Regional Skills Assessment

Ayrshire

Summary Report 2019
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.

RSAs also include forecast data that has been commissioned through Oxford Economics. A number of caveats need to be applied when using forecast data. The Technical Note\(^1\) provides full detail on this but broadly it should be noted that forecasts are based on what we know now and include past and present trends projected into the future. Their value is in identifying likely directions of travel rather than predicting exact figures. The more disaggregated they become, especially at smaller geographical units, the less reliable they are likely to be. Standard occupational classifications (SOC) and standard industrial classifications (SIC) are used to define occupations and industries. ONS has useful SIC\(^2\) and SOC\(^3\) hierarchy tools that can be used to understand the classifications in more detail.

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\(^4\).

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\(^5\) that was launched in August 2019 that provides more detailed data.

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 Ayrshire which covers the East Ayrshire, North Ayrshire and South Ayrshire local authorities.

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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/)
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/)
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 growth.

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 2010. 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 2007. 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 Scotland (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 2041. 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 ratios 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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8 Scottish Government (February 2019) International Comparators of Productivity – Economy Indicator 2017
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.
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\(^\text{17}\).

Scotland’s Response to the Climate Emergency

In April 2019, Scotland’s First Minister declared a climate change emergency with targets being set to reduce greenhouse gas emissions to net-zero by 2045. In May 2019, Scotland’s Climate Change Secretary set out Scotland’s response to the climate change emergency including action such as:

- A change in approach to airport departure tax;
- Funding to strengthen the rail freight industry and reduce the amount of freight that travels by road; and
- A new farmer-led initiative to drive low-carbon, environmentally sustainable farming practices.

The Cabinet Secretary for Environment, Climate Change and Land Reform confirmed that Scottish Government will be “placing climate change at the heart of everything we do”\(^\text{18}\) and this is at the core of the recently published Programme for Government.

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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.

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**

<p>| | |</p>
<table>
<thead>
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<tbody>
<tr>
<td>We need innovative workplaces and skills to boost productivity with employers and employees as active participants in the skills system</td>
<td>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</td>
</tr>
<tr>
<td>We need to develop fit for purpose skills to enable Scotland to achieve its ambitious target for greenhouse gas emissions</td>
<td>We need to develop sector specific skills for the economy and skills for resilience – ‘meta skills’</td>
</tr>
</tbody>
</table>

**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

Source: Skills Development Scotland
Ayrshire Economy
Ayrshire 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 Ayrshire in 2019 was £5.7bn, four per cent of Scotland’s output (£138.8bn).

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

In 2019, the highest value sectors in Ayrshire were:
• Manufacturing, £1.1bn;
• Real Estate, £0.7bn;
• Human Health and Social Work, £0.6bn; and
• Wholesale and Retail, £0.6bn.

Past Economic Performance
From 2009 to 2019 the Ayrshire 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 Ayrshire is forecast to grow by 1.3 per cent on average each year from 2019 to 2029. Whilst this rate of growth would be below that of Scotland (1.7 per cent) and the UK (2.0 per cent), it would be greater than the average annual growth rate that Ayrshire experienced from 2009 to 2019.

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 Ayrshire is expected to be driven by the dominant Real Estate sector from 2019 to 2029, the GVA produced by the sector will increase by £131.8m. 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:
• Human Health and Social Work, £87.8m;
• Manufacturing, £77.4m;
• Wholesale and Retail Trade, £73.4m; and
• Administrative and Support Service Activities, £47.8m.

When compared to GVA output in 2019, 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. Information and Communication is expected to have the greatest rate of GVA growth from 2019 to 2029 in Ayrshire. This was one of the smallest sectors in 2019 (in economic terms) but it is forecast to have an average annual growth rate of 2.4 per cent. The Administrative and Support Service Activities and Professional, Scientific and Technical Activities sectors are also expected to have a fast rate of growth from 2019 too, averaging 2.3 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 each year from 2019 to 2029 in Ayrshire. The forecast average annual rate of contraction is -0.9 per cent. Whilst Education is forecast to remain the same, the Human Health and Social Work sector is forecast to have GVA growth, growing by 1.3 per cent per year over the forecast period (see Figure 4). This will be as 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), Ayrshire

Source: Oxford Economics
The key sectors contributing most to GVA growth in Ayrshire from 2019 to 2029 are expected to be Health and Social Care, Financial and Business Services, Energy and Construction (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), Ayrshire

