sectors: wholesale and retail trade; transportation and storage; accommodation and food services; information and communication; financial and insurance activities; real estate activities; profess., scientific and technical activities; administrative and support services; arts, entertainment and recreation; and other service activities.
By occupation, Business and Public Service Professionals are forecast to experience the greatest increase in employment in Forth Valley from 2019 to 2029 (of 500 workers). An additional 400 workers are expected to be required in Caring Personal Service Occupations, driven by expansion in the Health and Social Care sector. Other occupations anticipated to have an increase that is relatively large for the region are:

- Clerical and Services Elementary Occupations, 400 workers;
- Skilled Construction and Building Trades, 400 workers; and
- Business and Public Service Associate Professionals, 400 workers.

Occupations likely to contract over the next decade tend to be those most closely associated with Manufacturing and Public Administration and Defence, reflecting the declining numbers of jobs in each of these sectors. Examples include Skilled Metal and Electrical Trades (-400 people) and Administrative Occupations (-300 people) (see Figure 15).

Figure 15
Forecast employment change by occupation (2019 - 2029), Forth Valley

Source: Oxford Economics
Total Labour Market Requirement in Forth Valley
Total Labour Market Requirement in Forth Valley

In the previous sections we presented what has happened, is happening and what is forecast to happen in Forth Valley economy and labour market. When looking at the labour market, we have until this section focused on how many jobs there will be in any given year and how that compares to another year. However, the labour market is more complex than this.

In this section, we provide greater insight on job openings\(^26\). To do this we consider the jobs that will be created or lost due to expansion or contraction in the labour market and the jobs that will arise due to people leaving the labour market. People leave the labour market and jobs become vacant for a variety of reasons, retirement being the most common cause. This is called the replacement requirement.

In Forth Valley, 49,200 job openings are forecast from 2019 to 2029. In the region, and as shown in the previous chapter, 2,800 jobs are forecast to be created in Forth Valley from 2019 to 2029 due to expansion in the labour market. A further 46,400 job openings will arise due to the replacement requirement.

These opportunities are expected to be concentrated in a small number of sectors, with four sectors in Forth Valley forecast to account for more than half (57 per cent) of the requirement. These are (see Figure 16):

- Wholesale and Retail Trade, 10,700 jobs;
- Administration and Support Services, 7,000 jobs;
- Human Health and Social Work, 5,300 jobs; and
- Accommodation and Food Services, 5,100 jobs.

\(^26\) Job openings can be full or part time and the job openings forecast could be higher or lower in reality. Please note that throughout this section totals may not equal the sum of constituent parts due to rounding.
Figure 16
Forecast net requirement by Industry (2019 - 2029), Forth Valley

Source: Oxford Economics
Please note that due to rounding, data in Figure 16 may differ to the narrative on page 26.
To fill these jobs, and others, there is a forecast requirement for 41,300 people in the region from 2019 to 2029. The difference between the people and job requirements is due to some people having more than one job, for example someone who has two part-time jobs. The number of people working in Forth Valley is expected to increase by 2,000 over the forecast period. There will also be a replacement requirement of 39,300 people.

By occupation, the greatest number of people are forecast to be required in (see Figure 17):
- Clerical and Service Elementary Occupations, 8,000 people;
- Sales Occupations, 4,600 people;
- Teaching and Research Professions, 3,800; and
- Corporate Managers, 2,900 people.
Supply of People in Forth Valley
Supply of People in Forth Valley

Projection of Total Population

NRS produce population estimates for Scotland biennially. Their 2016 based forecasts cover the period up to 2041, so in this chapter we present a longer forecast period than the previous chapters.

In 2016, the population of Forth Valley was 304,500, six per cent of Scotland’s population.

By age, the largest group in Forth Valley were people of working age (16-64 years). There were 195,100 people in this age group, 64 per cent of the region’s population. Whilst it was the largest group, people of working age across Scotland accounted for a larger share of the population overall (65 per cent).

