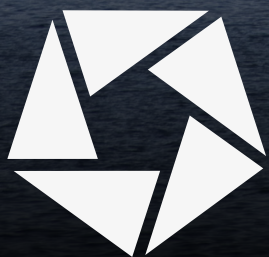




University of
Strathclyde
Business
School



Fraser of Allander Institute
Orkney Islands Economic Review
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Disclaimer

The analysis in this report has been conducted by the Fraser of Allander Institute (FAI) at the University of Strathclyde. The FAI is a leading academic research centre focused on the Scottish economy.

The report was commissioned in 2020 by Orkney Islands Council.

The analysis and writing-up of the results was undertaken independently by the FAI. The FAI is committed to providing the highest quality analytical advice and analysis. We are therefore happy to respond to requests for technical advice and analysis. Any technical errors or omissions are those of the FAI.

Executive Summary

Orkney is a unique economy within Scotland and has a number of economic strengths that are evidenced throughout this report. We discuss the key opportunities and challenges facing this Island economy.

It is clear that Orkney is a relatively prosperous part of Scotland and does well on many economic measures, including "wider" measures of success such as wellbeing. However, we discuss many of the challenges when using current official statistics to properly measure the economy of Orkney. In looking at what is available for this crucial part of the Scottish economy, it is clear that the range of data available from the UK and Scottish governments do little to assist informed policy making.

The immediate outlook for growth in Orkney is of course dominated by the impact of the coronavirus pandemic. On balance, many of the economic effects of the pandemic should be temporary.

But in the short-run, the consequences have been enormous. Indeed, the stronger the public health response to the virus, the greater the 'hit' to the Orkney economy. There is a risk that any short-term disruptions evolve into something more serious.

Both the UK and Scottish governments have implemented a range of measures to support the economy. It is vital that everyone involved works together to not only protect the economy in the short-run but to limit any 'hysteresis' effects from taking hold.

We also discuss a number of long-term challenges for the Scottish economy, and how they are relevant to Orkney: these challenges have not gone away. Growth that is secured in the future needs to be sustainable, shared and generate genuine local impacts. For example, Orkney, with its abundance of natural resources, has a crucial role to play in Scotland's transition to a greener economy.

National policy must recognise that the Orkney Islands economy is very different to the Scottish economy, and to that of the other Island groups in Scotland. Care is needed when thinking about how national policy priorities may impact upon Orkney (as the implications might be quite different).

Similarly, Orkney's economic make-up means its own priorities might look quite different to those for Scotland as a whole. We focus on a number of areas of opportunity in this report. These are consistent with an economy that will transition to become more low carbon, that will help support more young people to live and work in Orkney, that will respond to – and take advantage of – changes in technology, and will help build an economy that supports the local communities wellbeing.

We highlight eight key areas –

- Energy
- Tourism
- Food & Drink (including agriculture)
- Marine Economy
- Digital Infrastructure & Research Environment
- Traditional industries (including creative industries)
- Community economic development
- A Global Orkney

1. Introduction

Orkney is a unique economy within Scotland and has a number of significant economic strengths.

It performs well on key measures of aggregate economic performance, with low levels of unemployment and relatively high levels of household income (compared to the Scottish average).

It has key strengths in a number of important sectors, from tourism to the marine sector through to food and drink. Across the 70 islands that make up Orkney there is world-class renewable energy potential.

On measures of wellbeing, Orkney consistently comes out near the top of rankings for quality of life.

But Orkney also faces a number of challenges.

Like many island communities it faces challenges brought on by its remoteness from traditional centres of government and general trade, including relatively expensive transport connectivity and barriers in developing businesses of scale. Its focus upon some key areas of the economy help it achieve benefits from specialisation, but at the same time, this makes it arguably less resilient to economic shocks.

Its population is ageing, and as in past generations, the pull of cities – both in Scotland and the UK – acts as a draw on many of the island’s young workers.

Crucially, it bears little economic resemblance, if any, with the rest of Scotland. It even differs remarkably from its Northern Isles neighbour Shetland. And whilst many of the challenges and opportunities that Orkney will face in the future will be similar to elsewhere in Scotland, how they will have an impact, is likely to look quite different.

Looking at what is best for Orkney’s economy, both at a local level and how national policy will impact upon local outcomes, is therefore crucial.

The aim of this report, by the Fraser of Allander Institute, is to inform discussions on the future priorities of Orkney both locally and nationally.

The report is structured as follows.

- Firstly, we review the latest economic data on the performance of Orkney. In doing so, we track performance over time and identify key strengths and weaknesses. One issue that we highlight is challenges around measurement. Robust economic data for Orkney is hard to source. We explain where this is a particular issue and offer advice on next steps.
- Secondly, we provide an overview of the outlook for the Orkney economy. As a rule, we try to avoid pinning too much weight to individual point estimates with regard to the outlook. And we would discourage anyone from doing so. Predicting the world ahead in such a time of uncertainty is a fool’s errand. Instead, what we recommend is identifying major structural changes that we know will impact upon the Orkney economy in the years to come; scoping out how and where they might impact; and then developing appropriate policy responses.

- Finally, and based upon the evidence collected for this report and discussions with key stakeholders, we provide an overview of what we see as being key strengths open to the Orkney economy both today and in the future. We highlight a number of sectors – such as tourism, food & drink and renewable energy – where Orkney punches well above its weight. We also float some ideas about how these areas of success could be built upon in the years ahead.

Of course, all of this discussion is now dominated by how our economy will be impacted by the ongoing coronavirus outbreak.

Not only will this have an impact upon the immediate outlook for the economy. But the likely long-term implications, both in terms of the downturn that will now follow and how the underlying structures of our economy will be impacted, will shape the future path of growth in Orkney significantly.

2. The Orkney Economy

Introduction

In this section, we provide an overview of the latest data on the Orkney economy.

We track performance over time and, where appropriate, we compare Orkney with other parts of Scotland (and the Scottish average).

We focus upon key metrics of economic and socio-economic performance, including levels of activity and the labour market. We also review the composition of the Orkney economy.

Rather than publish table-after-table, we pull out what we believe to be key facts and trends that, in turn, will best inform the discussions to follow.

All of this is helpful to support local policymakers – and national policymakers and agencies – to identify priorities, strengths and weaknesses, and also to inform the future outlook.

As we discuss in Box 1, one particular challenge in understanding the Orkney economy is around the quality of the data that is available. Where possible, we use official sources, but given the scale of the Orkney Islands, these sources often come with significant health warnings¹. We suggest prioritising investment in usable local data – perhaps by working with local businesses and organisations – which can then be used to track economic performance.

What do we find:

- On most indicators, Orkney is a relatively prosperous part of Scotland;
- But it faces a number of particular challenges, many of these reflects the unique nature of a remote island economy;
- The Orkney labour market performs particularly strongly (in part, reflecting the unique nature of a remote island economy and the mobility of its workforce); and
- Orkney is the smallest local authority by population in Scotland, with a population just 3.5% that of Glasgow (the largest local authority).

¹ Issues include insufficient survey responses to support publication and/or wide confidence intervals around point estimates.

Box 1: Economic data quality for Orkney

Care is needed when examining local statistics – particularly on the economy and labour market.

Much of the data is collected through surveys at a national level. Whilst it is possible to obtain a ‘local’ view, the sample sizes for local areas are generally small. This means that there is greater margin for error.

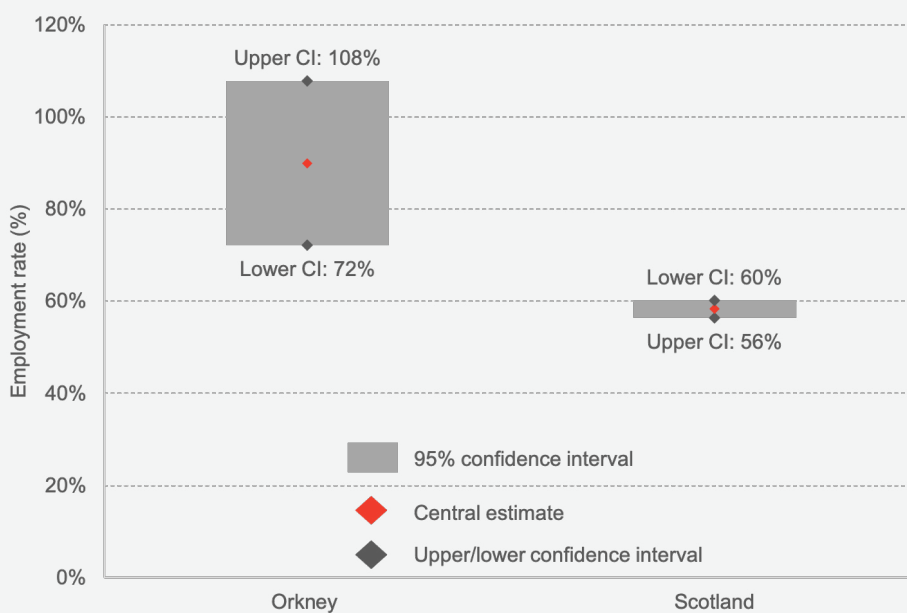
On other occasions, the statistics might rely on modelling. For example, where there is no survey information on, say business R&D spending, an apportionment may be made based upon a local authority’s share of national employment in particular R&D intensive sectors.

This means that care is required when looking at local comparisons, particularly within subgroups (e.g. youth employment etc.).

For example, the confidence interval around Orkney’s youth employment rate is currently 18% points, as shown in Chart 1. Giving a range of 72% to 108% - clearly this is inaccurate.

In addition to all this, Orkney faces its own unique challenges with its data, even if the data itself is accurate. In particular, with an island economy like Orkney we can sometimes see a big difference between measures of economic activity based upon whether or not it is based upon ‘workplace’ vis-à-vis ‘resident’ basis.

Chart 1: Youth employment (16-24), April 2018 - March 2019



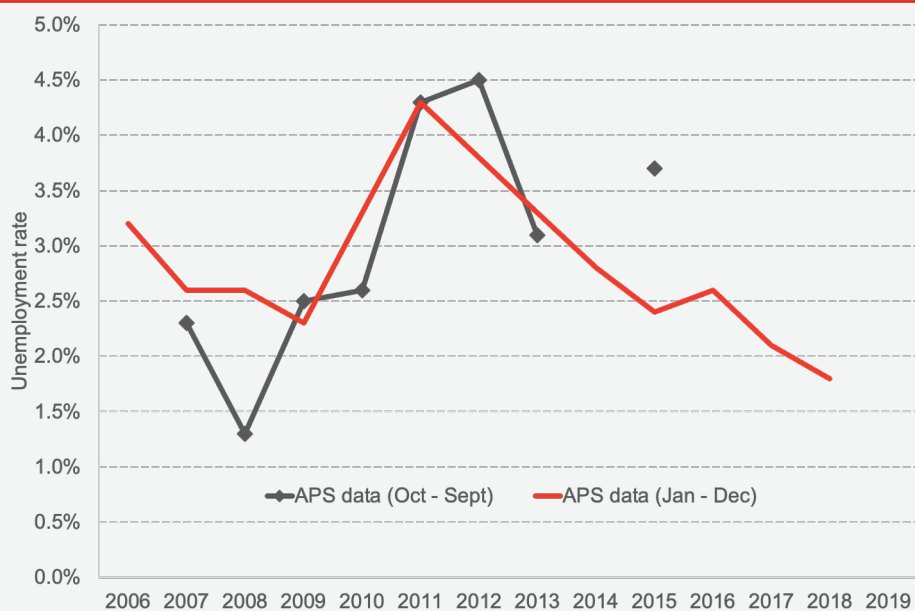
Source: APS

But there are even issues with the headline economic indicators like unemployment.

For example, the latest unemployment data for Orkney (October 2018 – September 2019) from the Annual Population Survey is not available since the sample size is too small to produce reliable estimates.

In fact, as Chart 2 highlights, unemployment data for these time periods is unavailable for 2006, 2014 and 2016 - 2019. And for the years available, the data is exceptional volatile. Therefore, for a small council area like Orkney, it is better to use annual data for January - December which is more available, less volatile and overall more reliable. However, this means that data can be quite dated.

Chart 2: Unemployment rate (16+) in Orkney, 2006 - 2019



Source: APS

This has practical implications too. For example, the new Scottish Central for Regional Inclusive Growth (SCRIG) local diagnostic, which the Scottish Government are requesting that local policymakers use to inform local and regional policymaking, is completely ineffective in the case of Orkney.

Other challenges with data also exist. Commonly used sources (including those used in the report, of course) may not capture certain types of microbusinesses (such as those under the VAT threshold or not registered for PAYE). This includes the Inter-Departmental Business Register (IDBR) and therefore many of the surveys for which it is the sampling frame, most notably the Business Register Employment Survey.

Whilst these are issues for the whole of Scotland, it is a particularly acute problem for those areas where micro business dominate, such as is Orkney, and these surveys cover agriculture particularly badly. These caveats need to be borne in mind when using this data to analyse the Orkney economy.

Economic Performance

Orkney is Scotland’s smallest local authority with an estimated population of 22,200 (just 0.4% of the total population of Scotland). Despite being such a small population, it covers around 1,000 sq kms, much of it is coastline.

