
Report To:	Environment & Regeneration Committee	Date:	16 June 2022
Report By:	Interim Director Environment and Regeneration	Report No:	E+R/22/06/06/SJ
Contact Officer:	Stuart Jamieson	Contact No:	01475 712041
Subject:	Fraser of Allander Institute - Supporting economic recovery in Inverclyde, West Dunbartonshire & Argyll & Bute		

1.0 PURPOSE

- 1.1 The purpose of this report is to provide the Committee with an update on the Fraser of Allander Institute's study Supporting economic recovery in Inverclyde, West Dunbartonshire & Argyll & Bute and to seek Committee approval for the study to be used as the basis of any engagement with both the UK and Scottish Governments, and in particular with the proposed Task Force for Inverclyde.

2.0 SUMMARY

- 2.1 Inverclyde Council, in conjunction with Argyll & Bute Council and West Dunbartonshire Council, commissioned the Fraser of Allander Institute to provide a report which considers the subject - Supporting economic recovery in Inverclyde, West Dunbartonshire & Argyll & Bute.
- 2.2 A report was presented to the Environment & Regeneration Committee in March of this year which provided a synopsis of the findings of the Fraser of Allander Institute's draft final report.
- 2.3 The three Councils have now received a copy of the draft final report which is contained in appendix 1 and has been subject of an all Member briefing.
- 2.4 Following engagement between the Leader of the Council and the Cabinet Secretary for Finance and the Economy the Council is attempting to establish a Task Force in conjunction with both the UK and Scottish Governments, to address the distinct challenges faced within Inverclyde
- 2.5 The report provides a narrative on the challenges faced by Inverclyde Council, along with our near neighbours and sets out a number of potential initiatives to enhance repopulation within Inverclyde and it is suggested that the Supporting economic recovery in Inverclyde, West Dunbartonshire & Argyll & Bute document be used in discussions with colleagues on the Task Force.

3.0 RECOMMENDATIONS

- 3.1 It is recommended that the Committee -
- note the content of the draft report from the Fraser of Allander Institute;
 - agree that pending the issue of the Fraser of Allander Institute's final report the report can be used in discussions with UK and Scottish Governments, specifically with regards to the Task Force.

Stuart Jamieson
Interim Director
Environment and Regeneration

4.0 BACKGROUND

- 4.1 Inverclyde's continued depopulation has long been recognised within the Council and its key strategic documents but it is clear that without radical interventions from Governments in both Westminster and Holyrood in order to stimulate economic activity and stop the drift of working age populations east or to the major cities, then it is likely that the Council will continue to depopulate with the resultant impact on funding and levels of deprivation.
- 4.2 The Council In conjunction with Argyll & Bute Council and West Dunbartonshire Council, commissioned the Fraser of Allander Institute to provide a report which considers the subject - Supporting economic recovery in Inverclyde, West Dunbartonshire & Argyll & Bute.
- 4.3 At its meeting in January 2022 the Committee was appraised of the interim findings of the study which highlighted issues around:-
- Population decline
 - Increasing the supply of affordable housing;
 - Attracting skilled workers through 'good jobs'; and,
 - Developing business clusters.
 - Economic recovery in areas requiring regeneration
 - Industrial specialisation; and,
 - Skills mismatch.
 - Dealing with poverty and inequalities
 - Encouraging inclusive growth.
- 4.4 The draft final report has now been received by the three Councils. It reaffirms the interim findings and supports the synopsis provided in March
- 4.5 The report highlights:
- What works: a discussion of the grand challenges facing the three councils, and a literature review on policies, UK-wide and globally, that have aimed to, and worked at, tackling these grand challenges.
 - Analysis of the overall performance of the three councils under a range of indicators, highlighting local authorities across Great Britain that are similar to each of the council areas, and that face similar long-term challenges.
 - Primary Research: Qualitative interviews with economic development policymakers in the similar or "sister" local authorities (or associated bodies linked to these areas, like overseeing Government departments, enterprise partnerships, or umbrella bodies) to understand the policies that have been successful in tackling some of these challenges. Through the course of our research, we have also identified those often cited as "best in class", and have engaged with these areas too.
- 4.6 They found that the three local authorities of Argyll & Bute, Inverclyde, and West Dunbartonshire are distinctive council areas in Scotland that face similar long-term

challenges, known as 'Grand Challenges'. These Grand Challenges are - Population Decline; Economic Recovery in areas requiring regeneration; and, Dealing with poverty and inequalities. Their discussions with policymakers in local government, umbrella bodies, enterprise bodies, combined authorities, and national government, were centred around the following areas:- -