The number of people of working age compared to those of non-working age has implications for the region’s dependency ratio. The dependency ratio is important when considering the demand for public services, for example schools and healthcare services, and the funds available to provide these services, the income from taxes and National Insurance. In 2016, the dependency ratio in Forth Valley was 56 per cent. This means that for every 100 people of working age, there were 56 people of non-working age. Across Scotland it was 55 per cent.

Of those who were in age groups thought to be dependent, the oldest age group was the largest. There were 56,500 people aged 65 or older who accounted for 19 per cent of the region’s population. Across Scotland those aged 65 or older accounted for 18 per cent of the population, which suggests an overall older population Forth Valley.

Children and young people (0-15 years) accounted for the remaining 17 per cent, there were 52,900 individuals in this age group (see Figure 18).

Brexit has placed an increased focus on the nationality of people living and working in the UK. It has the potential to discourage EU migrants from coming to the UK to live and work, either through choice or eligibility. Migration is important to Scotland as without it the population would be declining.

Figure 18
Population by age (2016), Forth Valley and Scotland

19% 18%
64% 65%
17% 17%

Forth Valley Scotland

0-15 16-64 65+

Source: National Records of Scotland
In Forth Valley, there were 11,000 people who were born in the EU and a further 8,000 from the rest of the world in 2018. The EU born population accounted for four per cent of the region’s population, and three per cent of the region’s population were born elsewhere in the world. Compared to Scotland the same percentage of the region’s population were born in the EU, and a smaller percentage were born elsewhere in the world. Across Scotland four per cent of the population were born in the EU, and four per cent were born in other countries outside of the EU.

From 2016 to 2041, the population of Forth Valley is projected to increase by approximately 20,200 people. Equating to a seven per cent increase, this is greater than the national projected growth rate of five per cent over the same period.

The age structure of the region’s population is projected to change over the coming decades, with the percentage of the population who are of working age expected to fall from 64 per cent in 2016 to 58 per cent in 2041; a projected decrease of 8,300 people.

The largest increases are expected in the 65 or older age groups, with an 89 per cent increase projected for those aged 75+ (an additional 21,500 people) and 25 per cent among those aged 65-74 (an additional 7,900 people). There is a forecast decline in all other age groups over the period, with the most substantial decline of seven per cent projected for those aged 16-29, a projected fall of 3,500 people.

These shifts suggest that the region could have a larger and generally older population by 2041. This has implications for the region’s dependency ratio. Brexit may also affect the population structure and exacerbate any challenges. By 2041, the region’s dependency ratio is expected to increase to 74 per cent. Ranging across the region from 69 per cent in Stirling, to 74 per cent in Falkirk and 84 per cent in Clackmannanshire. Across Scotland the dependency ratio is expected to rise to 70 per cent (see Figure 19).

**Figure 19**

**Dependency ratio (2016 and 2041)**

<table>
<thead>
<tr>
<th>Region</th>
<th>2016</th>
<th>2041</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glasgow, East and Midlothian</td>
<td>47%</td>
<td>49%</td>
</tr>
<tr>
<td>Edinburgh</td>
<td>47%</td>
<td>49%</td>
</tr>
<tr>
<td>Aberdeen City and Shire</td>
<td>51%</td>
<td>55%</td>
</tr>
<tr>
<td>Scotland</td>
<td>51%</td>
<td>55%</td>
</tr>
<tr>
<td>West Lothian</td>
<td>55%</td>
<td>59%</td>
</tr>
<tr>
<td>Fife</td>
<td>56%</td>
<td>60%</td>
</tr>
<tr>
<td>Forth Valley</td>
<td>71%</td>
<td>74%</td>
</tr>
<tr>
<td>Tayde</td>
<td>74%</td>
<td>74%</td>
</tr>
<tr>
<td>Lanarkshire</td>
<td>76%</td>
<td>78%</td>
</tr>
<tr>
<td>West</td>
<td>76%</td>
<td>76%</td>
</tr>
<tr>
<td>Fife</td>
<td>76%</td>
<td>78%</td>
</tr>
<tr>
<td>Highlands and Islands</td>
<td>85%</td>
<td>85%</td>
</tr>
<tr>
<td>Ayrshire</td>
<td>88%</td>
<td>88%</td>
</tr>
<tr>
<td>Dumfries and Galloway</td>
<td>94%</td>
<td>94%</td>
</tr>
<tr>
<td>South of Scotland</td>
<td>95%</td>
<td>95%</td>
</tr>
<tr>
<td>Scottish Borders</td>
<td>95%</td>
<td>95%</td>
</tr>
</tbody>
</table>