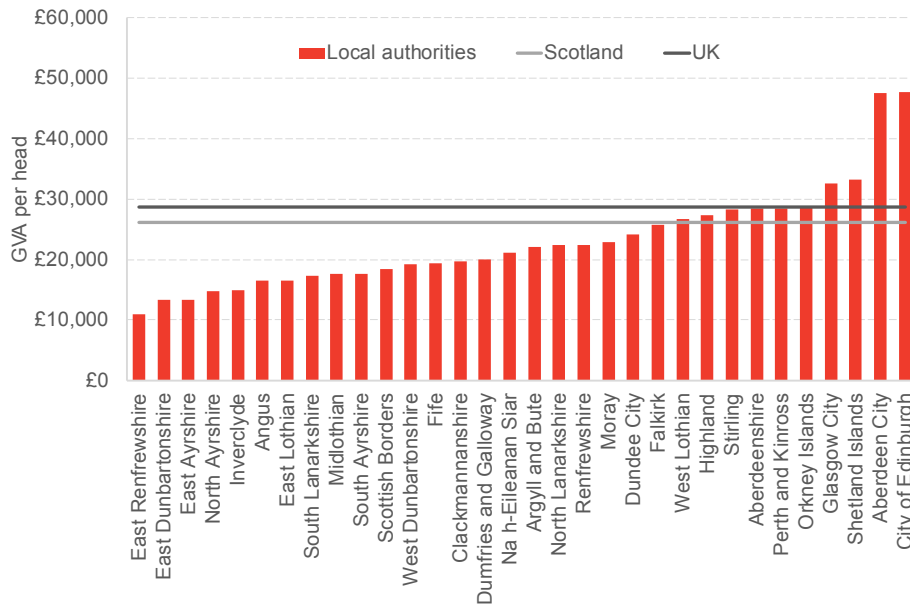
It is closer to the Arctic Circle than it is to London.

We say all this, as these basic facts about Orkney are crucial to understanding its economic performance (and outlook).

Despite this, Orkney has a GVA per head of £28,600². This puts Orkney, broadly in line with the UK average and around 10% higher than the Scottish equivalent figure.

Chart 3 shows the GVA per head for Scotland’s local authorities compared to Scotland and the UK overall. The latest data shows that Orkney has the 5th highest GVA per head in Scotland after Scotland’s big cities and the Shetland Islands.

Chart 3: GVA per head, 2018



Source: ONS

So, at first glance, Orkney on this indicator is a relatively prosperous part of both Scotland and the UK.

However, we should caution that this measure is likely to be particularly prone to statistical error at such a small local unit level.

For example, it is highly volatile. Over the last 20 years, the figure for Orkney has fluctuated between being close to the UK average, to nearly 25% above. We would therefore, avoid reading too much into year-on-year changes and instead focus upon the one consistent conclusion; that is, that Orkney – on this indicator – performs relatively strongly compared to other parts of the UK, Scotland and other islands and remote rural communities in Scotland.

² GVA per head is a useful – although far from perfect – indicator of the amount of economic activity that takes place within an area. It measures the average GVA, i.e. the total value of final goods and services produced in an area, per person living in that area.

As of 2018, Orkney's GVA per head of £28,600 compares to £22,100 in Argyll and Bute, £27,300 in the Highlands, £33,100 in Shetland and £26,100 in Scotland overall.

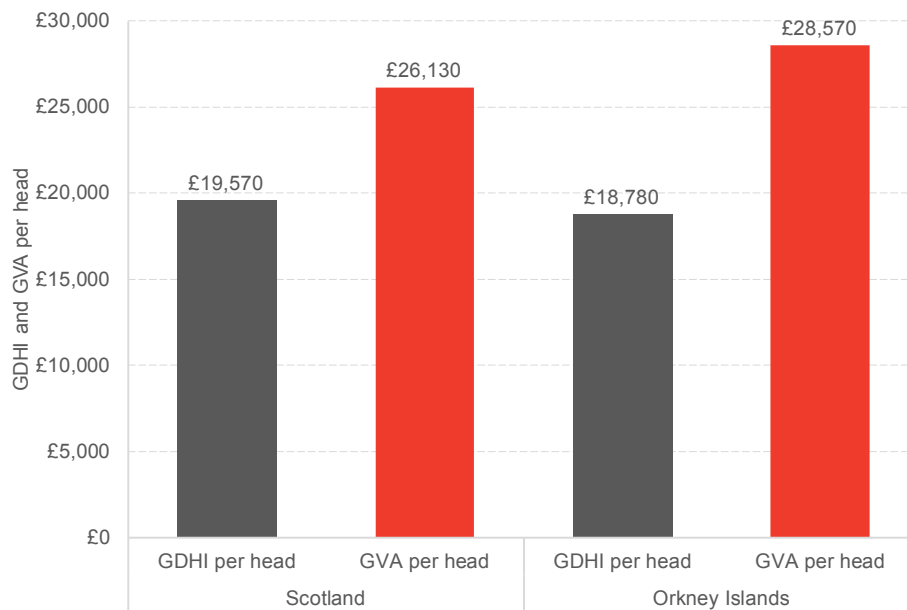
Source: ONS

One thing that GVA figures do not tell us about, is how much activity generated in Orkney stays in Orkney amongst households that live here.

Interestingly, there is some tentative evidence to suggest that there may be a gap between the two.

For example, the ratio of gross disposable household income per head to GVA per head in Orkney, for 2018, is just 66%, over 9 percentage points lower than the equivalent Scottish figure.

Chart 4: GDHI per head v. GVA per head, Orkney and Scotland, 2018



Source: ONS

So, whilst the measure of how much activity is taking place in Orkney is either broadly in line or above the equivalent figure for the UK (and Scotland) on a per head basis, on an income per head basis, it is slightly lower. Of course, there are statistical errors in all this data, but it does suggest a potential disconnect between the two with perhaps not all of the wealth generated in Orkney staying and benefiting the households that live there.

On balance however, we can conclude that Orkney is a prosperous part of Scotland and the UK.

Consistent with slightly lower levels of earnings per head, house prices in Orkney in 2017 averaged £154,595 compared to a Scottish average of £179,121 (or 86% of the Scottish average). Average house prices in Scotland ranged from £266,188 in Edinburgh to £112,044 in North Ayrshire.

Source: ONS

Industrial Mix of the Orkney Economy

As of 2019, 44% of businesses in Orkney were in the agriculture, forestry and fishing sector, and in terms of business units, 38% of Orkney's units belong to businesses in this sector.

Source: IDBR

The make-up of the Orkney economy, by sector, is highlighted in the table below (with the Scotland wide figure also shown for comparison).

Table 1: GVA share by sector and local authority, 2018

	Orkney	Glasgow	Scotland
Agriculture, fishing, mining, electricity, gas, water and waste	14%	4%	7%
Manufacturing	4%	6%	10%
Construction	7%	5%	6%
Wholesale and retail trade; repair of motor vehicles	7%	9%	10%
Transportation and storage	5%	3%	4%
Accommodation and food service activities	2%	3%	3%
Information and communication	1%	9%	4%
Financial and insurance activities	2%	10%	7%
Real estate activities	10%	10%	11%
Professional, scientific and technical activities	6%	8%	7%
Administrative and support service activities	1%	6%	4%
Public administration and defence	12%	6%	7%
Education	5%	5%	6%
Human health and social work activities	24%	13%	10%
Arts, entertainment and recreation	1%	1%	2%
Other service activities	0%	2%	2%

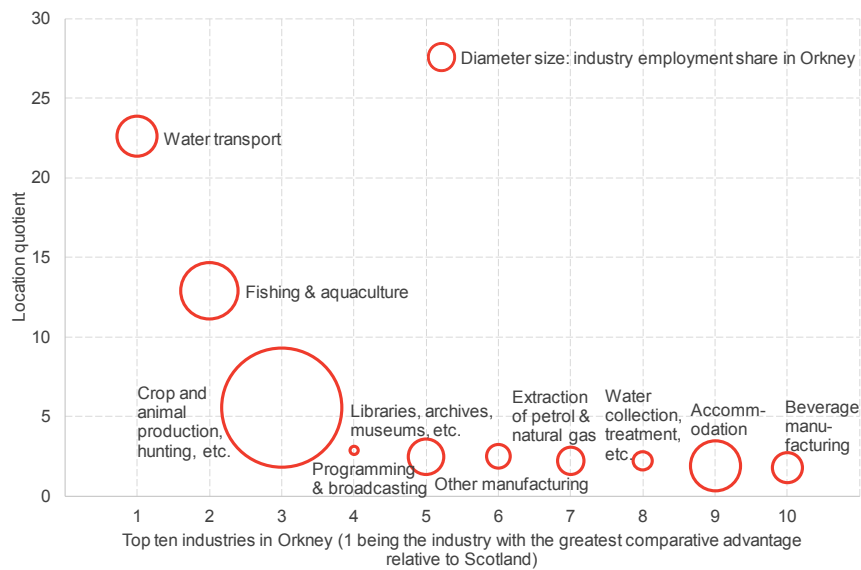
Source: ONS

GVA by sector at a local authority level does not break down the first row of industries in Table 1. So, in order to get a more detailed breakdown of the prevalent industries in Orkney, location quotients were calculated using data from the Business Register and Employment Survey. It is worth bearing in mind the caveats with the use of such data as we outline in Box 1.

Tourism is obviously a very important source of income for Orkney. This cuts across a number of different sectors, including accommodation and food services, manufacturing and transport, depending on the goods and services that tourists consume when they visit.

Chart 5 highlights the location quotients for Orkney and Scotland. This is essentially an indicator of the industries in which Orkney has a comparative advantage over the rest of Scotland – a quotient above 1 indicates a greater concentration of an industry in Orkney.

Chart 5: Location quotients for Orkney and Scotland, 2018



Source: BRES

A number of interesting conclusions can be drawn from Chart 5 and Table 1.

Firstly, there are a number of areas where Orkney has a comparative advantage over the rest of Scotland. Some of these, e.g. water transport and fishing, undoubtedly reflect the geography of the islands. Others however, such as those tied to food & drink, agriculture and tourism are more tied to the industries that have developed on the islands.

In 2016, exports from Orkney were valued at around £100 million.

Source: Scottish Government

Secondly, the make-up of the Orkney economy is quite different to that of Scotland as a whole. For example, agriculture, fishing, mining, etc. makes up only 7% of the Scottish economy; whereas in Orkney it contributes 14%. Additionally, these differences are even more apparent when considering urban economies like Glasgow City.

On balance the mix of private vs. public sector split in Orkney is slightly skewed toward the public sector – with 31.2% of employment in the public sector compared to a Scottish average of 25.5%.

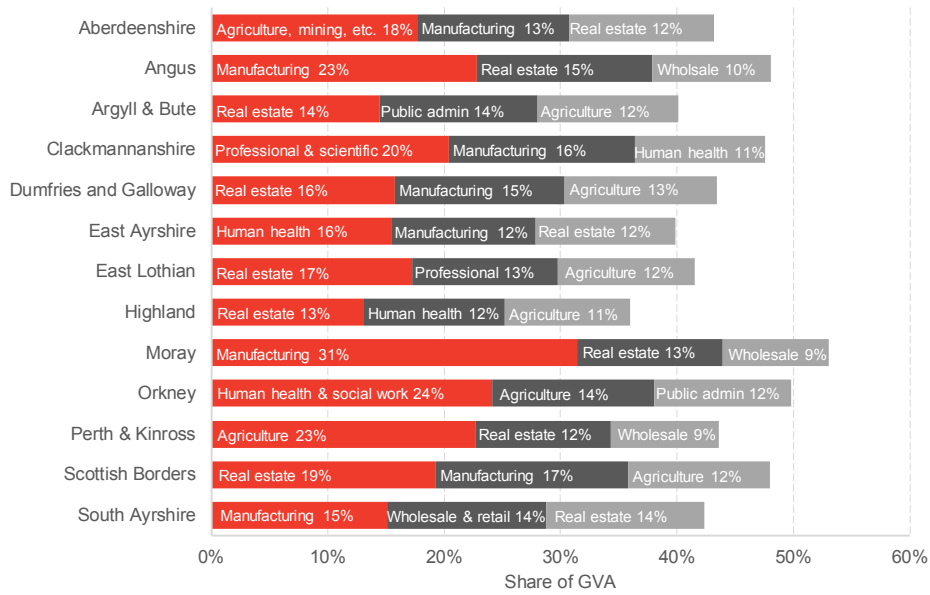
Source: NOMIS

Finally, and again reflective of the nature of the islands, the public sector is relatively more important – particularly in terms of employment than on the mainland. It is worth emphasising though that the nature of an island economy may mean that the public sector has to step in to deliver where it is not possible for the private sector to do so - for reasons of scale or "market failure". Therefore it should be expected that the public sector would be larger than for Scotland as a whole.

To further understand the Orkney economy, and to see how different it is to Scotland (and other parts of the country), it is helpful to compare the three largest sectors of the economy. Chart 6.

In Orkney the three largest sectors are: human health and social work activities; agriculture, fishing, etc.; and public administration.

Chart 6: Top three sectors by selected Scottish local authorities, 2018



Source: ONS

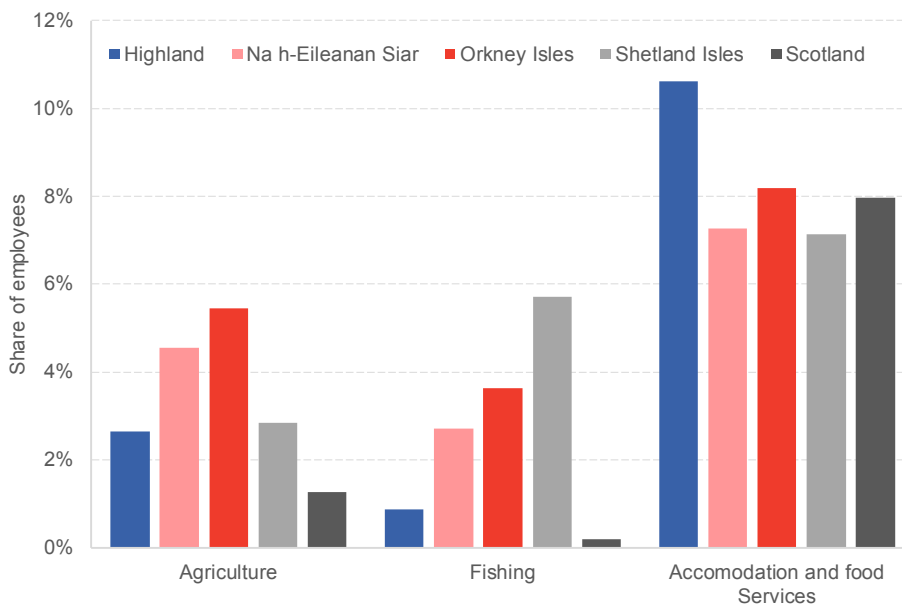
The data from Chart 6 does not provide a specific tourism sector however, it is estimated that the visitor economy in Orkney is worth over £67m per annum – with average spend per visit at £350.