Policy context, in particular recent trends in the economic development landscape. The range of powers available in the combined authority model was highlighted as a way that more regional powers could address key problems in areas, ensuring opportunities surrounding economic development, employment, skills, and housing.

Skills & knowledge economy. Collaboration between further and higher education institutions was discussed as being a critical way for regions to address skills mismatches in the local areas, allowing education providers to specialise in fields demanded by the local economy. Government incentives were highlighted as a way to support education providers in offering courses that may not be in demand now, but will be essential to address future challenges such as Brexit or climate change

Attracting investment. A range of policies aimed at encouraging the relocation of high-profile firms to a region are available to local authorities. One of which is the offering of grants, not loans, to large enterprises. Whilst there are a range of incentives available to regenerate large Brownfield sites, some solutions, i.e. Carbon Capture and Storage Sites, are better suited to regions that have existing links with UK Continental Shelf activity.

Foundational economy. Throughout their engagement, investment in the foundation economy, i.e. essential goods and services in hospitality, retail, etc., was outlined as being essential in ensuring vital sectors of the economy are supported, offering the chance to reverse the deterioration of employment conditions, reverse the leakage of money from communities, and address the environmental costs of extended supply chains.

Infrastructure and housing. Focussing on the economic and social benefits that come from spending public money in the local economy was highlighted as a crucial way of ensuring development or regeneration projects support local supply chains and local jobs. Some areas attach clauses to projects to ensure maximum community benefits from infrastructure/housing investments whilst other areas have mapped out their supply chains to ensure that a greater percentage of public money is being reinvested into the local economy.

- 4.7 Following engagement between the Leader of the Council and the Cabinet Secretary for Finance and the Economy, the Council is attempting to establish a Task Force in conjunction with both the UK and Scottish Governments. The two Governments agreed to a Joint Task Force focused on supporting Inverclyde's economic recovery, however this was delayed due to the new wave of the pandemic caused by the Omicron variant. In the meantime, however, the Council and the Scottish Government have worked on a terms of reference for the Task Force. A date is currently being arranged for the next on this.

5.0 PROPOSALS

- 5.1 It is proposed that subject to Committee endorsement of the of the Fraser of Allander draft final report that it be shared with our Community Planning Partners and used to inform discussions with the Task Force with UK and Scottish Governments.

6.0 IMPLICATIONS

6.1 Finance

Financial Implications:

One off Costs

Cost Centre	Budget Heading	Budget Years	Proposed Spend this Report	Virement From	Other Comments
N/A					

Annually Recurring Costs/ (Savings)

Cost Centre	Budget Heading	With Effect from	Annual Net Impact	Virement From (If Applicable)	Other Comments
N/A					

6.2 **Legal**

None.

6.3 **Human Resources**

None.

6.4 **Equalities**

Equalities

(a) Has an Equality Impact Assessment been carried out?

<input type="checkbox"/>	YES
<input checked="" type="checkbox"/>	NO – This report does not introduce a new policy, function or strategy or recommend a substantive change to an existing policy, function or strategy. Therefore, no Equality Impact Assessment is required

(b) Fairer Scotland Duty

If this report affects or proposes any major strategic decision:-

Has there been active consideration of how this report's recommendations reduce inequalities of outcome?

<input type="checkbox"/>	YES – A written statement showing how this report's recommendations reduce inequalities of outcome caused by socio-economic disadvantage has been completed.
<input checked="" type="checkbox"/>	NO

(c) Data Protection

Has a Data Protection Impact Assessment been carried out?

<input type="checkbox"/>	YES – This report involves data processing which may result in a high risk to the rights and freedoms of individuals.
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X	NO
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6.5 **Repopulation**

The development of the issues highlighted in this report will if developed have a positive impact on the Council's repopulation agenda.