Source: National Records of Scotland
Skills Shortages, Gaps and Challenges in Forth Valley
**Skills Shortages, Gaps and Challenges in Forth Valley**

The Employer Skills Survey (ESS) gathered information on the skills challenges that employers encountered when recruiting, and any challenges that they had within their existing workforces. It is the primary source for this insight as it has taken a consistent approach across sectors and regions. The survey covered:

- Recruitment and skill-shortage vacancies;
- Skills gaps in the existing workforce;
- Skills under-utilisation;
- Upskilling - the need for staff to acquire new skills or knowledge;
- Training and workforce development; and
- High Performance Working practices.

The insight presented here is from the 2017 ESS which covered Scotland, England, Wales and Northern Ireland. The next ESS will be published in 2020 and unlike previous years, Scotland’s results will be published by the Scottish Government. Future ESS results for England, Wales and Northern Ireland will still be available and will be published by the UK Government.

**Skills Shortages**

Skills shortages are challenges that arise when employers are recruiting but are unable to find applicants with the required skills. When a vacancy cannot be filled due to a shortage of skills it is a skill-shortage vacancy (SSV). SSVs impact on the workplace and workforce in a number of ways, including:

- Increasing the workload for other staff;
- Creating difficulties when trying to meet customer service objectives; and
- Increasing operating costs.

In 2018, skills shortages were estimated to have cost Scottish employers £361.3 million, roughly £17,000 per organisation²⁷.

To understand the scale of the challenge that they present we can consider their incidence (how many employers are experiencing the challenge) and their density (how many vacancies are affected).

In 2017, the number of employers reporting at least one SSV in Forth Valley was nine per cent, compared to six per cent for Scotland. This suggests a challenge that extends further across the region’s labour market compared to Scotland’s. The incidence of SSVs in the region was lower in 2015 (eight per cent), whereas across Scotland the incidence of SSVs has remained the same (six per cent) from 2015 to 2017.

Density, which indicates how many vacancies were SSVs, was higher in Forth Valley than Scotland in 2017 and 2015. In 2017, density in the region was 35 per cent, up from 27 per cent in 2015. Across Scotland, density was 24 per cent in 2015 and 2017. This suggests that employers in the region are facing difficulties across a number of roles, with greater challenges than employers across Scotland (see Figure 20).
Across Scotland, to overcome SSVs, the most common responses employers took were to:

- Increase their expenditure on advertising and recruitment;
- Use new recruitment methods; and
- Redefine existing jobs.

Skills are not the only reason employers can find it difficult to fill vacancies. Other factors like hours and location, can make it harder. In Forth Valley, 44 per cent of employers tried to recruit non-UK nationals to overcome hard to fill vacancies, compared to 41 per cent in Scotland. Across Scotland, most employers (89 per cent) who sought to recruit non-UK nationals considered EU nationals. Equivalent data for Forth Valley is not available however any changes to migration policy as a result of Brexit will affect all regions in Scotland.

Most employers took action to overcome SSVs, however 11 per cent of Scottish employers in 2017 took no action.
Skills Gaps
Skills gaps arise when existing employees are not fully proficient as they do not have all the skills necessary for their role – these can be people, personal, practical and/or technical skills. Similar to skills shortages, we consider the incidence (how many employers have at least one person not fully proficient) and density (how many employees are not fully proficient). Skills gaps have similar impacts to SSVs and can slow down innovation in the workplace. Across Scotland, the most common causes of skills gaps were:

- Employees being new to their role, or training being incomplete;
- A lack of staff motivation; and
- An inability to recruit staff with the required skills, creating a need to upskill employees/recruits.