Source: Orkney Islands Council and Visit Scotland

The conclusion that is clearly drawn from this data is that the make-up of the Orkney economy is quite different from the Scottish mainland.

Quite often, Orkney gets put in the same bracket as Shetland and the Western Isles – e.g. on things like an Islands Deal – but again, care has to be exercised here, as the nature of the these three economies are quite distinct. For example, Chart 7 highlights that agriculture is more prevalent in Orkney whereas for Shetland, fishing dominates.

Chart 7: Share of employees by industry, selected Scottish local authorities, 2018



Source: BRES

Throw-in the issues associated with being a small island economy, such as connectivity and access to services, and it is clear that the priorities of Scotland and Orkney may look quite different on different issues and over time. It is however worth bearing in mind the caveats with such analysis as we outline in Box 1.

Business Base

The number of businesses in Orkney has increased by just over 7% since 2014. This growth has been driven by private sector businesses.

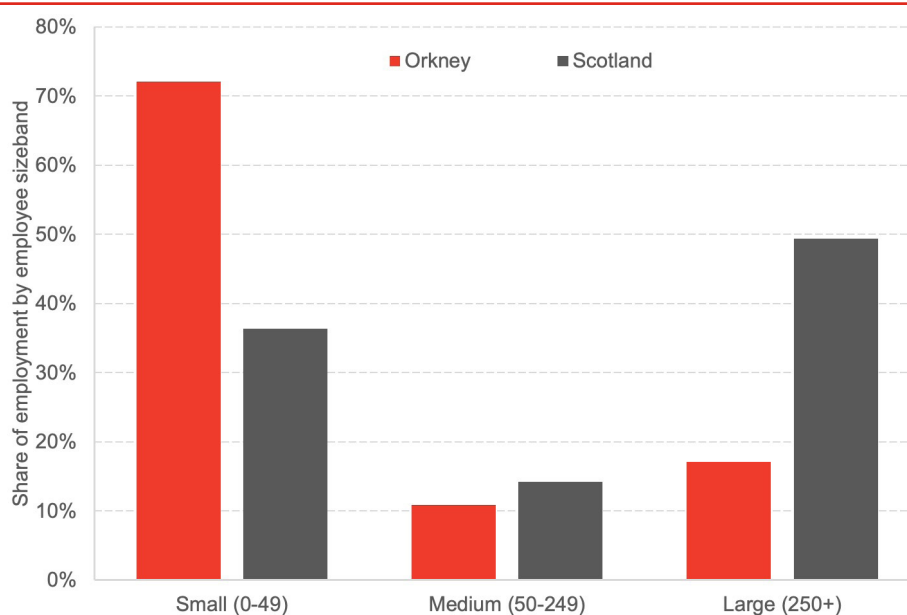
Overall, Orkney has a higher business stock – per head of population – than the Scottish economy as a whole.

Unsurprisingly, as a small island economy, most businesses in Orkney are of a small scale.

According to the latest data, of around 1,500 businesses on the islands, just over 90% (or 1,360 enterprises) had fewer than 10 employees. There were no ‘large’ employers (firms employing more than 250 people). And only 10 medium-sized employers (firms employing between 50 and 249 people).

Overall, this picture of enterprises in the private sector in Orkney is not too dissimilar to Scotland as a whole - the overwhelming number of enterprises have fewer than 50 employees.

Chart 8: Share of employment by employee size-band, private sector businesses, 2019



Source: Businesses in Scotland (Scottish Government)

However, whilst the structure of the enterprises is largely similar, the structure of employment within those enterprises is distinctly different.

The majority (72%) of employees in the private sector in Orkney work in small businesses with fewer than 50 employees. By contrast in the rest of Scotland, only 36% of private sector employment is in small businesses with 49% of employment in businesses with 250 or more employees.

Labour Market Outcomes

On labour market outcomes, as Table 2 highlights, Orkney performs strongly.

Table 2: Employment and unemployment rate, 2018

	Employment (16-64)		Unemployment (16+)	
	Rate (%)	Year Change	Rate (%)	Year Change
Orkney	87.5	▼	1.8	▼
Scotland	74.1	▼	4.3	▲

Source: Scottish Government (APS)

Unemployment in Orkney has, and remains, much lower than the Scottish and UK figure. Employment rates are consistently close to 90%.

Even after the 2008/2009 recession, unemployment in Orkney only rose 1.7 percentage points between 2007 and 2011, compared to 3.5 percentage points in Scotland overall.

The latest data on female employment shows that 81% of females in Orkney are in employment compared to a Scottish average of 72%. Although the confidence interval for Orkney is 11 percentage points, Orkney's female employment is consistently well above Scotland's, and most of the time this is after accounting for these large confidence intervals.

Source: ONS

Underpinning these results are some interesting features of the Orkney labour market.

Firstly, part-time work is much more prevalent in Orkney than it is in other parts of the country. In 2018, total employee jobs in Orkney were estimated at 11,000 – 5,000 part-time. This ratio is significantly higher than the equivalent figure for Scotland. 45.5% of all jobs in Orkney were part-time, compared to a Scottish average of 33.3%.

Secondly, self-employment is slightly higher in Orkney than in Scotland, perhaps again reflecting the nature of a small island economy. We suspect that the number of people with second jobs may also be higher than the Scottish average, but again the official statistics are unreliable.

Thirdly, weekly earnings in Orkney lie slightly above those of Scotland - £598.8 vs. £576.7 per week respectively.

Interestingly, this appears to be driven by a substantial difference between male and female earnings, with one of the largest gender pay gaps in Scotland. Full-time male earnings are nearly 9% higher in Orkney than in Scotland. But female full-time earnings are nearly 17% below.

It is possible to speculate that some of the explanation behind these figures relates to jobs associated offshore, particularly within the oil industry, and the prevalence of caring and public sector roles amongst women. The sustainability of such roles is something that we return to in Section 3.

Finally, we can look at the qualifications of the workforce (or at least the educational performance) of those in the local community.

The latest figures show that a higher proportion of those aged 16-64 had level 4 qualifications and above (Scottish Vocational Qualification level 5, Degree, Postgraduate qualifications, Masters, PhD, or equivalent) in Scotland (44.2%) than in Orkney (42.5%) in 2018, although a higher proportion of those aged 16-64 in Scotland had no qualifications (9.7%) than in Orkney (2.7%).

Population

An ongoing generational challenge for any remote island community is maintaining a stable population.

Interestingly however, Orkney has actually performed better than both the Scotland-wide average – and relative to other parts of the Highlands and Islands – in terms of population growth in recent years.

This achievement is all the more significant when compared to other remote rural parts of Scotland, such as Argyll and Bute, Dumfries and Galloway and the Western Islands, where population dynamics have been much more challenging.

Table 3: Population Change, 2001-2018

	Population 2001	Population 2011	Population 2018	Change 2001-2018	Change 2001-2011	Change 2011-2018
Orkney Islands	19,220	21,420	22,190	15.5%	11.4%	3.6%
Highlands & Islands (LA based)	454,850	487,480	489,330	7.6%	7.2%	0.4%
Scotland	5,064,200	5,299,900	5,438,100	7.4%	4.7%	2.6%

Source: National Records of Scotland

Approximately half of Orkney's population live in Kirkwall. Fewer than 3,000 live on the outlying non-linked isles, providing challenges around provision of key services and basic infrastructure.

But like other parts of Scotland, Orkney's population is getting older. And if anything, the challenge for Orkney is greater than other parts of the country.

In 2017, the median age in Orkney was 47.4. This compares to a Scottish wide figure of 42.

Overall, a higher proportion of the population is older in Orkney than in Scotland as a whole.

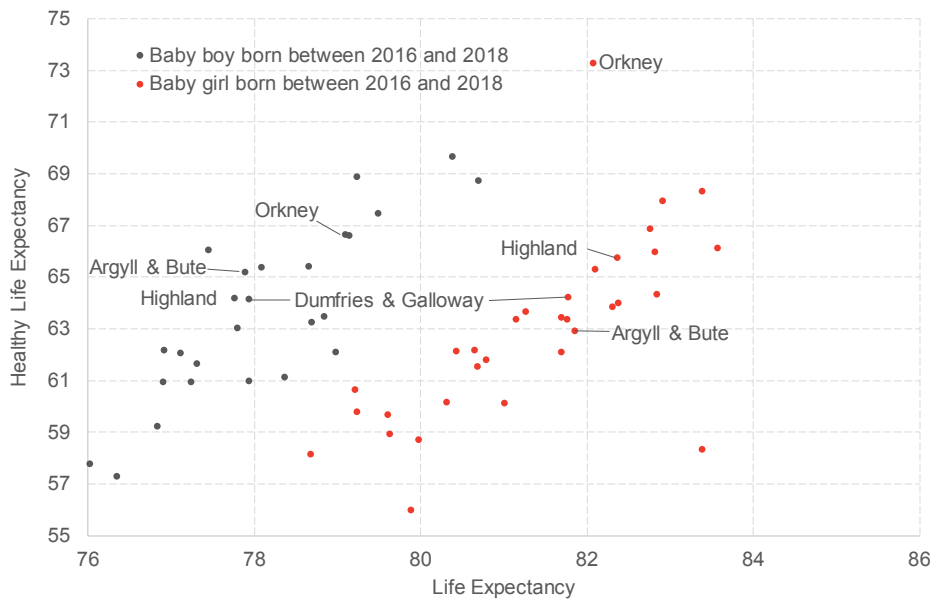
Table 4: Population share by age-band, 2018

	% Share of Population						Total Population 2018
	0-15	16-29	30-49	50-64	65-74	75+	
Orkney	16%	14%	23%	23%	13%	11%	22,190
Highlands & Islands	16%	15%	24%	23%	13%	10%	489,330
Scotland	17%	18%	26%	21%	11%	8%	5,438,100

Source: National Records of Scotland

There are two aspects driving this. Firstly, the underlying demographics of the population. Secondly, the healthier life expectancy that exists in Orkney compared to the Scottish average. Chart 9.

Chart 9: Life expectancy and healthy life expectancy, Scottish local authorities, 2016-2018



Source: ONS

As we discuss in Section 3, the outlook for Orkney’s demography will be a key structural challenge facing the local economy in the years to come.

Poverty and Wellbeing

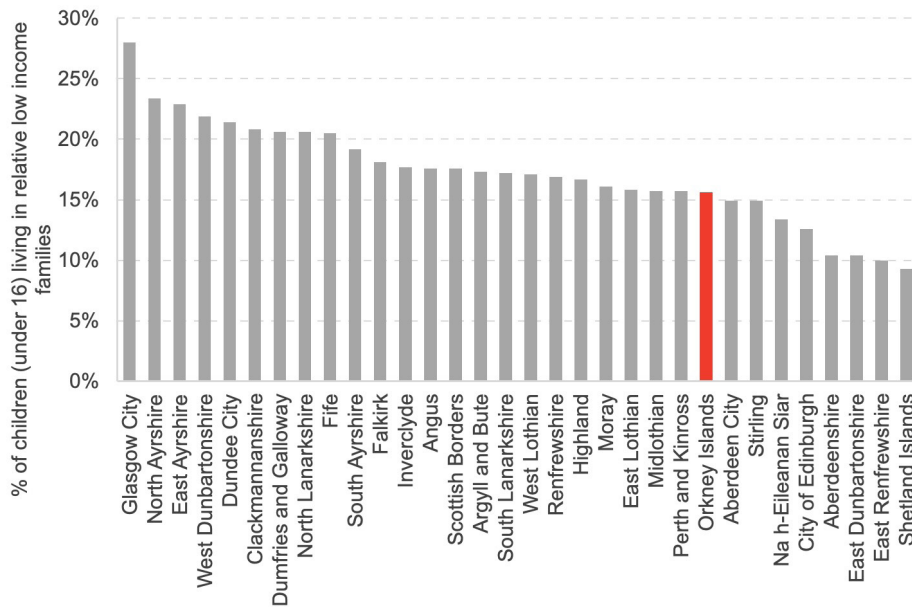
Of course, one way in which the health of an economy can be measured is via the experiences of those who live there. A well-functioning economy should be able to ensure that people have a good standard of living.

One indicator of living standards is the relative poverty rate – i.e. the number of people who have income below 60% of UK median income. Low household income indicates that people may struggle to buy basic goods and services, and be unable to fully participate in normal activities enjoyed by the rest of society, such as an annual holiday or family day trips.

Chart 10 shows relative child poverty for local authorities in Scotland using DWP’s experimental statistics on local child poverty³. These figures indicate that just over 15% of children in Orkney are living in relative poverty. Whilst far lower than the worst performing local authorities in Scotland, this nonetheless shows that families in Orkney are facing financial challenges.

³ [Office for National Statistics](#)

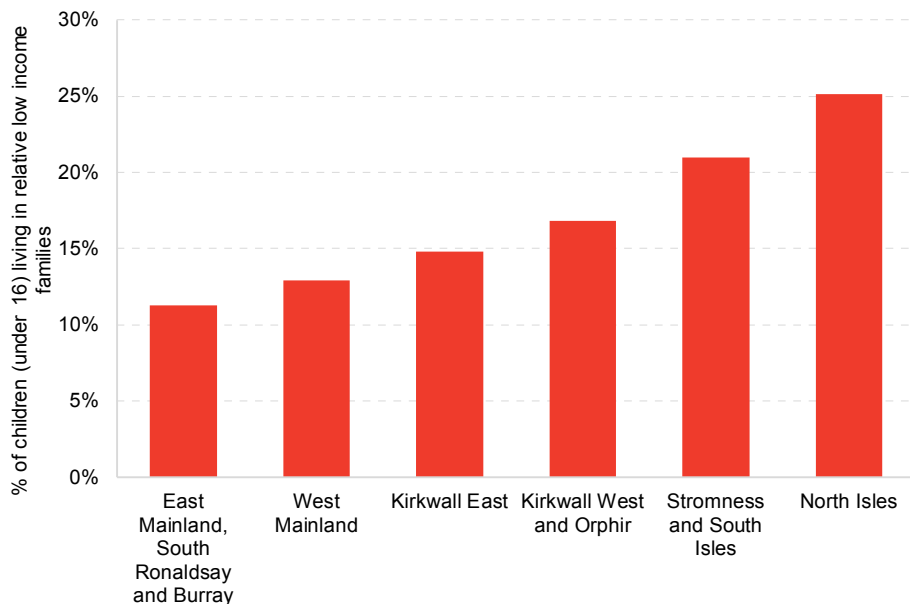
Chart 10: Relative Child Poverty by Local Authority (Before Housing Costs) - Scotland (2018/19 - provisional)



Source: DWP

Chart 11 shows how this differs across Orkney and shows clear divergence, although again far below the worst performing parts of Scotland (the highest rate is 58% in Southside Central in Glasgow).