7.0 **CONSULTATIONS**

7.1 Consultation has taken place with appropriate officers and the report is supported by the Corporate Management Team

8.0 **BACKGROUND PAPERS**

8.1 None.

Fraser of Allander Institute

Supporting Economic Recovery in
Inverclyde, West Dunbartonshire &
Argyll & Bute

March 2022

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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.

This report was commissioned in July 2021 by Argyll & Bute Council, Inverclyde Council, and West Dunbartonshire 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

Despite having their differences, the three local authorities of Argyll & Bute, Inverclyde, and West Dunbartonshire face similar challenges.

Some of the most notable refer to population decline, economic recovery in areas requiring regeneration, and how to address complex issues such as inequality and poverty.

What works – lessons from the literature

A comprehensive literature review was carried out to identify successful policies both from practice here in the UK and abroad.

We found a range of policies which have successfully addressed **population decline** in the past -

- Increasing affordable housing
- Improving local infrastructure
- Implementing employment initiatives

To support **economic regeneration** efforts, the following policies are available to policymakers -

- Developing a knowledge exchange economy
- A strategy of industrial specialisation
- Addressing a skills mismatch
- Attracting new-high profile firms to the region

Policy initiatives to address **inequality and poverty** have included –

- Encouraging inclusive growth
- Introducing employment initiatives
- Social lending initiatives
- Building community engagement
- Retrofitting homes and buildings

Which areas in Great Britain are facing similar challenges?

Whilst desk-based research provided useful examples of best practice, we carried out qualitative research to find out what has worked, across Great Britain, in tackling these grand challenges.

In order to identify, and then interview, similar, or “sister” local authorities across GB that are facing the same challenges as the three councils, we created a similarity index based on four themes: demographics, industry, labour market, and poverty.

These indicators identified the following areas in England and Wales as similar to the three councils:

- **Argyll & Bute:** Powys, Ceredigion, and Northumberland (part of North East LEP).
- **Inverclyde:** Blaenau Gwent, Redcar and Cleveland (part of Tees Valley combined authority and LEP) and Neath Port Talbot.
- **West Dunbartonshire:** Knowsley (part of Liverpool city region combined authority and LEP), Blaenau Gwent and Merthyr Tydfil.

The literature review also highlighted areas that have successfully tackled some of these grand challenges which we therefore interviewed as part of our primary research. These areas are the Greater Birmingham & Solihull (GBS) Local Enterprise Partnership (LEP) and the D2N2 LEP.

Feedback from our interviews/engagements are used throughout this report.

What did these areas tell us?

In Q1 2022, we engaged with policymakers in local government, umbrella bodies, enterprise bodies, combined authorities, and national government. Our findings from our primary research fell under five key themes, highlighted below.

Policy Context

There was considerable reflection from policy makers on the economic development landscape over the past decade or so, and the impact that recent developments, i.e. Levelling Up, have had.

The range of powers that are available in the combined authority model was highlighted as a way that more regional powers were “able to offer the package of powers that are more able to holistically address the issues in our region, and ensure that we are offering opportunities to young people, in terms of economic development, employment opportunities, skills and housing”.

Skills & Knowledge Economy

In their recently published skills report, D2N2 identified technological change, COVID-19, and Brexit as the cause of some pronounced skills mismatches in the regional economy. One initiative discussed was to engage with further and higher education providers to understand where current skills mismatches lie, and what action could be used to address these issues. Governments could provide incentives to education providers to offer courses that may not be in demand now, but will be essential to address future challenges emerging from issues like Brexit.

Attracting investment

Certain types of policies can encourage the relocation of high-profile firms to a region, provided the correct incentives are offered. For example, in our interviews, it was highlighted that grants, not loans, had been particularly effective at attracting high-profile firms to the area. This was epitomised by the relocation of SmartParc to the D2N2 region, owing in part to a £12 million grant offered by the D2N2 LEP. As a result of SmartParc’s relocation, over 5000 jobs were created in the D2N2 region.

The Tees Valley also provides examples of incentives that have been used to regenerate large Brownfield sites, most notably the British Steel site in Redcar and Cleveland.