- Health and social care: £87.8
- Financial and business services: £62.8
- Energy: £45.5
- Construction: £42.4
- Food and drink: £33.8
- Engineering: £30.4
- Tourism: £28.3
- Digital: £20.0
- Creative industries: £17.3
- Chemical sciences: £16.8
- Life sciences: £16.8
- Child-day care activities: £9.0

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 3.8 per cent each year on average. This strong outlook reflects the Scottish Government’s childcare policy to double the number of hours of free 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, Financial and Business Services and Creative Industries sectors. However, like Child-Day Care Activities the overall contribution from Digital and Creative Industries 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), Ayrshire

<table>
<thead>
<tr>
<th>Sector</th>
<th>Average Annual GVA Growth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child-day care activities</td>
<td>3.8%</td>
</tr>
<tr>
<td>Digital</td>
<td>2.1%</td>
</tr>
<tr>
<td>Financial and business services</td>
<td>2.0%</td>
</tr>
<tr>
<td>Creative industries</td>
<td>1.8%</td>
</tr>
<tr>
<td>Energy</td>
<td>1.5%</td>
</tr>
<tr>
<td>Health and social care</td>
<td>1.3%</td>
</tr>
<tr>
<td>Tourism</td>
<td>1.2%</td>
</tr>
<tr>
<td>Food and drink</td>
<td>1.0%</td>
</tr>
<tr>
<td>Life sciences</td>
<td>1.0%</td>
</tr>
<tr>
<td>Construction</td>
<td>0.8%</td>
</tr>
<tr>
<td>Chemical sciences</td>
<td>0.8%</td>
</tr>
<tr>
<td>Engineering</td>
<td>0.6%</td>
</tr>
</tbody>
</table>

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 Ayrshire was £40,300. This was lower than the Scottish average of £50,400 (see Figure 7).

From 2009 to 2019, productivity in Ayrshire grew by 1.3 per cent on average each year. This rate of growth was the same as that 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 Ayrshire 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).

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![Figure 7: Productivity (2019)](image-url)
Ayrshire’s Employment
Ayrshire’s Employment

Current Employment

Total employment in Ayrshire (measured by jobs) was estimated to be 141,900 in 2019, five per cent of Scottish employment.

The employment rate for the working age population (aged 16-64) in Ayrshire was 70.6 per cent, which was below the rate for Scotland (74.5 per cent). Compared to Scotland, the region had below average employment rates for:

- Young people (aged 16-24), 54.7 per cent compared to 58.3 per cent;
- Males, 73.9 per cent compared to 78.1 per cent;
- Females, 67.6 per cent compared to 71.1 per cent; and
- Disabled people\(^{21}\), 40.5 per cent compared to 45.9 per cent.

The employment rate for ethnic minorities was higher in Ayrshire compared to Scotland, 59.1 per cent compared to 57.4 per cent\(^{22}\).

The region’s overall employment rate means that approximately three in ten of Ayrshire’s working age population were unemployed (5.4 per cent) or economically inactive (25.4 per cent)\(^{23}\). 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, 95,400 jobs (67 per cent) were full-time in Ayrshire in 2019. This was a lower percentage share compared to Scotland where 68 per cent of jobs were full-time. Within the region just under two thirds of full-time jobs (59,500; 62 per cent) were held by males, and the approximately one third (35,900; 38 per cent) were held by females.

Part-time jobs accounted for a greater percentage share of employment in the region compared to Scotland, 33 per cent compared to 32 per cent. Overall there were 46,500 part-time jobs in Ayrshire, females accounted for three quarters of these jobs (34,900; 75 per cent). Whilst males accounted for 25 per cent, 11,700 jobs (see Figure 8).

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\(^{21}\) 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.

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**Figure 8**

Employment by gender and full-time/part-time (2019), Ayrshire

![Graph showing employment by gender and full-time/part-time in Ayrshire](source: Oxford Economics)
In Ayrshire, the largest employing sectors, and their regional share of employment, in 2019 were (see Figure 9):
• Human Health and Social Work, 19 per cent;
• Wholesale and Retail Trade, 16 per cent;
• Manufacturing, nine per cent; and
• Accommodation and Food Services, nine per cent.