Chart 11: Relative Child Poverty by Ward (Before Housing Costs) - Orkney (2018/19 - provisional)



Source: DWP

Low household income is of course of concern, but is not the only barometer of whether people have a good standard of living. Increasingly, there is more work being undertaken to capture ‘broader’ measures of economic wellbeing and performance. We would urge some caution when interpreting this data, as the results obtained can be highly subjective and depend upon what is included (and what is not included) in any index.

That being said, they are still interesting to look at.

One of the most popular is the Grant Thornton Vibrant Economy Index⁴. The index includes, not just measures of economic performance, but also wider indicators such as community trust, health and wellbeing and inclusion.

On the most recent figures, Edinburgh was ranked number one for overall vibrancy, and for dynamism and opportunity, Aberdeen achieved top ranking for prosperity. But the Orkney Islands were ranked number one for community, trust and belonging and also health, wellbeing and happiness⁵.

Another indicator – again one that should be viewed with some caution as it is based upon a relatively small subjective survey – is the Lloyds ‘Quality of Life Survey’⁶.

For 2020 Orkney was ranked Number 1 in Scotland and 18th in the UK for ‘Quality of Life’

Infrastructure and Anchor Institutions

One of the key messages that arose from our initial discussion with stakeholders in Orkney, has been around the distinct challenges that businesses – and individuals living there – face that are relatively unique to Orkney (or are shared by a small number of other island communities in Scotland).

These have arisen in a number of forms.

On physical infrastructure for example, the nature of the Orkney Islands means that accessibility and connectivity both within Orkney and to other centres of economic activity within Scotland remains challenging.

"Infrastructure and connectivity must be improved in order not to squander the opportunities presented by emerging technologies in Orkney"

Stakeholder Interview

The average travel time in Orkney to the nearest GP, for example, is 3.6 minutes – 10.5 minutes when using public transport. However, if travelling to a retail centre, average travel times are around 5 minutes, but some intermediate zones around the Isles face 1.5-hour travel times to retail centres, extending to over 2 hours when using public transport. These travel times do however need aired with caution, for example, in many of the more remote areas of Orkney travel times may seem short, however do not account for the potential longer waiting times for ferries or flights.

On digital infrastructure, the share of premises with access to superfast broadband has risen from 19% in 2015, but is still only 62% in 2019.

Source: Ofcom

Some of these challenges are reflected in the General Revenue Grant for Orkney, which is higher than the Scottish average – at £3,205 vs. £1,981 per capita. This figure in Orkney is still lower than that of Shetland, £3,426, and the Western Isles, £4,109. But there remain calls for this to be looked at again, to see just how accurately it reflects ‘need’ within local authorities.

4 See: [Grant Thornton Vibrant Economy Index](#)

5 Source: [Grant Thornton](#)

6 Source: [Lloyds](#)

Finally, one key challenge in remote rural communities can quite often be the lack of ‘anchor’ institutions that can help support a local economy. For example, cities often benefit from being the location for national government agencies and/or large higher and further education institutions.

Orkney does benefit from a vibrant public sector (employing slightly more people than the national average), and also a campus of the University of the Highlands and Islands. Interestingly, and quite differently to many other rural economies, it also has a number of private sector anchor institutions – in research, the European Marine Energy Centre (EMEC), and Heriot-Watt University; as well as in food & drink. For example, the Orkney Distillery not only produces Orkney Gin but the distillery process attracts tourists, and just recently, turned its production to hand sanitiser to help the island in its efforts to tackle Covid-19.

Summary

So what can we conclude from this bank of economic and socio-economic data?

It is clear that Orkney is a prosperous part of the Scottish economy.

Orkney performs strongly on wider socio-economic measures, including on healthy life expectancy and levels of social deprivation.

The Orkney economy looks quite different from the economy of Scotland as a whole. The industrial mix of the economy is much more tilted toward agriculture and fishing, and human health.

Underneath these headline figures, we see some wider trends.

In broad terms, economies of remote islands with small populations, face a number of unique characteristics that differentiate them from more ‘typical’ areas of economic activity. Orkney is no different.

Its scale and location means that – in comparison to other parts of the country – it has a relatively small internal market. This has positives and negatives. On the one hand, it can lead to a reliance upon ‘imports’ for key day-to-day economic activities (such as food and fuel). But on the other hand, it can often help ensure relatively high ‘local multipliers’.

There is some evidence that there is a net leakage ‘out’ of Orkney. On indicators of GVA per head (i.e. activity taking place in Orkney), the islands perform better than the Scottish average. But on average household income (i.e. income withheld within households), it performs below.

All of this places Orkney in a relatively strong footing – but with key challenges relatively unique to rural communities – to respond to the changes that we know are coming in the future.

3. Outlook

Introduction

In this section of the report, we discuss the economic outlook for Orkney.

The coronavirus outbreak represents the greatest public health crisis in a generation. Whilst the health risk for the families impacted is clearly the most important concern, the scale of the potential outbreak – with up to 20% of all working age people off sick – coupled with the effective lock-down of all non-essential businesses, will have a significant economic impact.

This, along with wider global uncertainty and not to mention Brexit, means that forecasting the short-term path for growth at either a local or national level is subject to a high degree of guesswork.

What we do know is that we will enter a sharp downturn. The effects will take time to wash through, both in terms of the recovery and the type of economy that will emerge post-crisis.

Looking beyond the short-term however, we can be fairly confident of long-term structural changes that will impact upon our economy in the decades to come. For example, our population is ageing, technological change is changing the way we work, and we have targets to shift to net zero by 2045. There is also a growing recognition that traditional models of economic growth may need to be replaced with a greater focus upon wellbeing and inclusivity.

There is little that a small local economy – such as Orkney – can do to alter the dynamics of such trends. Instead, the best approach is to understand how such trends might impact upon the local economy and to respond accordingly.

We highlight, four so-called ‘Grand Challenges’ in this report –

- Transition to net zero
- Demographic change
- Technological change
- Growth & wellbeing

In what follows, we argue that Orkney is highly exposed – both in a good and bad way – to these ‘Grand Challenges’; and arguably much more so than Scotland as a whole.

Before this, we provide an overview of the immediate economic outlook.

The immediate economic outlook

The coronavirus

Most businesses are preparing for – or are already experiencing – a major shock to their day-to-day activities in the light of the coronavirus pandemic.

At a global level, we have seen stock market falls; the FTSE is down 30%. Oil is trading at \$20 per barrel. Confidence has plummeted. Order books for manufacturing have fallen sharply.

The channels through which the virus will feed through to the real economy are complex and wide ranging. The impacts will vary by firm, sector and marketplace.

Most exposed will be businesses in Orkney that rely upon so-called ‘social spending’. Particularly hard hit will be the islands’ tourism sector, and we are already seeing significant falls in visitor numbers and bookings.

On balance, many of the economic effects of the pandemic should be temporary. People will return to work. Activities postponed will come back on stream. Families will book holidays once again. Gummed-up supply chains will return to normal.

But in the short-run, the consequences will be enormous. Indeed, the stronger the public health response to the virus, the greater the ‘hit’ to the Orkney economy. There is a risk that any short-term disruptions evolve into something more serious.

Much of the day-to-day economic activity that would have taken place in the past months and those to come will be lost forever.

More generally, recessions often bring with them ‘scarring’ effects, for individuals and businesses. It can take time for any economy to recover.

Both the UK and Scottish governments have implemented a range of measures to support the economy. Schemes range from loans, through to wage subsidies, business rates holidays and hardship funds. Whilst looking good on paper, it is vital that everyone involved, from government through to public agencies, banks and local businesses, work together to not only protect the economy in the short-run but to limit any ‘hysteresis’ effects from taking hold.

Wider economic performance

The coronavirus comes on the back of a challenging time for the wider economy.

The departure of the UK from the EU Single Market (scheduled for the end of the year) has led to weak investment and heightened business uncertainty across the UK.

But Brexit cannot be blamed for all our recent challenges. Growth in the wider economy has been fragile for a much longer time.

Scotland’s economy, in real terms, grew by just 8% in the past 10 years, compared to 22% growth in the decade before 2008.

Source: QNAS (Scottish Government)

Policy implications

What does all this mean for policymakers, businesses and stakeholders in Orkney?

- Firstly, we are in for a period of significant economic hardship for – at least – the next few months. For many, perhaps longer. The resilience of local businesses will be tested. Ensuring the right support is available – and quickly – for firms will be crucial.
- Secondly, the legacy effects of this crisis are likely to last for some time. For example, whilst demand may return when the immediate health crisis passes, it will take much longer for export markets and tourism numbers to return. The massive fiscal response is likely to mean that public indebtedness will rise. How this will be paid back – and the implications for public services more generally – is yet unknown.
- Thirdly, it seems inconceivable that once the immediate crisis passes, the economy will return to ‘normal’. Some aspects of our economy may change for ever. We do not yet know how a move to more remote working practices will pan-out. At some point, debates around wellbeing vs. growth, the robustness of globalisation more generally to such risks, and the future of industries (such as oil & gas and retail) where the crisis has come at the worst possible time, will need to be resolved.

Such questions will dominate the policy and economic debate over the next few years. Preparing Orkney how to respond, and thinking how it might wish to position itself to these challenges, will be important.

Grand Challenges

Background

As highlighted above, alongside the immediate short-term crisis, we know too that there are major structural changes feeding through to our economy over the next few years.

By making the right investments in enterprise, infrastructure, skills and wellbeing, the long-term future of a local community can be best supported.

Indeed, Orkney’s successes over the years in energy, tourism, food & drink, and in quality of life, have been built up over decades (if not longer). Developing these successes further, and tackling structural weaknesses, is arguably where the greatest collective impact can be achieved by any local economic community.

In what follows, we take each ‘Grand Challenge’ in turn and highlight how it might impact upon Orkney. In Section 4, we discuss specific opportunities that feed into these ‘Grand Challenges’.

Transition to net zero

It is now widely accepted that the global economy needs to fundamentally change if climate change is to be tackled.

The UK’s commitment to net zero by 2050 and the Scottish Government’s declaration that we are facing a climate emergency, has created a fresh impetus around economic and climate change policy⁷.

⁷ The Scottish Government has set a target to be net zero by 2045, with a 75% reduction in emissions by 2030.

Orkney is well-placed to take advantage of the transition to a low carbon economy; and to contribute disproportionately to Scotland-wide objectives. But as a remote, island community, it also faces particular challenges.

Orkney – at 8.7 tonnes (t) – has higher per capita CO₂ emissions than the Scottish average of 5.3t.

Source: BEIS

Firstly, it is clear that if Scotland (and the UK) are to meet their climate change ambitions, there will need to be a drive towards ever more renewable energy production.

Significant progress has been made. In 2018, around 74 per cent of Scotland's electricity demand was met from renewables - well above figures for the EU and UK.

But we are arguably nowhere near even half way in the level of deployment required for a zero-carbon future.

Scottish Power estimate that to meet the net zero goal renewable energy will have to quadruple and electricity generation will have to double.

Source: Scottish Power⁸

As we discuss in the next chapter, with Orkney's renewable potential, it has the opportunity – with the right funding and infrastructure – to make a major contribution to Scotland (and the UK's) renewable energy targets.

Orkney's contribution need not just be limited to best utilising its natural environment to support the deployment of renewable capacity, but also to continue to support the development of new technologies in the first place⁹.

But there will also be challenges. For example, the Flotta oil terminal has been an important source of employment and income (including for the local authority) for years. Over time, it will be subject to a phased decline.

In 2016, Orkney generated renewable output equivalent to 121% of its electrical demand a feat unrivalled for an area of similar scale and energy capacity in the UK.

Source: Orkney Renewable Energy Forum

Secondly, low carbon sectors more generally, from re-manufacturing through to the circular and blue economies, will bring with them significant potential for an island like Orkney.

At the same time, the drive to limit emissions raises questions for past models of trade, including food security¹⁰. To reduce carbon, it is likely that more local and sustainable food produce will rise up the agenda, which again Orkney is well-placed to benefit. There is also likely to be an increased demand for sustainable tourism in the years to come.

Orkney's environment therefore, beyond renewable energy, provides significant opportunities to create jobs and prosperity for its inhabitants for years to come.

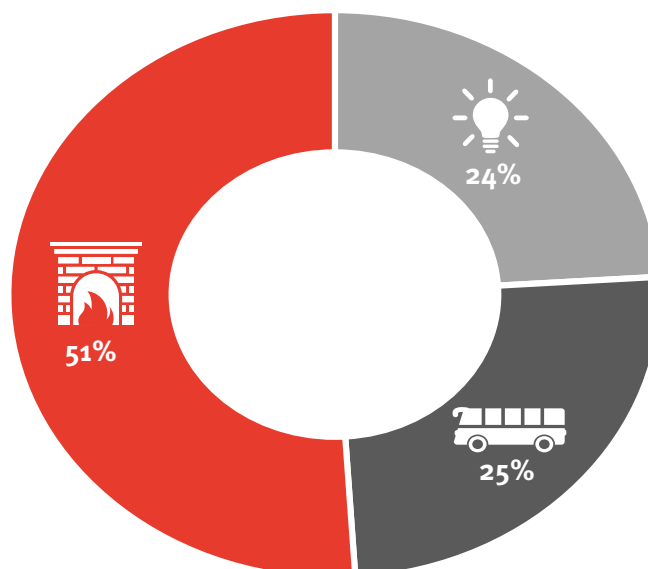
⁸ See: [Scottish Power](#)

⁹ We discuss the European Marine Energy Centre in the next section.