Foundational economy

The foundational economy refers to organisations/businesses that provide services and products within their communities that support everyday life. Jobs in the foundational economy most notably refer to health, care, education, housing, utilities, tourism, food supply and high street retail.

According to the Centre for Research on Socio-Cultural Change (CRESC), policymakers often neglect the side of the economy that creates and distributes essential goods and services, instead focussing on high-tech, R&D intensive sectors which may not be well suited to their region. Investment, promotion and support of the foundational economy are being particularly pursued in parts of Wales.

Infrastructure & Housing

In our engagement, there was a notable focus on the economic and social benefits that come from spending public money in the local economy. For example, Swansea Council, as part of their Community Benefits Policy, now attach community benefit clauses - i.e. a clause that ensure supply chains are committed to local sourcing - to development or regeneration projects.

Another interesting initiative was a grant offered by the United Welsh Housing Association as part of a partnership in Blaenau Gwent. This grant enabled the housing association to map out their supply chains and better understand their local economic impact. Through this initiative, a greater percentage of public money is reinvested in the local economy, supporting local suppliers and jobs.

Introduction

The ‘Three Councils’ of Argyll and Bute, Inverclyde, and West Dunbartonshire are unique economies.

Argyll & Bute is the second largest council area in Scotland. The area has a rich prehistoric landscape and is made up of a mainland economy and small island economies, like the Isle of Bute.

Inverclyde, famous for its maritime infrastructure and shipbuilding history, borders Renfrewshire and North Ayrshire, and is home to coastal villages like Inverkip which lies on the Firth of Clyde.

West Dunbartonshire is home to towns such as Clydebank and Dumbarton, and is well known for its scenic villages in Balloch and Loch Lomond and the Trossachs National Park.

Whilst the three councils have unique histories they face similar ‘Grand Challenges’.

These challenges are –

- Population decline;
- Economic recovery in areas requiring regeneration; and,
- Dealing with poverty and inequalities.

Given the diverse nature of the three Councils, this report looks to identify a handful of similar, “sister”, areas across Great Britain for each council, examining a number of dimensions, including -

- Demographics;
- Labour market; and,
- Industry;
- Poverty.

This report sets out qualitative interviews with the economic development functions and/or LEPs in these “sister” areas to explore:

- Policies that have been successful in recent years to address population or household decline, stimulate economic regeneration, and/or reduce poverty and inequality;
- Plans for supporting economic recovery post-COVID; and,
- How policy initiatives can support Scotland or UK wide strategies such as Levelling Up.

This report is structured as follows -

- Section 1 includes a ‘what works’ discussion of the grand challenges facing the three councils, and a literature review on policies, UK-wide and globally, that have aimed to, and worked at, tackling these grand challenges;
- Section 2 includes analysis of the overall performance of the ‘three councils’ under a range of indicators, highlighting local authorities across Great Britain that are similar to each of the council areas, and that face similar long-term challenges;
- Section 3 highlights key takeaways from our primary research, i.e. qualitative interviews, with economic development policymakers in the similar or “sister” local authorities (or associated bodies linked to these areas, like overseeing Government departments, enterprise partnerships, or umbrella bodies) to understand the policies that have been successful in tackling some of these challenges. Through the course of our research, we have also identified areas cited as “best in class”, and have engaged with them too.
- Section 4 concludes this report.

1. What works?

Despite having their differences, the three local authorities of Argyll and Bute, Inverclyde, and West Dunbartonshire face similar challenges.

Some of the most notable refer to population decline, economic recovery in areas requiring regeneration, and how to address complex issues such as inequality and poverty.

This section provides a comprehensive review of the literature to understand which policies have worked in the past to address these challenges.