Real Estate Activities, the sector that is expected to contribute most to GVA growth in the future (irrespective of the imputed rent consideration) accounted for a small share of regional employment in 2019. 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 Ayrshire, Manufacturing was the greatest specialism with the percentage of employment in this sector about 1.3 times greater than the Scottish average. The Human Health and Social Work and Wholesale and Trade sectors had above average concentrations in Ayrshire too (1.2 times more concentrated each). The attraction of Ayrshire as a destination for tourists is also likely to have contributed to the increased presence of the Accommodation and Food Services and Art, Entertainment and Recreation sectors in the region. These sectors were both 1.2 times more concentrated in the region.

Of the key sectors, Health and Social Care, as might be expected given the sectoral insight above, was the largest in Ayrshire in 2019. The sector accounted for 26,700 jobs. Tourism was the second largest with a total of 12,900 jobs (see Figure 10).

![Figure 10](image-url)
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 one-third of all occupations (36 per cent) in Ayrshire were ‘higher level’, 37 per cent were ‘mid-level’ and 27 per cent were ‘lower level’. Compared to Scotland, the occupational structure of the Ayrshire 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):
- Caring Personal Service Occupations, 11 per cent;
- Elementary Occupations: Clerical and Services, ten per cent;
- Administrative Occupations, seven per cent; and
- Sales Occupations, also seven per cent.
**Past Employment**

Employment in Ayrshire decreased by -2.9 per cent from 2009 to 2019. This was largely caused by contraction in prominent, large employing sectors including:

- Wholesale and Retail Trade, -2,600 jobs;
- Transportation and Storage, -900 jobs; and
- Agriculture, Forestry and Fishing, -700 jobs.

Whilst these sectors experienced job losses, other sectors grew. The greatest absolute growth occurred in the Professional, Scientific and Technical Activities sector in Ayrshire. Compared to 2009, there were 700 more jobs in the sector in 2019. Growth also occurred in Arts, Entertainment and Recreation (500 jobs) and Other Service Activities (400 jobs).

Beyond the sectors, other shifts in the region’s labour market have occurred. Part-time employment increased by 1,000 jobs, whilst full-time employment declined by 5,300 jobs from 2009 to 2019. Female employment also declined by 4,600 jobs whilst male employment increased by 300 jobs.

**Employment Forecast**

The employment decline that has occurred in Ayrshire in the past is forecast to continue. From 2019 to 2029 marginal employment decline of 0.3 per cent is forecast in the region. This equates to very little employment change year to year, and 400 fewer jobs in total over the forecast period. Whilst Ayrshire is forecast to continue to have employment decline, the growth that has occurred across Scotland is forecast to continue. 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 Ayrshire shows a similar outlook with little change for each. Employment in East Ayrshire and North Ayrshire is expected to stay the same from 2019 to 2029. Whilst employment decline is forecast in South Ayrshire (-0.1 per cent per year).

Over the period to 2029, full-time employment is expected to decrease in Ayrshire with 400 fewer full-time jobs in 2029 compared to 2019. Male full-time employment is expected to decrease, by 500 jobs and female full-time employment will increase marginally (less than 100 jobs)\(^2\). Part-time employment is not expected to change. Female part-time employment is forecast to decline by 300 jobs, but this decline is expected to be offset by growth of 300 jobs in male part-time employment (see Figure 12).

**Figure 12**

*Forecast employment change, by gender and full-time/part-time (2019 - 2029), Ayrshire*

![Figure 12](image)

Source: Oxford Economics

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24 Figures are rounded to the nearest 100 and as a result totals may not equal the sum of the constituent parts.
Although employment is forecast to decrease in Ayrshire from 2019 to 2029, sectors will have varying performance. The greatest growth in jobs is forecast in Administrative and Support Service Activities, with 900 more jobs expected in the sector by 2029 compared to 2019. Other sectors forecast to have growth over the forecast period include Construction (700 jobs) and Professional, Scientific and Technical Activities (600 jobs).

Job losses in Ayrshire are forecast in some sectors, notably in production sectors and the public 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 2,200 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).

Employment is also forecast to fall overall in Ayrshire’s public services sector25 with Public Administration and Defence forecast to contract by 900 jobs over the forecast period due to continued pressure on public finances. The Education sector is also expected to contract but by a lesser amount, 200 jobs. Human Health and Social Care is the only part of the public sector expected to grow, the sector is forecast to have 400 more jobs in 2029 compared to 2019.

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

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**Figure 13**
Forecast employment change by Industry (2019 - 2029), Ayrshire

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 Ayrshire over the forecast period. The percentage is forecast to rise from 49 per cent in 2019 to 50 per cent in 2029. In 2019 the Construction sector accounted for seven per cent of employment and this share is expected to be maintained in 2029. The share that the public services, primary industries and Manufacturing sectors each account for is expected to decline by one percentage point over the forecast period to 31 per cent, three per cent and eight per cent in 2029 respectively.