¹⁰ Lockdown measures have caused food security to become a real issue for residents on the isles as food prices soared due to the difficulty in receiving food supplies - this led to [Orkney Islands Council](#) setting up a food funding scheme in response to the crisis.

Thirdly, the structure of how much of society – and the economy – operates will have to change. This will include the food that we eat, the way we heat our homes and the transport that we take.

Chart 12: Final energy consumption in Scotland by heat, electricity and transport, 2015



Source: BEIS

For all of Scotland’s recent successes in renewables, we have much distance to travel.

We lie bottom in the EU for renewable heat production, for example. And surface transport – road, aviation and shipping – is now an increasing source of emissions. Both pose particular challenges for Orkney, with its rurality and aged housing stock.

That being said, progress has been made in a number of key areas¹¹

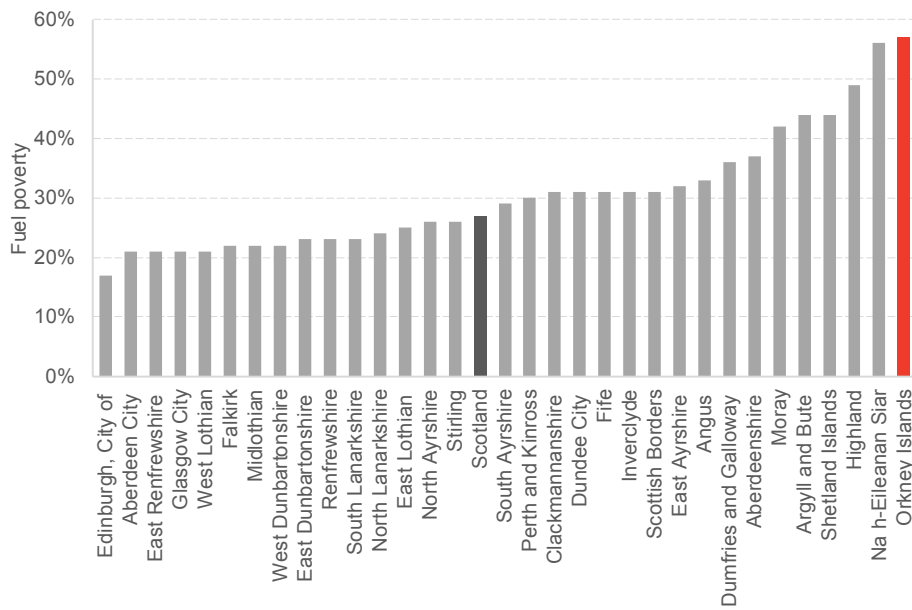
Working with Carbon Trust on a programme to reduce its carbon emissions, Orkney Islands Council has achieved an 18% reduction of carbon emissions over the last 10 years

Source: Orkney Islands Government

But historically, Orkney has suffered high rates of fuel poverty, driven in part by climate but also costs of fuel. There is no mains gas provision to the Orkney Islands, which means that residents must use more expensive heating oil.

¹¹ See for example [Orkney Sustainable Energy Strategy](#).

Chart 13: Fuel Poverty by Local Authority, 2015 - 2017



Source: Scottish Government

Orkney is amongst the worst affected areas in the UK, alongside the Western Isles and Shetland.

The unique challenges faced by an island such as Orkney will mean that national policies to limit emissions could look quite challenging. Take housing for example. The government in Holyrood has legislated that all new homes should use renewable and low-carbon heat from 2024.

But the geography of Orkney means that large scale district heating schemes will be impossible for many. Much of the housing stock is pre-1990, requiring major investment in retro-fitting. In a place that does not benefit from economies of scale and where rurality raises costs, the challenges of such a transition will be higher.

Similarly, low carbon transport in Orkney is not as easy to implement. Distances between communities are longer, with many of the most remote communities linked by sea or air transport. Even with a rise in the number of low carbon cars on the island in recent years, electric planes and ferries are still in the development phase, meaning it could be a while yet before the technology is suitable for an island like Orkney.

Again, progress has been made in recent years, but it would be wrong to not recognise the challenges involved.

Orkney has the largest number of electric vehicles per capita in Scotland.

Source: Orkney Sustainable Energy Strategy

At the same time, in terms of economic opportunities, exporting produce out of Orkney – such as food & drink – and encouraging tourists to come to Orkney, also carries a necessary carbon cost. Developing sustainable travel solutions, to and from the islands, will be key.

On waste, again the geography of the islands means that large amounts of waste are processed each year. Exploring options to adopt technologies that support the circular economy and unlock investment to transfer waste to fuel is a challenge, but also an opportunity.

Finding sustainable solutions to all of these issues is not easy. With them come challenges and

opportunities –

- Opportunities in terms of meeting a significant amount of Scotland’s renewable demand in the future, and tackling Orkney’s long-standing fuel poverty challenges.
- Challenges in terms of the high levels of investment required and the urgency in which national policymakers are requiring changes to be made.

All of this will require coordination across many tiers of government and public agencies and ambition to unlock the significant sums of public and private monies required.

Demographic change

For generations, a constant challenge for Orkney has been the pull of the mainland for its young people. What we also know is that the structure of Orkney’s population will change significantly in the years to come.

Over the next few decades, Orkney’s population will grow more slowly than in the past, and it will age. All this will be on top, as we highlighted in Section 2, of a population that is already older than the Scottish average.

"The demographic challenges facing Orkney somewhat help determine the scale of our ambition for the Orkney economy. We need a solid foundation for people to stay, including a vibrant educational environment, affordable housing, and a variety of jobs available. "

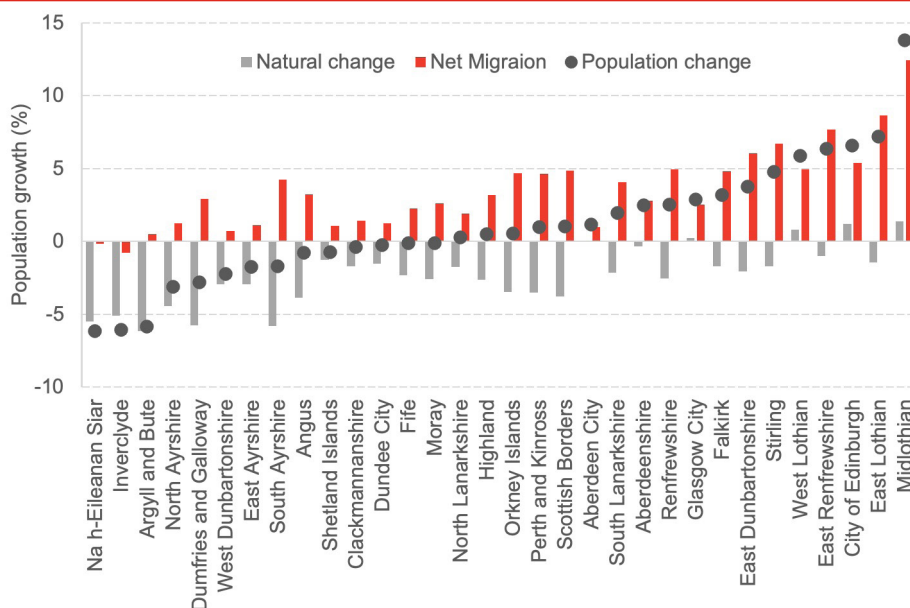
Stakeholder Interview

The population of a local area is crucial to the sustainability and vibrancy of its economy.

We can be pretty confident of what drives population change over the long-term. That is, rates of migration from overseas and within the UK; and natural change (i.e. births vs. deaths). The current outlook for both of these looks challenging.

The chart below shows the projections for population across different local authorities in Scotland over the next 10 years.

Chart 14: Projected population growth by local authority, 2018 – 2028



Source: National Records of Scotland

The population of Orkney is projected to remain relatively flat. But the ‘natural change’ in the population will be negative. In other words, population decline will only be halted by in-migration. If migration rates were to decline, for example post-Brexit, then the risks would be stark.

Within this, a particular challenge is the outlook for people of working age.

Table 5 shows population projections for Orkney and Scotland to 2043. Orkney’s working age population is forecast to decline by 8%, while pensioners are forecast to grow by 28%.

Table 5: Population projections by age structure in Orkney, 2018-2043

	Children	Working Age	Pensionable Age
Orkney	-20%	-8%	28%
Scotland	-10%	0%	23%

Source: National Records of Scotland

Such trends create challenges, particularly in retaining and developing a young workforce to support the local economy. Interestingly, there is some evidence to suggest that Orkney does do quite well – despite the challenges – both through quality of life indicators and surveys of its young people. But the scale of the challenges is significant.

In a survey for Highlands and Islands Enterprise, 58% of young people in Orkney were ‘committed stayers’ (planning to live and work in the highlands and islands). This compared to 43% across the region.

Source: Highlands and Islands Strategy

Of course, an ageing population brings challenges as well as opportunities.

Yes, an ageing population puts pressure on local budgets (i.e. in health and social care). But at the same time, this creates employment opportunities in caring responsibilities.

There is little that policymakers can do to shape the demographics of a local area. Migration policies lie elsewhere, whilst fertility rates reflect decades of change in society. Instead, the focus has to be upon creating attractive places for people to stay.

Employment opportunities are key. But so are good schools, good healthcare, broadband access, transport connections and quality housing.

Technological change

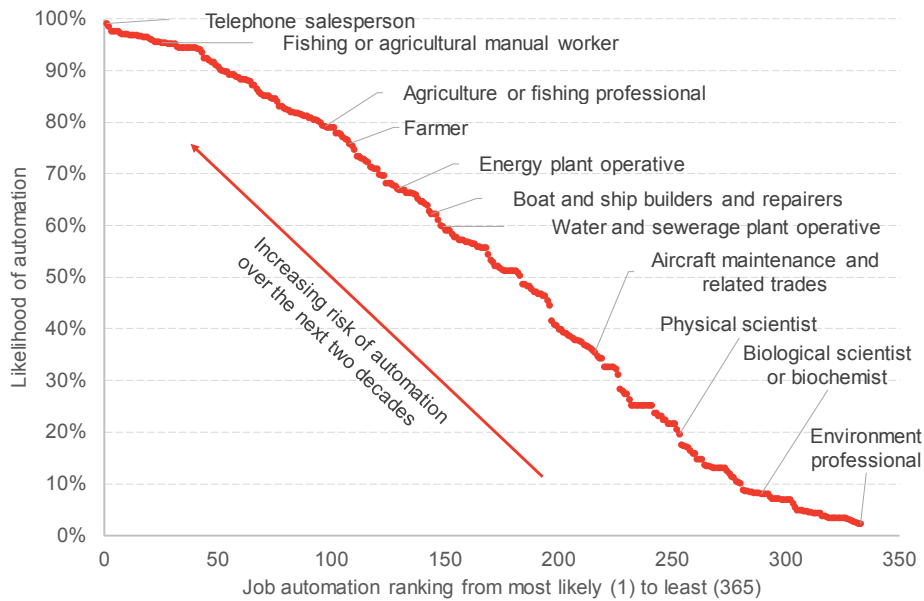
The pace of technological change is transforming the way in which businesses operate. It is also turning on its head how consumers shop and interact with each other.

Again, this is another global change where the experience of Orkney may look quite different to Scotland as a whole.

For much of Scotland, particularly those in the services industry, the key concern with technological change is the loss of jobs to robots and machines.

This is of course an issue for Orkney. See Chart 15.

Chart 15: Likelihood of automation in the next two decades, UK



Source: BBC News, Oxford University, ONS

Our own modelling suggests that around 3 in 10 current jobs in Scotland are believed to be at high risk from automation.

This is not to say that this will automatically lead to a sharp rise in unemployment. New jobs will be created on the back of technological change too. Orkney cannot be expected to be immune from such pressures.

At the same time, those impacted by technological change may not always be that well-placed to cope with change. Those in the most precarious positions – e.g. in terms of skill or income level – will be most at risk.

Of those employed in Orkney, 44% have qualifications at a degree level or higher compared to 49% in Scotland.

Source: Annual Population Survey

However, whilst technological change comes with risks, for somewhere like Orkney, it also brings huge opportunities.

Location will no longer be as vital as it once was. More people will be able to work away from centres of economic activity than before.

Traditional industries, such as knitwear, food & drink and arts & crafts, that might not in the past have had an easy route to market can, now through digital marketplaces, sell to anywhere in the world with relative ease.

The internet has transformed the way in which people book holidays, with Orkney’s scenery and attractions now publicised around the world on a scale never seen before.

New technologies in areas such as renewable energy, offer opportunities for Orkney. Perhaps not in terms of manufacturing, but in terms of servicing and support to installations.

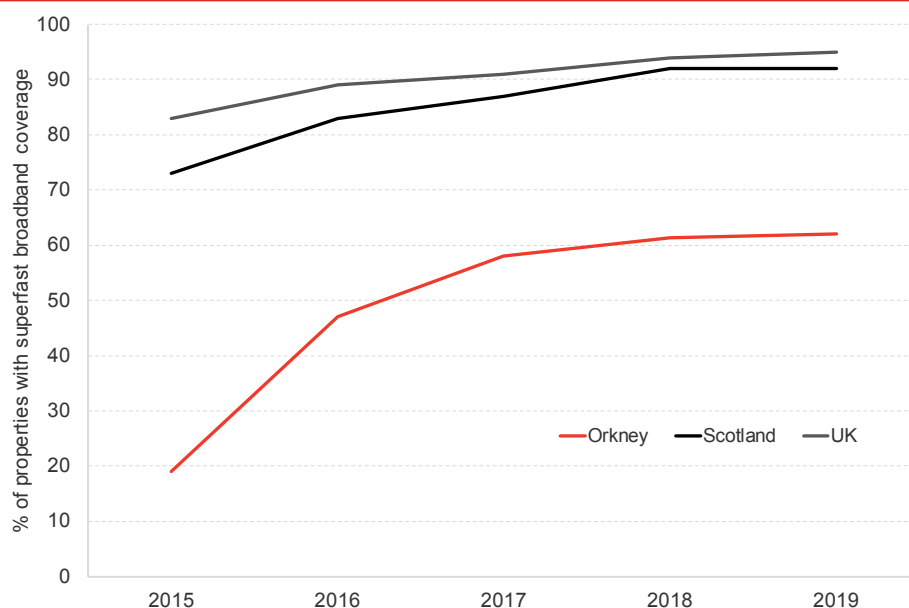
Orkney has the landscape and seascape to lead the world’s renewable energy revolution. The European Marine Energy Centre (EMEC) is the only worldwide provider of both wave and tidal energy converters.