1. Population Decline

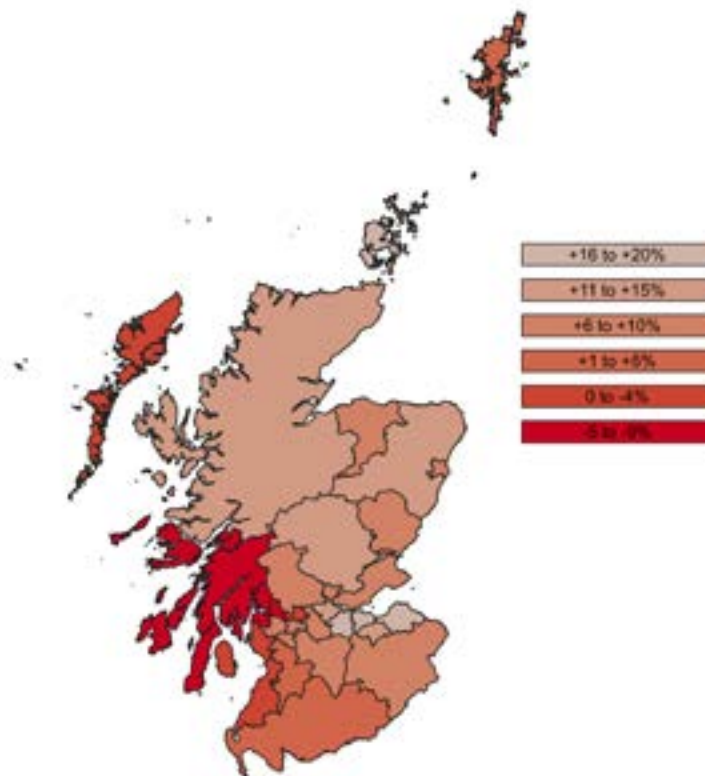
Population decline is a challenge faced primarily by West Coast Authorities in Scotland.

Not only does population decline have an economic impact – decreasing output, lowering the pool of skilled workers, and reducing employment opportunities -, it can also have a social impact.

Between 2000-2020, the Scottish regions most acutely affected by population decline were Argyll and Bute, Inverclyde, and West Dunbartonshire. See Diagram 1.

In the past two decades, population has declined by 9% in Inverclyde, and in both Argyll and Bute and West Dunbartonshire, population has fallen by 6%.

Diagram 1: Rates of population change in Scotland, 2000 – 2020

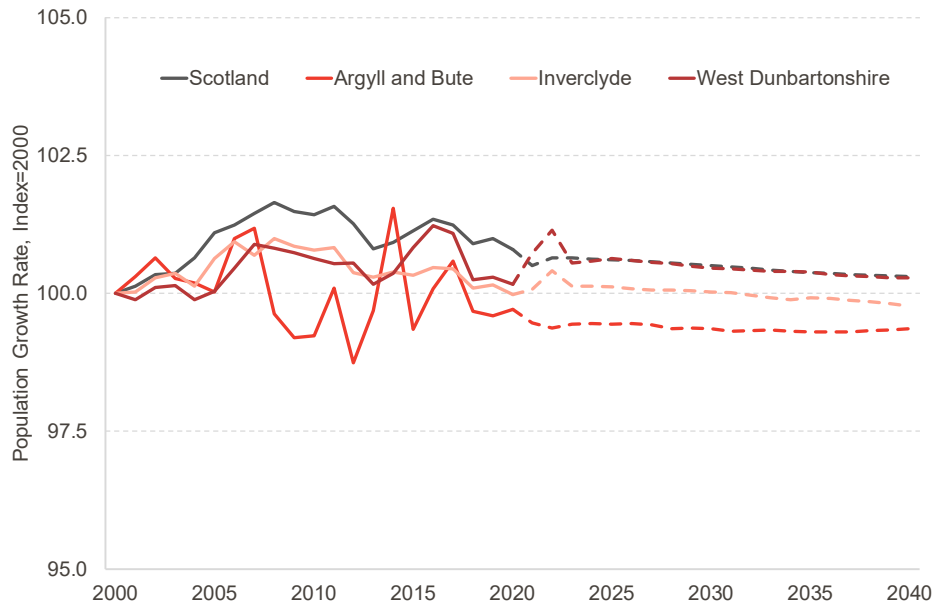


Source: National Records of Scotland (2021)

National projections see population decline in these local authorities persisting in the future.

They estimate the population of Inverclyde will decline by a further 13% between 2020-2040, as well as by 12% in Argyll and Bute and 6% in West Dunbartonshire. See Chart 1.