Looking ahead, the outlook for the key sectors largely echoes the broad sector trends summarised above – with Financial and Business Services forecast to have the greatest growth (700 jobs). Construction, the third largest key sector in 2019, is expected to grow by 600 jobs from 2019 to 2029 in Ayrshire.

A number of other key sectors will experience growth over the forecast period, including:
- Health and Social Care, 400 jobs;
- Child-Day Care Activities, 400 jobs; and
- Tourism, 400 jobs.

Engineering is the key sector forecast to have the greatest employment decline in Ayrshire, with 900 fewer jobs in 2029 compared to 2019 expected (see Figure 14).

26 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, Caring Personal Service Occupations are forecast to experience the greatest increase in employment in Ayrshire from 2019 to 2029 (of 400 workers). Growth in these occupations is closely related to the forecast rise in employment in the Health and Social Care sector. An additional 400 workers are expected to be required in Skilled Construction and Building Trades, driven by expansion in the Construction sector. Other occupations anticipated to have an increase that is relatively large for the region are:

- Business and Public Service Professionals, 300 workers;
- Business and Public Service Associate Professionals, 200 workers; and
- Culture Media and Sports Occupations, 200 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 (-600 people) and Administrative Occupations (-500 people) (see Figure 15).
Total Labour Market Requirement in Ayrshire
Total Labour Market Requirement in Ayrshire

In the previous sections we presented what has happened, is happening and what is forecast to happen in Ayrshire’s 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. 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 Ayrshire, 55,100 job openings are forecast from 2019 to 2029. In the region, and as shown in the previous chapter, it is forecast that there will be 400 fewer jobs in Ayrshire from 2019 to 2029 due to contraction in the labour market. However, 55,500 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 Ayrshire forecast to account for more than half (59 per cent) of the requirement. These are (see Figure 16):

- Wholesale and Retail Trade, 12,600 jobs;
- Human Health and Social Work, 7,300 jobs;
- Accommodation and Food Services, 6,700 jobs; and
- Administrative and Support Service Activities, 6,100 jobs.

These sectors were the largest, as well as specialisms, in the region in 2019 with the exception of Administrative and Support Service Activities. This sector is however the one expected to have the greatest absolute growth over the forecast period.

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), Ayrshire

Source: Oxford Economics
To fill these jobs, and others, there is a forecast requirement for 52,100 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 Ayrshire is expected to decline by 700 from 2019 to 2029 however the replacement requirement of 52,800 people creates a need for labour.

By occupation, the greatest number of people are forecast to be required in (see Figure 17):
- Clerical and Service Elementary Occupations, 8,800 people;
- Sales Occupations, 6,700 people;
- Caring Personal Service Occupations, 5,000 people; and
- Teaching and Research Professions, 3,800 people.

Figure 17
Forecast net requirement by occupation (2019 - 2029), Ayrshire

Source: Oxford Economics
Supply of People in Ayrshire
Regional Skills Assessment 5 Supply of People in Ayrshire

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 Ayrshire was 370,600, seven per cent of Scotland’s population.

By age, the largest group in Ayrshire were people of working age (16-64 years). There were 228,000 people in this age group, 62 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 Ayrshire was 63 per cent. This means that for every 100 people of working age, there were 63 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 80,400 people aged 65 or older who accounted for 22 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 in Ayrshire. The region accounts for eight per cent of Scotland’s population aged 65 or over compared to seven per cent for all ages.

Children and young people (0-15 years) accounted for the remaining 17 per cent. There were 62,100 individuals in this age group (see Figure 18).

Figure 18
Population by age (2016), Ayrshire and Scotland

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Ayrshire</th>
<th>Scotland</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-15</td>
<td>17%</td>
<td>17%</td>
</tr>
<tr>
<td>16-64</td>
<td>62%</td>
<td>65%</td>
</tr>
<tr>
<td>65+</td>
<td>22%</td>
<td>18%</td>
</tr>
</tbody>
</table>

Source: National Records of Scotland
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. In Ayrshire, there were 4,000 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 one per cent of the region’s population, and two per cent of the region’s population were born elsewhere in the world. Compared to Scotland a smaller percentage of the region’s population were born in the EU or 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 Ayrshire is projected to decline by approximately 18,800 people. Equating to a five per cent decrease, this contrasts with 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 62 per cent in 2016 to 53 per cent in 2041; a projected decrease of 41,000 people.