In 2017, the number of employers who reported a skills gap in at least one employee was 17 per cent in Forth Valley, compared to 16 per cent for Scotland. Since 2015, the incidence of skills gaps in the region has increased. In 2015, 14 per cent of employers experienced a skills gap – this was greater than the equivalent for Scotland (13 per cent).

Overall, 5.8 per cent of the workforce in Forth Valley had a skills gap in 2017. This was a decrease from 8.5 per cent in 2015, and above the Scottish rate of 4.9 per cent in 2015 and 5.0 per cent in 2017. This, alongside the insight on incidence, suggests that more employers in Forth Valley experience skills gaps, and they also have a greater concentration of skills gaps in their workforce (see Figure 21).

Across Scotland employers responded to skills gaps by:

- Increasing their expenditure on training, expanding trainee programmes and/or increasing training activity;
- Implementing more staff supervision; and
- Implementing a mentoring or buddy scheme.
Most employers in Forth Valley acted to overcome skills gaps, and nine per cent sought to recruit non-UK nationals as a response, compared to 15 per cent across Scotland. Across Scotland, most employers (93 per cent) who sought to recruit non-UK nationals considered EU nationals equivalent data for Forth Valley is not available.

Most employers took action to overcome SSVs, however 15 per cent of Scottish employers took no action in 2017.

Skills Under-Utilisation
Employees are under-utilised if they have skills and qualifications more advanced than what is needed for their role. Addressing skills under-utilisation is important. In 2012 the economic cost to the UK of skills under-utilisation was estimated to be between £12-25bn. If skills-utilisation was on a par with the levels observed in Germany or France, UK GDP would be £5-9bn higher. There are implications for individuals too, having their skills under-utilised can impact on their income, health and wellbeing.

Similar to SSVs and skills gaps we can understand the incidence (how many employers have under-utilised employees) and density of the challenge (how many employees are under-utilised).

The number of employers reporting skills under-utilisation in their workforce was lower in Forth Valley in 2017 compared to Scotland, 27 per cent and 35 per cent respectively. Whilst lower, this still suggests that more than over a quarter of employers in the region had skills and talent going unused. From 2015 to 2017 the percentage of employers reporting skills mismatch decline in Forth Valley (down from 34 per cent). However, skills under-utilisation increased across Scotland from 32 per cent in 2015.

The proportion of staff under-utilised has declined in the region, from 7.5 per cent in 2015 to 6.2 per cent in 2017. This suggests that whilst more employers in the region are experiencing skills under-utilisation, in general the number of their employees under-utilised has declined. Across Scotland, the percentage of staff under-utilised increased from 7.9 per cent to 9.2 per cent which suggests a skills challenge that is growing across Scotland (see Figure 22).

Figure 22
Skills Under-Utilisation (2015 and 2017), Forth Valley

<table>
<thead>
<tr>
<th>Percentage of employers reporting Skills Under-Utilisation</th>
<th>Percentage of the workforce Under-Utilised</th>
</tr>
</thead>
<tbody>
<tr>
<td>34%</td>
<td>7.5%</td>
</tr>
<tr>
<td>27%</td>
<td>6.2%</td>
</tr>
</tbody>
</table>

Source: Employer Skills Survey

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Upskilling
Skills are gained throughout life, and a need to upskill can arise due to:
• New legislative or regulatory requirements;
• The introduction of new technologies, equipment or working practices;
• Increased competitive pressure;
• The development of new products and services; and more recently
• The UK’s decision to leave the EU.

A need to upskill employees in the next 12 months was anticipated by 58 per cent of employers in Forth Valley (as of 2017). This was lower than the percentage of employers across Scotland who anticipated a need to upskill (69 per cent). Within the region, operational skills were the most commonly mentioned development area (61 per cent compared to 57 per cent across Scotland). The need to upskill digital skills was higher in the region compared to Scotland (58 per cent compared to 49 per cent), as was the expected need to upskill complex analytical skills (53 per cent compared to 44 per cent) (see Figure 23). The evidence suggests that whilst fewer employers in Forth Valley expect to upskill their workforce in the next twelve months, the upskilling requirement typically covered more skills.