Chart 1: Projected Population, Scotland, Argyll & Bute, Inverclyde, and West Dunbartonshire, outturn 2000 – 2020, forecasts 2020-2040



Source: National Records of Scotland

“Our population is ageing and we have significant sections of the economy that are not acquiring the skills to stay economically active. This is a real area of concern for us.”

Economic policy can support regional economies to tackle demographic challenges, and there are several policies that have successfully addressed population decline in the past.

These include –

- Increasing the supply of affordable housing;
- Improving local infrastructure; and,
- Attract workers.

Increase the supply of affordable housing

As highlighted by Mulder (2006), affordable housing can play a crucial role in attracting people to local areas.

In particular, increasing the supply of affordable housing can extend homeownership opportunities to people typically priced out of the housing market.

Investment in affordable housing, coupled with investment in good schools, play parks, and local businesses, work together to attract young professionals and families to communities.

Sasser (2010) found that housing affordability was associated with the number of people who chose to live in a particular area. Additionally, Vermeulen and Van Ommeren (2009) found that as local housing provision increased by 10% in the Dutch Randstad area of the Netherlands, there was a subsequent 6.5% increase in the regional population aged between 15-64.

In recent years, several policies in the UK have aimed at building affordable housing. One such policy implemented by Birmingham City Council was called 'Brummie Bonds'.

This policy refers to a low-cost method of raising finance dedicated to affordable housing developments. Under this programme, Birmingham city council raised finance from private lenders. Notably, this method of raising finance was £1.4 million cheaper than going through government organisations (GBCC, 2017).

Through the 'Birmingham's Brummie Bond' programme, £45 million was raised for low-cost housing development, supporting Birmingham city councils' development plan of building 89,000 new homes by 2031 (Bailey, 2017).

Improving local infrastructure

Like increasing the provision of affordable housing, infrastructure investment can generate numerous benefits for an area, helping attract workers, and overcome issues associated with population decline.

This report focuses on two types of infrastructure: digital and transport.

Digital infrastructure

Owing to the onset of COVID-19 and the growing prevalence of remote working, digital infrastructure has never seemed more important (Forster, 2020).

In 2020, the Scottish Government published a review of the 'Scottish Technology Ecosystem', written by Mark Logan. In this report, 34 policy recommendations were proposed, drawing on successful initiatives implemented elsewhere.

Some of these policy recommendations include:

- Establishing a network of incubators providing start-up support with local workspaces and a high-speed internet connection;
- Grant funding that is better aligned to the needs of start-ups; and,
- Investment in digital skills through engagement with schools and initiatives like CodeClan – an SQA accredited skills academy that aims to bridge the digital skills gap in Scotland's tech industry.

Through the initiatives identified within this report, not only will workers be better equipped for an increasingly digital world, but there will also be improved educational and talent outcomes, upgraded infrastructure, and better-targeted funding available to businesses.

Highlighting the shift to digitalisation, in October 2020, just under a fourth of all workers in the UK worked remotely (ONS, 2020). With many employers adopting home working or hybrid models – splitting work between home and office space -, some suggest this could create an opportunity for rural and sub-rural regions to attract remote workers (Local Government Association, 2021).

"Working from home has really benefitted rural economies because now people do not need to move to big cities for job opportunities."

To facilitate this rise in remote working, it is important that local authorities have adequate digital infrastructure in place.

"We have a big deficit in terms of our rural connectivity. We are trying to intervene and strengthen this connectivity, and we're doing quite a lot of work to understand how 5G could be an enabler for the work that we are doing."

In the Hamilton Country region of Tennessee, one city called Chattanooga has demonstrated the benefits of investing in digital infrastructure.

In 2009, Chattanooga and the broader Hamilton County region invested \$396 million to develop fibre optic infrastructure and deliver an advanced smart grid power distribution system. This resulted in Chattanooga's businesses and residents gaining access to the fastest internet speeds in the Western Hemisphere at the time.

A study undertaken by Lobo (2020) aimed to measure the impact of this infrastructure investment.

They found that due to this investment in digital infrastructure, there was a 9.3% uplift in population growth between 2010-2019, a value 2% higher than the national average.