The largest increases are expected in the 65 or older age groups, with a 75 per cent increase projected for those aged 75+ (an additional 26,100 people) and five per cent among those aged 65-74 (an additional 2,500 people). There is a forecast decline in all other age groups over the period, with the most substantial decline of 19 per cent projected for those aged 30-64, a projected fall of 31,700 people.

These shifts suggest that the region could have a smaller 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 88 per cent. Ranging across the region from 79 per cent in East Ayrshire to 96 per cent in South Ayrshire. Across Scotland the dependency ratio is expected to rise to 70 per cent (see Figure 19).

Source: National Records of Scotland
Skills Shortages, Gaps and Challenges in Ayrshire
Skills Shortages, Gaps and Challenges in Ayrshire
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 organisation.

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 Ayrshire was five per cent, compared to six per cent for Scotland. This suggests a challenge that is less prevalent in the region’s labour market compared to Scotland’s, but there is evidence that it is growing. The incidence of SSVs in the region was lower in 2015 (three 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 Ayrshire than Scotland in 2017 and lower in 2015. In 2017, density in the region was 33 per cent, up from 17 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 in 2017 (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 hard to fill vacancies. In Ayrshire, 20 per cent of employers tried to recruit non-UK nationals to overcome hard to fill vacancies, compared to 41 per cent across Scotland. As a response to recruitment challenges, 89 per cent of employers across Scotland sought to recruit EU nationals (equivalent data for Ayrshire is not available). 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.

Figure 20
Skills Shortage Vacancies (2015 and 2017), Ayrshire

Source: Employer Skills Survey
**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 15 per cent in Ayrshire, compared to 16 per cent for Scotland. Since 2015, the incidence of skills gaps in the region has increased. In 2015, 12 per cent of employers experienced a skills gaps in Ayrshire which was a lower percentage compared to Scotland (13 per cent).

Overall, 5.6 per cent of the workforce in Ayrshire had a skills gap in 2017. This was a decrease from 6.4 per cent in 2015, and above the Scottish rate of 5.0 per cent in 2017 (4.9 per cent in 2015). This, alongside the insight on incidence, suggests that skills gaps are more far reaching and more concentrated in Ayrshire compared to Scotland (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 Ayrshire acted to overcome skills gaps, and 25 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 Ayrshire is not available.

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

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**Figure 21**

**Skills Gaps (2015 and 2017), Ayrshire**

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of employers with a Skills Gap</td>
<td>12%</td>
<td>15%</td>
</tr>
<tr>
<td>Percentage of the workforce with a Skills Gap</td>
<td>6.4%</td>
<td>5.6%</td>
</tr>
</tbody>
</table>

Source: Employer Skills Survey
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\(^{29}\). There are implications for individuals too, having their skills under-utilised can impact on their income, health and wellbeing\(^{30}\).

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 the Ayrshire in 2017 compared to Scotland, 34 per cent and 35 per cent respectively. This still suggests that more than one third of employers in the region had skills and talent going unused. Skills under-utilisation increased in the region and across Scotland from 2015 to 2017, from 27 per cent and 32 per cent respectively.

The percentage of staff under-utilised has declined in the region, from 12.0 per cent in 2015 to 10.4 per cent in 2017. 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 (see Figure 22).

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**Figure 22**

**Skills Under-Utilisation (2015 and 2017), Ayrshire**

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage of employers reporting Skills Under-Utilisation</th>
<th>Percentage of the workforce Under-Utilised</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>27%</td>
<td>12.0%</td>
</tr>
<tr>
<td>2017</td>
<td>34%</td>
<td>10.4%</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 65 per cent of employers in Ayrshire (as of 2017). This was lower, but close, to the percentage of employers across Scotland who anticipated a need to upskill (69 per cent). Within the region, operational and digital skills were the most commonly mentioned development area. Approximately half of the employers who identified development needs mentioned these (52 per cent and 51 per cent respectively). The need to upskill operational skills was lower in the region compared to Scotland (57 per cent), whilst the expected need to upskill digital skills was higher in the region compared to Scotland (49 per cent). Fewer employers in the region expected a need to upskill the complex analytical skills of their employees (38 per cent) compared to Scotland (44 per cent). The evidence suggests that fewer employers in Ayrshire expected to upskill their workforce in the next twelve months compared to Scotland, with the need for digital upskilling above that for Scotland (see Figure 23).