Source: EMEC

Technology is also transforming the way people can be educated. Young people – and adults retraining or upskilling – no longer necessarily have to leave the islands. Instead greater access to online resources mean that they will be able to study from home.

However, despite a sharp rise in the accessibility of superfast broadband in recent years, Orkney still lags behind Scotland and the UK overall. Chart 16.

Chart 16: Share of properties with superfast broadband coverage, 2015 - 2019



Source: Ofcom Connected Nations

Of course, for this ‘localisation’ of many industries and activities to work most effectively, other aspects of the policy landscape need to work in line (e.g. broadband, marketing, transmission charging, skills training, infrastructure etc).

Economic Growth & Wellbeing

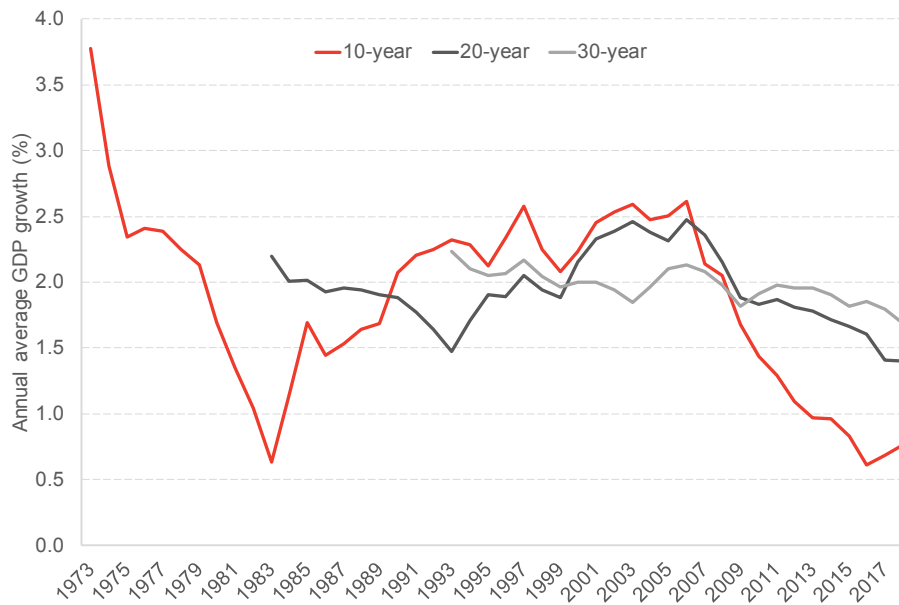
The above discussion highlights some of the particular structural changes that will impact our economy in the years to come.

Many of these changes are already shaping both the pace and balance of growth in Scotland and in Orkney.

After a period when most advanced economies grew at a steady pace – at around 2% per annum - growth rates have, over the past decade, slowed significantly. Chart 17.

Add on top of this a major downturn as a result of this global pandemic and it is not difficult to imagine that a world of limited economic growth will continue for the foreseeable future.

Chart 17: Average annual GDP growth, Scotland, 1973 – 2018



Source: QNAS (Scottish Government)

If the period of slow growth in the UK and Scotland is a new norm, then it poses fundamental questions for our ‘economic model’ and society. Questions around the role of the State, how we measure success, and our willingness to trade off slower/faster growth for other environment or social outcomes become highly relevant.

On the one hand, this suggests that work to turn around this growth performance is ever more crucial.

But if we are on a lower trajectory for growth for the foreseeable future, this makes discussions around inclusive growth, community wealth building and wellbeing all the more important. See Box 2.

Box 2: Moving Beyond GDP

There is increasing recognition that a focus solely upon economic growth – by metrics such as GDP – does not capture all what a community sees as being valuable within a local economy.

This is all the more evident now that economic growth is much slower than in the past.

Concerns over poverty and inequality in society are one element of this. Over time, inequalities across most economies have got worse. This trend is on track to continue in the years to come, particularly as automation has an impact upon particularly low-skilled work.

Focussing upon issues around wellbeing does however, pose a challenge to policymakers.

Firstly, clarity is needed over what is ‘wellbeing’? Who determines what it is and whose wellbeing is prioritised?

Secondly, clarity is needed over how we decide upon different aspects of wellbeing – particularly if there are trade-offs. Is a reduction in child poverty preferable (and if so, by how much?) to a rise in fuel poverty?

Thirdly, how do we measure and evaluate programmes that will impact upon wellbeing?

This work is still in its infancy, but it is clear that the direction of travel is shifting in this direction.

In short, growth that is secured needs to be sustainable, shared and generate genuine local impacts. It suggests that ‘old’ models of growth – for example, chasing productivity enhancements and international investment – might not be the most effective approach.

The role of anchor institutions is vital, such as the public sector, higher and further education institutions and large-scale private sector employers.

Of course, all of this takes place in a community that has its own economic barriers to face, from physical isolation, seasonal employment and limited diversification. As has been a key theme, ensuring that national policy recognises these differences is highly important.

Some of the key conclusions that we make are that –

- Orkney is a prosperous part of Scotland that has a lot to offer, but its economy is quite different from both Scotland as a whole, and other islands in Scotland;
- As a result, care is needed therefore when thinking about how national policy priorities may impact upon Orkney (as the implications might be quite different); and,
- Similarly, Orkney’s economic make-up means its own priorities might look quite different to those for Scotland as a whole.

4. Opportunities for Orkney

Introduction

In the earlier sections of the report, we have reviewed Orkney's economic performance and compared how it performs relative to Scotland as a whole (and other parts of the country). We have also discussed the outlook for Orkney's economy, with an emphasis upon the long-term.

In this final section, we discuss some of the key areas where Orkney has substantial opportunities to continue their success in the years ahead.

These sectors build upon our discussion in Section 3 where we raised the prospects of 'Grand Challenges'.

All of the areas that we touch on are consistent with an economy that will transition to become more low carbon, that will help support more young people to live and work in Orkney, that will respond to – and take advantage of – changes in technology, and will help build an economy that supports the local communities wellbeing.

We highlight eight key areas –

- Energy
- Tourism
- Food & Drink (including agriculture)
- Marine Economy
- Digital Infrastructure & Research Environment
- Traditional industries (including creative industries)
- Community economic development
- A Global Orkney

We discuss each in turn.

Energy

As we have highlighted throughout the report, Orkney has a key role to play in Scotland's renewables transition.

Given Orkney's island make-up, not only does it have a comparative advantage with a strong blue economy, but also has outstanding natural resources that make it a renewables hub, not just for Scotland but in Europe.

Since 2003, Orkney has been home to the European Marine Energy Centre (EMEC), the world's first and foremost test site for real life deployment of marine energy devices.



Credit: Colin Keldie

European Marine Energy Centre (EMEC)

The EMEC's work has placed Orkney at the forefront of the development of marine renewables. EMEC offers developers the opportunity to test full scale grid connected prototype devices.

EMEC estimates that 300 people in Orkney work in marine renewables after a quarter of a century of related academic activity and a decade of R&D facilities.

Source: EMEC

Opportunities abound in wind and other forms of energy too.



Credit: Colin Keldie

Renewable Energy

Orkney had 774 onshore wind sites, roughly 8% of the UK total, and was home to 13 out of the UK's 19 wave tidal installations¹².

The renewable energy potential in Orkney also led to the creation of the 'Surfn Turf'¹³ programme in partnership with the Scottish Government. A big problem in the UK renewables sector has been capacity, with copious amounts of clean energy left unharnessed, as UK power cables struggle to accommodate the large amounts of electricity available, with the programme designed to help resolve this issue.

As part of the Scottish Government's commitment to carbon neutral by 2045 and their Sectoral Marine Plan for offshore wind energy, there is ongoing developments of offshore wind farms in areas surrounding Orkney, which could unlock employment opportunities in Orkney's marine economy.

Through the leadership that Orkney has shown, not just in marine and wind, but also in reducing its carbon energy use and investing in small, local, technologies, Orkney has become a net exporter of electricity.

This has led to major breakthroughs in the tidal energy sector in Orkney, with the EMEC becoming the first body to successfully produce Hydrogen gas using electricity generated from tidal energy in 2017. The hydrogen gas generated is carbon neutral and can be used for transport, heating, agriculture and even transportation of electricity to the UK national grid.

¹² Source: [UK Government](#)

¹³ See: [Orkney Surf 'n' Turf](#)

"Significant investment in renewables can be transformative for the Orkney Islands Economy. Somewhere should be the world leader in tidal energy – why not Orkney?"

Stakeholder Interview

The EMEC's work in the production of hydrogen provides a potential solution to the undercapacity problem, creating an energy storage medium. This can then be harnessed back into a source of power for both general energy consumption and some low emission vehicles, with the process already being used to fuel both inland ferries and freight ships in Orkney. This work not only benefits Orkney, but also the experience gained from doing so can be used to developed hydrogen style energy processes across Scotland and the UK, making Orkney a world leading research hub in tidal energy.

In 2018, the energy sector in Orkney, including renewables, employed around 250 people, representing 2% of all employment. This compares with 1.3% for Scotland as a whole, when excluding Aberdeen City / Aberdeenshire.

Source: Scottish Government

Of course, there is significant potential to go that much further.

Clearly there is a balance to be struck between local environmental and community impact, as well as the generation of large amounts of electricity for export.

But if Orkney is to fill its potential for Scotland (and the UK) in terms of renewable generation then it will require investment in enabling infrastructure – most significantly a more adequate electrical grid infrastructure to the mainland. At the same time, greater clarity and stability around the long-term trend for energy markets will be required too.

What other opportunities are there?

Waste is a major challenge on the islands. But it comes with an opportunity. Orkney has the chance to pioneer mixed recycling services and to develop Energy from Waste (EfW) facilities connected, for example, to community heating systems options. Such innovations will help pioneer a truly circular economy.

There is also potential in the transportation of fuel and energy sources. Orkney is home to the Scapa Flow, a large waterway used by shipping freights and oil tankers, primarily for ship to ship transfers of crude oil or collections from the nearby Flotta oil terminal.

There were 59 STS oil transfers from 111 vessels between 1 April 2018 to 31 March 2019, a near 100% increase on the previous year. The number of oil tankers visiting the Flotta terminal stood at 34 with estimated revenues of the Scapa flow waterway at around £7.9m.

The Flotta terminal has played a pivotal role in the UK oil and gas industry, with around 10% of the UK's oil output handled through the terminal, providing employment opportunities.

As the transition away from crude oil and gases to renewable and clean energy sources continues, and given that the Scapa flow has already successfully played host to the STS transfer of hydrogen gas, there is an opportunity to repurpose the water way to accommodate more clean energy transfers, helping to further strengthen Orkney's blue economy.



Credit: Colin Keldie

Scapa Flow

A tidal stream free area of just under 325 square kilometres that has established itself as one of the largest natural harbours in the world, and northern Europe's preferred location for ship-to-ship transfer operations.

Orkney's Scapa Flow has a rich history from the first and second world wars and this is documented at Lyness' Scapa Flow Visitor Centre and Museum. As of 2019, Orkney Islands Council, along with others, have funded the renovation of this wartime heritage site which is due to be completed in 2021. Orkney's Scapa Flow Museum is an important tourist attraction for the Islands and renovations will enhance tourism opportunities in the area.

For all Orkney's energy potential, as we highlighted in the report it faces high levels of fuel poverty. This inconsistency needs to be tackled. Developing sustainable long-term energy solutions that work for all parts of Orkney is a challenge, but also an opportunity in building a more sustainable and inclusive economy. The ability to legislate and implement changes to make this more achievable does not necessarily lie at the local authority level, and is something that might need to be worked upon with national government.

Tourism

Each year, the population of Orkney swells as thousands of visitors arrive to explore the history, culture and scenery of the islands.

Sustainable tourism provides a major opportunity for Orkney to create long-term employment opportunities and investment – particularly in more remote and rural areas.

The significance of tourism to Orkney continues to grow. In 2019, there were just over 190,000 visits to Orkney (not including cruise passengers).

In 2019, around 58% of all tourists to Orkney were 'first-time' visitors.

Source: Orkney Islands Council and Visit Scotland

Across Scotland, tourism is a major growth sector. The Highlands and Islands alone secured 2.7m overnight visitors in 2018, with recent figures indicating growth of 8% in early 2019. Orkney is a key offer in that market.

In 2018, tourism facing industries in Orkney employed around 1,250 people, representing more than 10% of all employment. This compares with 8.3% for Scotland as a whole.

Source: Scottish Government

Tourism expenditure supports not just direct jobs, but ongoing jobs through the Orkney economy via the supply chain that supports the sector and the local spending footprint of those who work in the industry.

As digital technology and the use of data evolves, the opportunity to innovate in the sector continues to grow. The tourism sector in Orkney will be looking to integrate new ways of working to better understand, predict and exceed visitor expectations.

Table 6: Share of visitors by origin, 2017

Origin	Share of Visitors
Rest of the UK	32%
Scotland	27%
Europe	20%
North America	12%
Other Overseas	9%

Source: Orkney Islands Council and Visit Scotland

Leisure visitors from the UK (excl. Scotland) had a greater spend on average (£419.50) than visitors from Scotland (£368.40) or overseas visitors (£350.72).