Between 2011-2020, Lobo's research also highlighted several other benefits that accrued from this investment:

- \$2.7bn in economic value for Chattanooga and the broader Hamilton County region, which translates to an annual economic benefit of \$645 for each Hamilton County over the study period;
- The creation and retention of almost 9,200 jobs, accounting for 40% of all jobs created in the region;
- Cost savings in excess of \$26.5 million from improved energy management and reduced power outages;
- Improved educational outcomes for 12,000 students through the HCS EdConnect scheme, a programme that offered high-speed internet access at no cost to students so they could continue their studies remotely during the COVID-19 pandemic;
- The reduction of 7,900 tonnes of carbon emissions from the advanced smart grid power distribution system due to improved energy generation and demand management; and,
- Research grants of \$110 million to research institutions like the University of Tennessee to establish Chattanooga as a Smart City Living Laboratory.

Transport Infrastructure

Transport Infrastructure can act as an important consideration when people decide to move to a new area (Duranton and Turner, 2012).

"Generally, we found areas with better transport links tended to do better employment-wise than more isolated areas."

Several UK policies have aimed to improve transport infrastructure in rural and suburban areas, making commuting and other forms of travel faster and more affordable.

Notably, in 2015, the Borders railway between Tweedbank and the City of Edinburgh was reopened after being closed for 46 years, bringing much-needed transport infrastructure back to the Scottish Borders.

Between 2017 and 2020, over 5 million passengers travelled on the newly opened Borders railway (Scottish Government, 2020a). In a survey undertaken by Transport Scotland (2017), it was found that 52% of borders railway users classed it as an important factor in their decision to move to their current address, highlighting its contribution to in-migration.

After the success of the Borders railway reopening, further railway expansion is expected as part of the Borderlands Inclusive Growth Deal. This is expected to generate investment exceeding £450 million in the region, resulting in an expansion of local education and work opportunities (Thompson, 2021).

Attract workers

As stated by Trendle (2009): “People follow jobs”, whereby more job opportunities can convince people to relocate to a particular area and persuade those already living there to remain as residents.

In recent years, several policies have been designed to encourage overseas talent to address labour shortages and fill vacancies in the UK.

Atlantic Canada Immigration Pilot (AIP)

One such policy was the Atlantic Canada Immigration Pilot (AIP), which the Canadian government launched in 2017.

Under this programme, visas were granted to skilled foreign workers and international graduates who wished to take up positions in Atlantic Canada to fill local labour shortages.

As of the 31st of December 2019, the Canadian government received over 9,000 applications to the AIP, around 6,100 of which were approved and just under 5,600 of whom arrived in Atlantic Canada (IRCC, 2020).

Due to the pilot’s success, the Canadian government has committed to making the AIP a permanent programme.

Spain has also implemented a similar policy to address skills shortages, known as the Spanish Catalogue of Hard-to-Fill Occupations (FAI, 2021).

Scottish Rural Visa Pilot Scheme

In Scotland, similar policies have also been considered.

Notably, in 2021, an expert advisory group on migration and population proposed several new designs for a rural visa to address declining rural populations. These include -

- Expanding the Skilled Worker route.

This would involve the creation of a 'Shortage Occupation List' where sponsored employers can list vacancies to recruit foreign workers. These vacancies will be listed in specific areas which lack domestic talent and are intended to fill roles of strategic importance.

- Scottish Visa.

Under the initiative, a quota is set for the number of workers which can be supplied to a particular region, using a points-based system to prioritise workers based on features like technical skills, language skills, and occupational experience.

■ Remote and Rural Partnership Scheme

This would involve the Scottish Government collaborating with employers and local authorities to develop a strategic mitigation plan that maps out critical vacancies and identify where future job needs could exist. Through this initiative, enrolled employers could nominate foreign employees to apply for the right to work in designated areas of Scotland.

Each of these initiatives aim to encourage foreign talent to fill critical vacancies in the UK. Through implementing these policies, critical vacancies which are central to addressing the issue of population decline could be filled.