Source: Employer Skills Survey
Conclusion
Conclusion
In 2019 Ayrshire made a GVA contribution to the Scottish economy of £5.7bn, four per cent of Scotland’s output (£138.8bn). Looking ahead, the economy is forecast to grow by 1.3 per cent on average each year up to 2029. Whilst this would be slower growth than what is forecast across Scotland, it would be more than the average annual growth rate that Ayrshire experienced from 2009 to 2019. The forecast however reflects a point in time and the high levels of economic uncertainty could change the outlook.

Total employment in Ayrshire (measured by jobs) was estimated to be 141,900 in 2019, five per cent of Scottish employment. Employment in the region declined from 2009 to 2019, and the forecast suggests that further decline will occur in the future from 2019 to 2029. Despite the overall decline some sectors will grow. The three sectors forecast to have the greatest jobs growth are:

• Administrative and Support Service Activities, 900 jobs;
• Construction, 700 jobs; and
• Professional, Scientific and Technical Activities, 600 jobs.

As the region’s share of Scotland’s GVA was lower in 2019 than its share of employment, productivity performance was below average. Productivity was £40,300 in Ayrshire compared to £50,400 across Scotland.

The forecast suggests that employment decline, equivalent to 400 fewer jobs in the region by 2029, will occur. The need to replace workers leaving the labour market however has the potential to create 55,500 opportunities. Vacancies arising due to the replacement requirement far outweigh those lost due to the decline in employment.

To fill these jobs, and others, there is a forecast requirement for 52,100 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, 8,800 people;
• Sales Occupations, 6,700 people;
• Caring Personal Service Occupations, 5,000 people; and
• Teaching and Research Professions, 3,800 people.

Whilst there will be demand for people to fill jobs, the population projection suggests that Ayrshire could have a smaller 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 contraction in the number of people of working age;
• Pressures on public finances and services could increase due to a growing dependency ratio. The region’s dependency ratio is expected to reach 88 per cent by 2041, up from 63 per cent in 2016; and
• Migration has been a driver of population growth across Scotland and an important source of skilled labour. With de-population forecast in the region and three 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.

Within Stage 2 of the Enterprise and Skills Review the Scottish Government highlighted the need to build stronger regional economies. Building on earlier
collaborative work, a Regional Economic Partnership (REP) has been established, reporting to the Ayrshire Regional Economic Joint Committee. The REP is led by the local authorities and self-assembled around the bespoke requirements of Ayrshire, seeking to build inclusive growth through a clear understanding of the future of the regional economy and its key challenges, constraints and opportunities. Membership is drawn from across the local authorities, national agencies, elected members, academics, other strategic partners and the private sector.

Heads of Terms for the Ayrshire Growth Deal were signed in March 2019. The vision is for the region to be vibrant, outward looking, attractive to investors and visitors, and for it to make a major contribution to Scotland and the UK’s growth. Building on the Inclusive Growth Diagnostic tool the local authorities and partners have developed a range of interventions to grow the regional economy. These include those with a focus on aerospace/space, enhancing the economic infrastructure, tourism, energy, the circular economy and the environment and digital, supported by a Regional Skills and Inclusion Programme and a Community Wealth Building Fund. The Growth Deal has secured a total investment of £251.5m, comprising £206m joint funding from both Scottish and UK Governments, and the remainder from regional partners. It is estimated that this investment will help deliver around 7,000 new jobs across the region, with the potential to unlock up to £300m of private investment.

A Regional Economic Strategy is currently in development and will set out a shared vision for the region, supported by a Regional Strategic Action Plan. On completion, work can begin on the proposed Regional Skills Investment Plan (RSIP) for Ayrshire, underpinning both the Regional Economic Strategy and the Ayrshire Growth Deal. SDS is committed to working collaboratively with partners to facilitate the development of an RSIP, seeking to embed an evidence based approach to skills planning, investment and delivery aligned to the needs of employers and the economy. This will be built on analysis and insight from the skills evidence base and consultation and engagement with key skills partners and employers. The focus will be on actions to address the main skills issues and support development priorities that regional partners identify.

The significant opportunities presented by the Ayrshire Growth Deal and the establishment of the REP have the potential to deliver transformational change in the region over the next decade. A clear focus on the evidence base and a commitment to collaborative working will maximise the benefits for the employers, individuals and communities of Ayrshire 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