Source: Orkney Islands Council and Visit Scotland

There are a number of growth areas for Orkney. Increasingly, tourists are looking for ‘experiences’ and are attracted to areas to experience their culture and local environment and given the 520-mile long coastline of Orkney, home to attractions such as Skara Brae and the Old Man of Hoy, there is great economic potential in the ‘experiences’ Orkney has to offer.

At the same time, the growth of new international markets is opening up opportunities for new visitors. While, historically, travel was a luxury good, the lowering of barriers and falling cost has put travel within reach of millions.

Across the world, in 2016, there were an estimated 1.24 billion international arrivals, compared to 25 million in the 1950s.

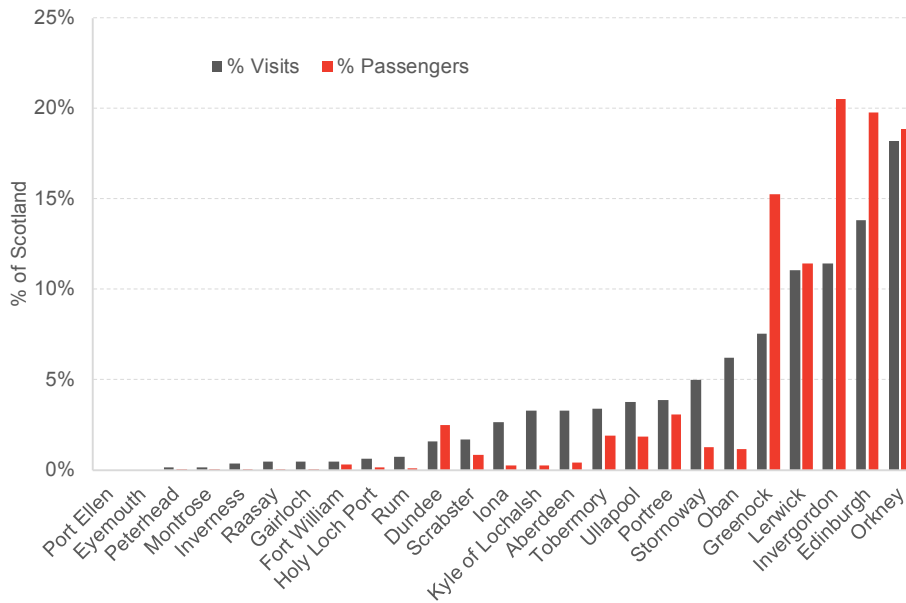
Securing even small market shares in growth markets – particularly as they become wealthier and households look for leisure and tourist activities – provides significant opportunities.

Some of these – such as the growth in cruise ship visitor numbers – bring opportunities but also challenges. In recent years, Orkney has become a destination for all major cruise operators, with an estimated 125,000 people visiting annually between April and September. In 2018, a total of 138 cruise ships visited Kirkwall, bringing 124,064 visitors to the island, accumulating gross harbour revenue of around £2 million - an increase of 10% on the previous year¹⁴.

Chart 18 shows that Orkney welcomed the highest number of cruise ships of all Scottish ports in 2018, translating into the 3rd highest volume of visitors.

14 [Harbour Authority Review, 2019](#)

Chart 18: Cruise ship visits and passenger disembarks, 2018



Source: Cruise Scotland



Credit: Colin Keldie

Cruise Ships

Orkney was the most popular cruise destination in both Scotland and the UK in 2018, as well as being voted ‘Best Overall Destination’ in Western Europe by Cruise Critic – the world’s largest online cruise resource.

On the one hand, this volume of visitors brings with it, significant spending footprint. But it also brings concerns around capacity and over-tourism (something that is a concern more generally in the digital age).

There are challenges, however. The coronavirus pandemic will usher in unprecedented disruption to Orkney’s tourism industry. It seems, based upon current trends, that this season will be effectively shut down.

Also many of Orkney’s annual events have been cancelled or postponed this year, including Orkney’s Nature Festival and Orkney’s 38th Folk Festival both of which were due to take place in May. With the majority of major events postponed until 2021, the money that would have been spent by tourists this year in Orkney is now lost, impacting Orkney’s tourism sector and the supply chain that supports it. There is also the effects that any long-term social distance measures will have on how the economy returns to normal once tourism is allowed to resume.

After lockdown, 52% of people would need tourist attractions to enforce social distancing before they would consider visiting.

Source: BVA BDRC

Going forward, a more general recession, coupled with a slow recovery, may mean that it is a good while yet before demand starts to return to normal. However, upon speaking to many stakeholders within the Orkney economy, there may be an opportunity to create a new normal, changing the face of the tourism sector for the better.

Orkney, a destination priding itself on high quality, high value goods has found that in recent years, given the boom in tourism, that the value of goods has decreased as more tourists demand cheap souvenirs and 'nic-nacs'. As well as this, many stakeholders expressed concerns not only around the negative externalities that higher footfall to the island brings, but also how volatile the sector is given the short tourism season and its lack of resilience to any shocks, such as the one we are currently experiencing.

Transforming the Orkney tourism sector, post-crisis, into a sector that potentially attracts less tourists, thus reducing the negative externalities, whilst extracting the highest value from those that do visit could be the key to building a new tourism sector; one that the economy relies less upon and one that is far more resilient.

"Tourism has become incredibly important for the Orkney Economy. Orkney has a strategic decision to make about the type and volume of tourism that it wishes to attract – and may want to focus on lower volume and higher value tourism in the future."

Stakeholder Interview

However, the right balance has to be struck. The ferries and cruise ships that bring the day-trippers and overnight stayers require an adequate volume of passengers on vessels and touring coaches to remain viable and to continue to be able to provide their services.

In 2019, 13% of visitors to Orkney were visiting for a day trip

Source: Orkney Islands Council and Visit Scotland

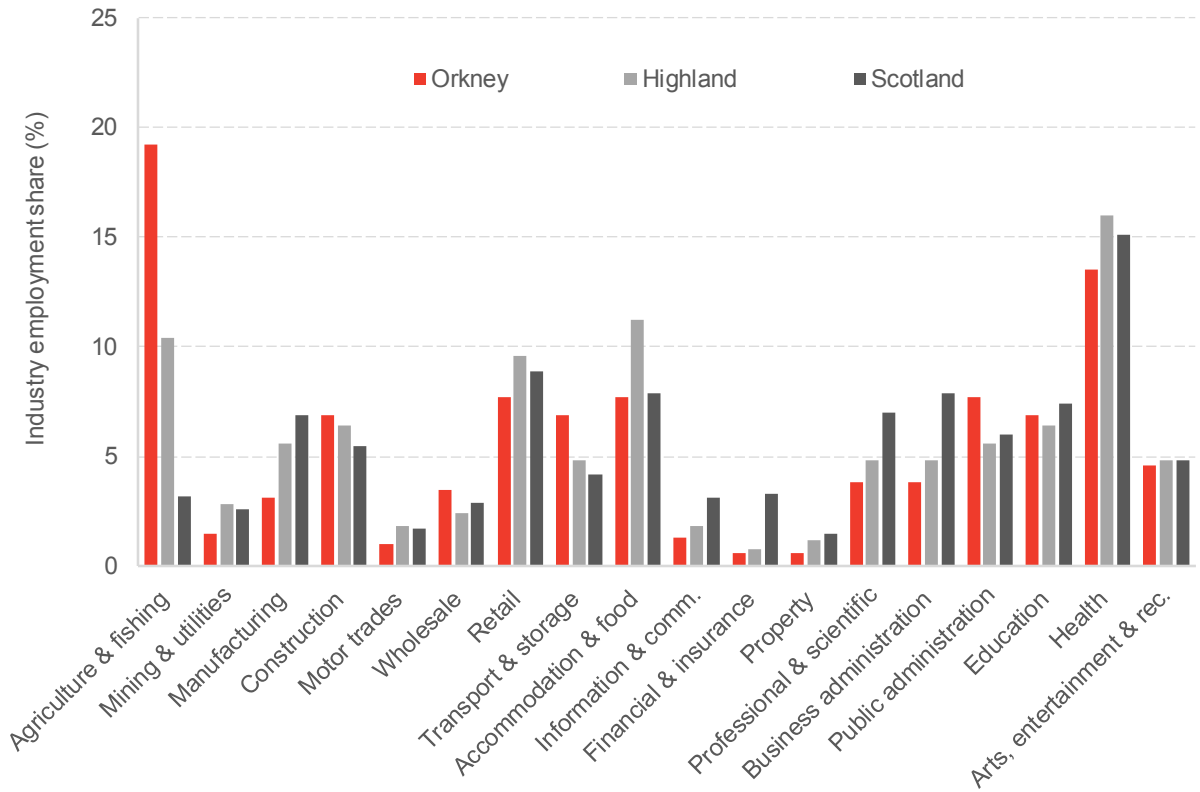
Ensuring that Orkney's reputation as a high-quality and exemplary destination is protected and enhanced, within an increasingly competitive global tourism market, is important both for the long-term future of the island's tourism industry and wider concerns around the environment and wellbeing.

Food & Drink

Farming and fishing remain an important economic – and cultural – part of the Orkney islands. In 2018, it is estimated that 19% of employment was in agriculture, forestry and fishing, 8% in public administration and 7% in transport and storage. A higher proportion of people work in these industries than Scotland as a whole.

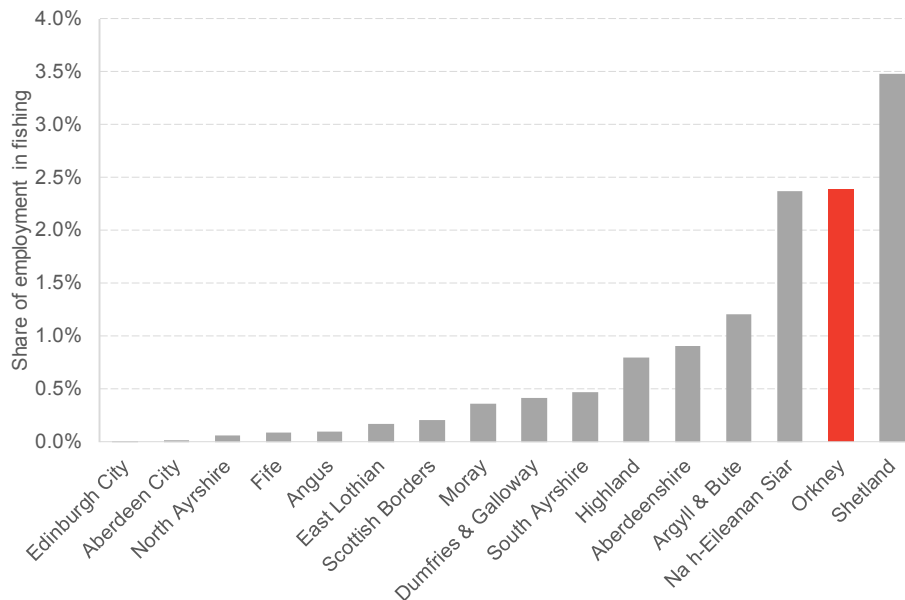
Orkney has the second largest share of employment in fishing in Scotland, after Shetland with the bulk of fishing coming from shellfish, particularly crabs. Chart 20.

Chart 19: Employment by Industry, 2018



Source: BRES

Chart 20: Share of employment in fishing, local authorities, 2018



Source: Scottish Sea Fisheries Statistics

In 2018, 98.5% of species landed in Orkney were shellfish, compare to just 3.5% in Shetland.

Source: Scottish Sea Fisheries Statistics



Fishing

Fishing and aquaculture supports around 90 local business units, representing around 5% of businesses in the economy.

The vast majority of these are small businesses with less than 4 employees.

Source: nomisweb

Just under 70% of shellfish caught in Orkney are crabs.

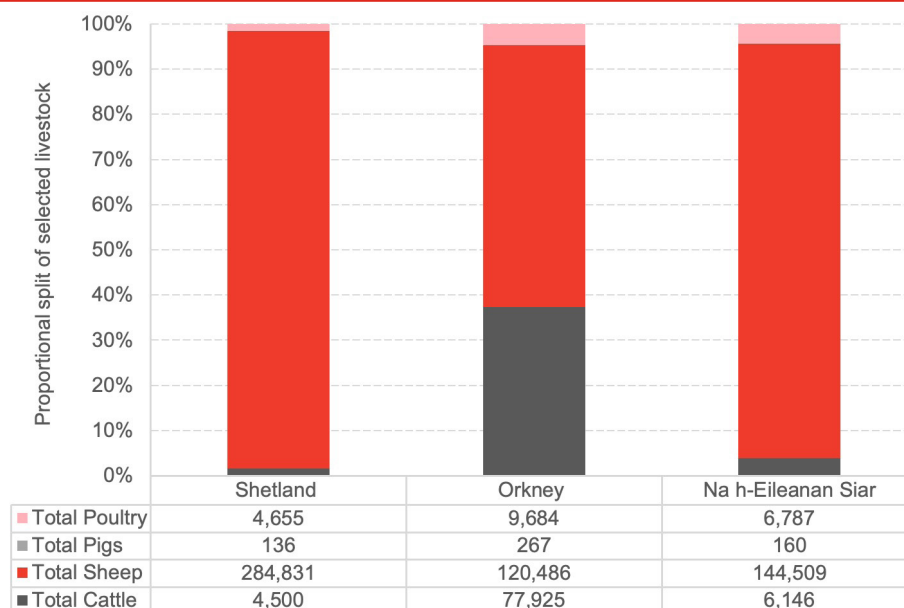
Source: Scottish Sea Fisheries Statistics

As the UK leaves the EU and ultimately withdraws from the European Common Fishery Policy (ECFP), this means removal of any quotas on the number of fish caught imposed through the European Union. Potential increased allowances of fishes caught in a post-Brexit world means Orkney has an opportunity to expand the fishing sector further, creating potential employment opportunities.

Additionally, agriculture is a key part of the economy in Orkney, and the mix of agricultural activities look different from other island communities. These differences are important to understand as the support required for Orkney's farmers will be different than for elsewhere.