Figure 23
Employers anticipating a need to upskill by type of skill (2017), Forth Valley and Scotland

<table>
<thead>
<tr>
<th>Skill Type</th>
<th>Forth Valley</th>
<th>Scotland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complex analytical skills</td>
<td>58%</td>
<td>49%</td>
</tr>
<tr>
<td>Operational skills</td>
<td>61%</td>
<td>57%</td>
</tr>
<tr>
<td>Digital skills</td>
<td>53%</td>
<td>44%</td>
</tr>
</tbody>
</table>
Conclusion
Conclusion

In 2019 Forth Valley made a GVA contribution to the Scottish economy of £7.1bn, five per cent of Scotland’s output (£138.8bn). Looking ahead, the economy in Forth Valley is forecast to grow by 1.5 per cent a year from 2019 to 2029. Greater growth is expected across Scotland (1.7 per cent per year) and the UK (2.0 per cent per year). The forecast however reflects a point in time and the high levels of economic uncertainty could change the outlook.

Total employment in Forth Valley (measured by jobs) was estimated to be 140,500 in 2019, five per cent of Scottish employment. Employment in the region increased from 2009 to 2019 and the forecast suggests that growth will continue in the future from 2019 to 2029. The three sectors forecast to have the greatest jobs growth are:

- Administration and Support Services, 1,600 jobs;
- Construction, 1,200 jobs; and
- Professional, Scientific and Technical Activities, 1,000 jobs.

Whilst both were five per cent, the region’s share of Scotland’s GVA was marginally higher in 2019 than its share of employment. As a result, productivity performance was above average. Productivity was £50,800 in Forth Valley compared to £50,400 across Scotland.

The employment growth forecast will create 2,800 new jobs in the region and the need to replace workers leaving the labour market will create further 46,400 opportunities. Vacancies arising due to the replacement requirement far outweigh those created by growth.

To fill these jobs, and others, there is a forecast requirement for 41,300 people in the region from 2019 to 2029. The difference between the people and job requirements is due to some people having more than one job, for example someone who has two part-time jobs.

By occupation, the greatest number of people are forecast to be required in:

- Clerical and Service Elementary Occupations, 8,000 people;
- Sales Occupations, 4,600 people;
- Teaching and Research Professions, 3,800; and
- Corporate Managers, 2,900 people.

Whilst there will be demand for people to fill jobs, the population projection suggests that Forth Valley could have a larger and generally older population by 2041. This presents a number of challenges:

- Skills challenges could be exacerbated by a deficit of talent, created due to the growth of people reaching retirement age and decline in the working age population;
- Pressures on public finances and services could increase due to a growing dependency ratio, the region’s dependency ratio is expected to reach 74 per cent by 2041, up from 56 per cent in 2016; and
- Migration has been a driver of population growth across Scotland and an important source of skilled labour. With six per cent of the region’s population born outside of the UK, changes to migration policy arising from Brexit could adversely affect future migration to the region and also impact on those who have already settled.

To address the current and future challenges in the labour market, and to make the most of the region’s strengths SDS is working in partnership with others on a range of actions.

Forth Valley region comprises the three local authority areas of Clackmannanshire, Stirling and Falkirk. There is no Forth Valley wide Regional Economic Partnership. Within the region there are two deals at

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30 Percentage of the population born outside of the UK may not sum to the percentage born in the EU and the rest of the world due to rounding.
different stages of development. These are the Stirling and Clackmannanshire City Deal and the Falkirk and Grangemouth Investment Zone Deal.