The quality of the grassland on parts of Orkney means that it can support dairy herds. Orkney has over half of the specialist dairy enterprises in the whole of the North West region (Shetland, Orkney, Na h-Eileanan Siar and Highland), which in turn supports the local cheese manufacturing industry. Compared to Scotland's other islands, cattle make up a significant proportion of livestock, again reflecting the better quality of the land.

Chart 21: Number and share of livestock by region, 2017



Source: Scottish Government

Orkney is also able to support a number of arable farms, with 6% of agricultural land used for cropping compared to less than 1% for the Shetland and Na h-Eileanan Siar.

Many farms struggle to turn a profit in the absence of subsidies, across Scotland and Orkney is no exception. The future of farm support post Brexit is still uncertain. Various different objectives will likely be pursued, with productivity and environment likely to be top priorities.

Much of the land in the Highlands and Islands can only support low intensity farming, and hence environmental objectives may be seen as more appropriate for the region. However, the land in Orkney can support relatively more productive enterprises than other island communities and hence this may not be the optimal approach for supporting farming on the island.

This should be recognised when government decides on post-Brexit support for the agricultural sector in Scotland, as well as many other factors that are important when deciding how to support areas of remote-rural Scotland, including potentially higher costs of production.

Although Orkney might not be able to mass produce food & drink on a scale to satisfy markets on a large-scale basis, it is clear that there are substantial markets for high-quality, sustainable produce, that Orkney farmers, fisherman and food & drink producers can satisfy.

This has already been used successfully by a number of businesses on the islands, from whisky through to meat, cheese, ice-cream and shellfish.

Each market that Orkney can work into will be different.

- For Scottish consumers (and visitors to Scotland), there is increasing demand for local produce and provenance is more celebrated in food service than in the past. This provides opportunities both in direct sales but also in developing local food and drink networks. Moreover, as highlighted above, tourism is a growth sector for the islands. There is the potential to work closely with that sector to unlock growth, particularly in light of the growing interest in local and authentic food and drink experiences.
- The rest of the UK undoubtedly provides opportunities in the biggest market on Scotland's doorstep. Orkney's (and Scotland's) growing reputation for high quality produce provides an opportunity for local producers to tap-into (particularly as major retailers, wholesalers and food service sectors open up to more local produce).
- Internationally, particularly as emerging markets around the world become richer, demand for 'premium' products will continue to rise. We have seen that already in recent years through the growth of Scotch Whisky and fish exports. Scottish food & drink exports over the last decade have grown by over 100%. Forecasts are that this growth trend will continue, with plans to double exports at the national level by 2030.

Orkney clearly has the produce. And the growth of the digital economy means that access to markets is now much closer than it has been in the past. A 'brand Orkney' for high-quality produce is developing (and could be developed further), helping to position the islands as the 'go-to' place in Scotland for high-quality produce.

The key will, therefore, be ensuring that the right infrastructure is in place to support the growth of these industries, including through connectivity to the mainland and overseas (particularly for perishable produce).

Branding and collaboration are important too. Individual producers are unlikely to be able to unlock key markets. But working with key larger producers, and as a collective unit, the opportunities to gain footholds in key markets becomes that much more accessible. Ensuring that a reputation for high-quality outputs is maintained at all times. This will be particularly important in an industry where consumer trends and habits are changing rapidly and constantly evolving¹⁵.

Marine Economy

We have already touched on a number of opportunities that present themselves due to the rich marine resources that Orkney enjoys. These together provide boundless opportunities to support jobs and prosperity in the Orkney economy both now and in the future.

These opportunities can be grouped into the following categories, and indeed touch on many of the other opportunities we have set out in this section. These are:

- Renewable Energy Capability
- Tourism, with a focus on cruise tourism
- Oil & gas transfer and shipment
- Fishing & Aquaculture



Credit: Colin Keldie

Marine Economy

"The Marine Economy presents a huge opportunity for Orkney. Never mind those Island economies that we would want to emulate: Orkney can be an example to other countries and island groups about how to use our natural resources"

Stakeholder Interview

The cross over with the other opportunities underlines how central the marine assets of Orkney are in supporting growth. In fact, given the strong reliance on the existing, volatile tourism sector in Orkney, there is a real opportunity to unlock the full growth potential of the blue economy and turn it into a reliant sector for Orkney to build upon.

The marine economy is defined by the Scottish Government as economic activity linked to the oceans, seas, bays, estuaries and other major water bodies, and the ecological and physical systems associated with them. The most recent statistics estimate that this supports 1,300 jobs directly, with many more in the supply chain. Chart 22.

The economic opportunities that Orkney's marine environment could offer are currently being explored.

For example, the Orkney Marine Environment Project aims to improve the availability of marine, social and economic data to aid future marine planning.

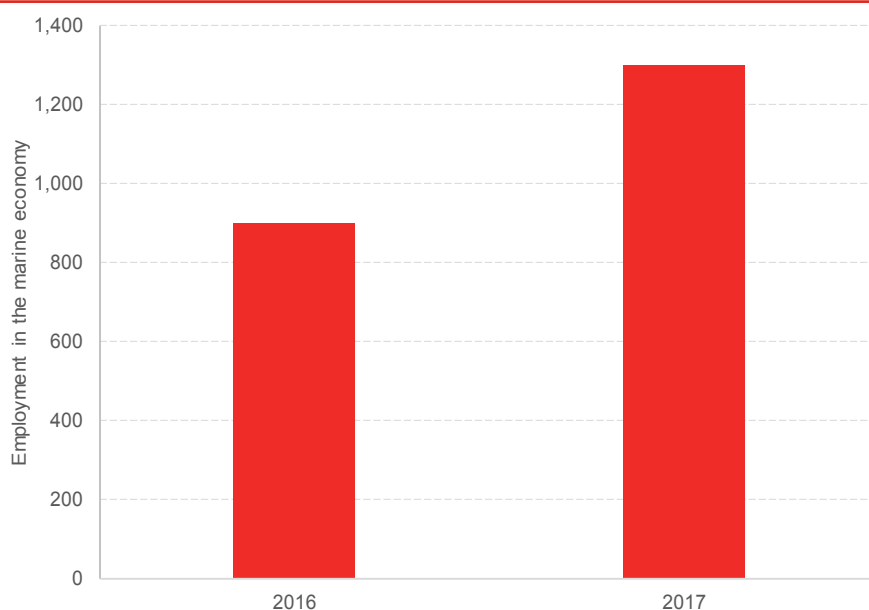
¹⁵ See [Scotland Food & Drink: Ambition 2030](#).

The project involves a ‘State of the Environment Assessment’ of the island’s marine area to 12 nautical miles and aims to foster knowledge exchange in the marine economy.

Additionally, the Scottish Wildlife Trust has teamed up with Heriot-Watt University for a two-year Oceans of Value project in Orkney. This collaboration aims to estimate the value of the marine environment to Orkney, including the contribution of diverse habitats, clean coastlines and wave and tidal energy to the Island's marine economy, providing insights for Orkney’s marine planning.

These projects coupled with the future Orkney Islands Marine Planning Partnership provides the opportunity for Orkney to grow a diverse and sustainable marine economy.

Chart 22: Employment in the Marine Economy, 2017



Source: Scottish Government

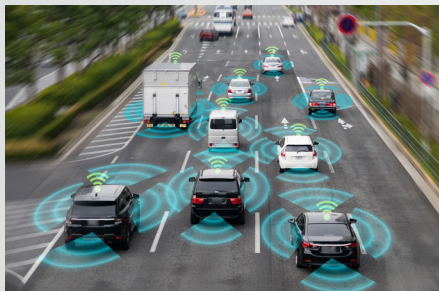
Digital infrastructure & Research Environment

We live in an age where being part of the ‘global information economy’ is pivotal. High-quality connectivity is therefore crucial for a small island like Orkney to deliver more innovation and inevitably experience growth. We have talked throughout about the importance of supporting business, and retaining young people in the community, targets made easier through the availability of better digital infrastructure.

We saw in Section 3 that access to digital amenities such as super-fast broadband is lower in Orkney than the UK and Scotland, however, access for the most remote parts has still increased over the last few years. This is supplemented by the recent increased investment in 5G network connection research in Orkney, to allow the island to experience the benefits of high-speed connectivity.

The ‘5G RuralFirst’ project has focussed on improving digital connectivity in rural areas. Situated primarily in Orkney, the project has brought opportunities for many sectors including: leisure, allowing 5G radio broadcasts for residents and improved mobile phone coverage to allow for better communication opportunities; tourism, enabling those visiting on day trips or guided tours to experience a more interactive experience; food and agricultural sectors, allowing for better monitoring of fish farm stock levels and livestock tracking; and also higher quality data transfer systems in the renewable energy sector.

The introduction of new technologies and better digital infrastructure does come at a price however and given the very remote nature of certain parts of Orkney, this will require better infrastructure in order to facilitate the reach of these amenities to everyone on the island. However, it also cannot be disputed, that there is large growth potential Orkney stands to gain from improved information sharing, better quality communication and improved technologies and processes.



Research Environment

"The research environment in Orkney provides a fertile environment for innovation in a diverse range of subjects, from autonomous vehicles to smart tourism to creative industries.

It is also responsive to local needs, working closely with local business to help fill skills gaps."

Stakeholder Interview

Orkney also plays host to a number of university campuses, with The University of the Highlands and Islands, Robert Gordon University and Heriot-Watt University all situated in Orkney in some capacity; these three universities offer classes in predominately an online format, however do offer on-campus teaching as well.

As all other Scottish universities now look set to operate, in full or in part, on an online format in the wake of long term social distance measures, the expertise acquired through the Orkney higher education system will prove invaluable, in advising other higher and further education institutions in this transformation.

Better digital infrastructure coupled with a thriving innovation system and high quality education also allows for the creation of a strong knowledge economy. The Orkney Research and Innovation Campus (ORIC) is one mechanism through which Orkney strives for high quality innovation, supplemented by the work of the aforementioned EMEC, there is real potential for world leading research into marine renewables and the low carbon sector, with further capacity for other research.

Therefore, high-quality innovation and R&D already taking place in Orkney, boosted by the investment in better digital infrastructure, could go a long way in retaining young talent, whilst also attracting new, highly qualified individuals to the island.

Traditional sectors (including creative industries)

Similar to food & drink, across the country there has been a sharp growth in creative industries; from textile designers, artists, jewellery-makers, photographers and musicians.

Similar to Scotland overall, under 3% of Orkney's employment is in creative industries.

Source: Scottish Government

It is estimated that the creative industries support around £9 billion of activity within the wider Scottish economy, each year. These industries are not just important employers and creators of wealth in their own right, but they also help to define local communities, maintain traditions and promote wellbeing.

The number of enterprises in Orkney operating in creative industries has increased by 50% in the past decade compared to 47% in Scotland.

Source: Scottish Government

Orkney, once again, punches well above its weight in these areas. Growth here also is entirely consistent with the ‘Global Challenges’ identified earlier.

The growth of technology makes it much easier to sell traditional produce – from jewellery to knitwear – to a much wider audience than before. Traditional arts and crafts link in well to the growing tourism industry and compliment Orkney’s reputation as a food & drink hub.

At the same time, the creative industries themselves can be important avenues to attract more people to the islands, both for employment but also for tourism.

The nature of many creative industries is that they are small-scale micro businesses. Talented artists and creators can be attracted from across the world to set up business in Orkney.

An area’s community-based culture, arts and heritage activities are a big part of what makes a region attractive for tourism. Large scale events – such as the internationally renowned Orkney Folk Festival – also provide a vehicle to attract visitors to the islands for tourism.

The nature of such industries is such that they might not be the highly productive sectors that lead to large growth in traditional economic metrics such as GDP. But we know that they bring sustainable employment and also wider socio-economic benefits for communities (including maintaining traditional expertise). In a world where wellbeing matters, not just growth, then such industries can play a disproportionate role in the long-term economic success of a local community.

Community economic development

Increasingly, there is much more of an acceptance that developing strong, capable and resourceful communities is vital for the social and economic growth of rural communities.

At the same time, and as we discussed in Section 3, there is a growing recognition that reliance upon traditional approaches to delivering faster economic growth might not always be desirable in all circumstances. Instead, a focus upon creating sustainable employment opportunities, fair work practices and business models that tackle inequalities and promote inclusion, are just as important.

In many parts of the country, this can be about tackling poverty. In Orkney, this is less of a concern. Instead it is more about helping to support viable communities to thrive, particularly those in more remote parts of the islands.

Supporting the growth of robust social enterprises, community projects – from cultural activities, through to local energy resources – and wider social capital, are important in their own right. But such investments are not just good for the economy, but they also bring with them wider health and social benefits. A thriving community is also important for the overall ‘brand approach’ which defines the Orkney Islands, and so brings with it many other advantages too.

"The nature of our economy means that we require individuals with flexible and diverse skill sets to meet the needs of our island economy. Also, gaps in provision don't last long; someone will come forward to fill them, whether the public or private sector, or both working in partnership"

Stakeholder Interview

A Global Orkney

Many stakeholders that we talked to talked of the ambitions of Orkney to look beyond the borders of Scotland and the UK.

Indeed, in many of the areas of opportunity that we have already touched on – renewable energy development, tourism and excellence in food and drink – the Orkney brand is well known globally, and is synonymous with quality, heritage and innovation.

A particular opportunity that has been flagged up is that for the islands to “look north” and take the opportunities presented by the links to Arctic countries. For centuries, the Northern Isles and countries in the Arctic have enjoyed close links that have had a lasting impact on our economy, culture and society.

Recently, the Scottish Government published “Arctic Connections”, Scotland’s Arctic Policy Framework. The primacy given to Orkney in this document shows the opportunities that the Islands have to capitalise on these connections in years to come.

Orkney has a significant track record in working with their Nordic and Arctic neighbours, whether it is through academic links, such as the Institute for Northern Studies, or examples like working with creative industry partners across the Arctic to develop new products or works that celebrate the natural and cultural heritage of Northern Communities. Stakeholders have told us that all partners in Orkney, including the Council and HIE, are focussed on enhancing and strengthening these links in the future.

In the face of potential challenges posed by Brexit, it will be more important than ever that Orkney is in a position to make the most of these global opportunities.

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