The Heads of Terms for the Stirling and Clackmannanshire City Deal were signed in May 2018. The deal sets out a vision for the region as “a highly desirable place to live, work and visit: an attractive place in which to invest financial, human and social capital, and will provide the platform for the region to thrive in new and emerging sectors with a highly-skilled and flexible workforce”. The deal will be jointly funded by both the Scottish and UK Governments with a total investment of £90.2m over the 15-year period of the deal. Regional partners will match this investment with up to £123.8m in additional funding, taking total funding to £214m with the potential to deliver over 5,000 new jobs and unlock private investment of £640m. Inclusive growth is central, with aspirations to drive inclusive growth and tackle inequalities through developing local talent. City Region Deal investment will include a focus on:

- Innovation through the new Scottish Environment Centre and an Aquaculture Hub delivered in conjunction with the University of Stirling.
- Digital through further development of the Stirling Digital hub and the creation of regional hubs.
- Culture and Tourism through the development of Cultural, Heritage and Tourism assets, and the new National Tartan Centre for Scotland.
- Infrastructure through the transfer of the MOD land at Forthside to Stirling Council for future development purposes.
- Transport, Connectivity and Low Carbon primarily through development of new Active Travel Routes across the region and the development of a new Regional Energy Masterplan.

This will be supported by a £1.9m regional skills & inclusion programme which will promote equality, address inequality and maximise economic benefits to all. The implementation of the deal and its fit with the wider economic development aspirations of the region will be supported through the planned Stirling and Clackmannanshire Regional Economic Advisory Board (SCREAB) comprising local authority, academic, national agency and business representatives.

Falkirk Economic Partnership, which is led by Falkirk Council with partners including Scottish Enterprise, Forth Valley College, Falkirk Community Trust, Scottish Canals and key private sector businesses.

Falkirk Council supported by regional and national partners are working on the development of the Falkirk and Grangemouth Investment Zone Deal, which will seek to unlock investment and deliver transformational inclusive economic growth across its communities, building on its strengths in manufacturing, tourism and service sectors. Implementation would be led by the Falkirk Economic Partnership, which is led by Falkirk Council with partners including Scottish Enterprise, Forth Valley College, Falkirk Community Trust, Scottish Canals and key private sector businesses.

Forth Valley has no overarching regional economic strategy and is not currently covered by a Regional Skills Investment Plan.

At a subregional level:

- The Stirling Council 5 Year Business Plan, sets out a key strategic priority to deliver inclusive growth and promote prosperity, focusing on the City Region Deal and seeking to encourage high value jobs across all of Stirling’s communities. This will include enhanced infrastructure, new skills and employability programmes, stronger business support and attracting new business and investment as well as developing indigenous business and social enterprises. There will also be a focus on high-growth sectors such as digital and aquaculture coupled with support for traditional sectors to strengthen the economic base, with Stirling’s economic strategy ensuring enhancement and promotion of its key sector strengths.

The Economic Development Strategy for Falkirk 2015-2025 sets out the aspiration that “Falkirk is the place to be; a smarter, greener and more inclusive place, where opportunities for work, quality of life, leisure and the excellence of the living spaces offer the ideal location for people, business and communities to thrive”. The strategy was produced in collaboration with partners and local stakeholders. Key priorities are to grow the economy through increased business development, support innovation to deliver high skilled, high value jobs with a workforce with the skills to secure them and ensure that there are opportunities for all communities to benefit from developments.

Whilst there is no current focused economic development strategy for Clackmannanshire, a key strategic outcome of the Clackmannanshire Local Outcomes Improvement Plan 2017-2027 is that Clackmannanshire will be attractive to businesses and people and ensure fair opportunities for all.

The significant opportunities presented by the Stirling and Clackmannanshire City Deal and the developing Falkirk and Grangemouth Investment Zone Deal, have the potential to deliver jobs and increased prosperity to employers, individuals and communities across Forth Valley. A strong commitment to collaborative working across regional and national partners including the local authorities, Forth Valley College, the University of Stirling, the enterprise and skills agencies, the business community and wider partners, will maximise the benefits flowing from these developments now and in the future.

Contact Us: If you have any feedback or comments on this report, please email rsa@sds.co.uk