2. Economic Recovery in Areas Requiring Regeneration

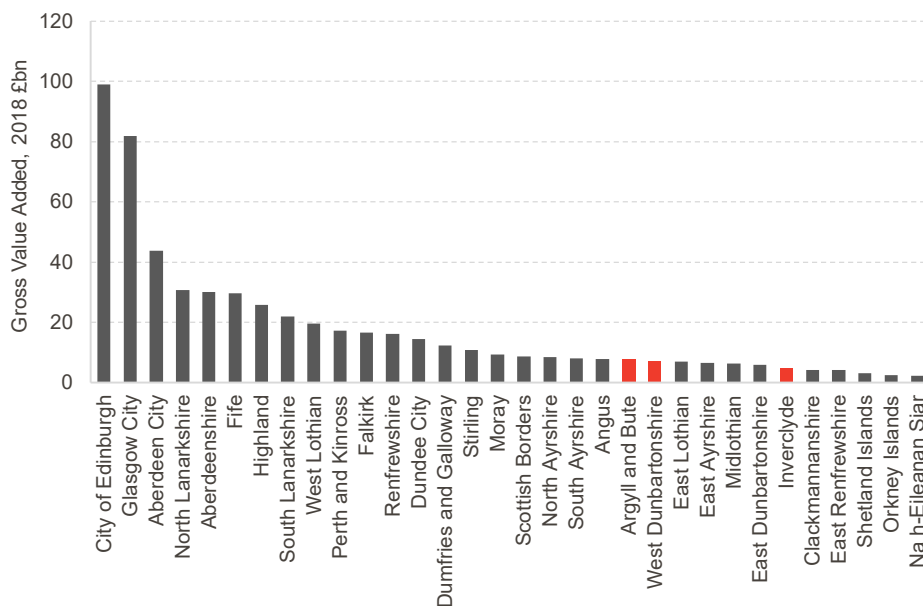
Like much of the UK, industrial activity in Scotland declined in the latter part of the 20th century (Lever, 1991). As shipyards, coal mines, and steel plants shut down, vital sources of employment ceased to exist, leaving many without a job and pushing many areas into a state of economic decline.

In Scottish regions that experienced high levels of industrial decline, McIntyre, Roy and Waite (2022) highlight that they now often feature higher levels of deprivation, as well as weaker labour market outcomes.

Using Gross Value Added (GVA) – which measures the value of goods and services produced in an area -, the three local authorities of Argyll and Bute, Inverclyde, and West Dunbartonshire can be compared across their level of economic activity.

Of the 32 local authorities, Inverclyde had the 27th highest, or 6th lowest, regional GVA in 2018 at a value of £4.7 billion, followed by West Dunbartonshire which had the 11th lowest regional GVA at a value of £7.1 billion, and Argyll and Bute which had the 12th lowest regional GVA at a value of £7.7 billion. See Chart 2.

Chart 2: Gross Value Added by Scottish Local Authorities, 2018, £bn



Source: ONS

To support economic regeneration efforts, several policies are available to policy makers.

These include -

- Establish a knowledge exchange economy;
- Industrial specialisation;
- Resolve skills mismatches; and,
- Encourage firm relocation.

Establish a knowledge economy

There is a strong, positive relationship between knowledge and skills development, and economic growth. One way of accumulating knowledge and skills, known as human capital, is to develop a knowledge economy.

"We have a programme centred around innovation, which aims to address the innovation gap in the region. We have really good universities doing R&D, but very little of it is translated into delivery in the region."

A knowledge economy is an economy that features:

- Knowledge-intensive business sectors;
- High education levels across the population;
- Scientific and higher education institutions; and,
- Investment in innovation by local firms.

Buseti et al. (2018a) suggest numerous policies that could develop a knowledge economy. Some of which are:

- Engagement with universities;
- Increased investment in research and development (R&D);
- Investment in technological and digital infrastructure;
- The promotion of innovation;
- The development of STEM expertise; and,
- The promotion of policies that encourage the circulation of knowledge and technology.

Characteristics of successful links with academic and private sector partners

When establishing a knowledge economy, local authorities can play an important role, providing funding to universities, as well developing a link between higher education institutions and private sector firms.

Rybnicek and Königsgruber (2018) find that government support is often essential to establish successful collaborations between universities and firms.

The concept of a triple helix, proposed by Ektzkowitz and Leydesdorff in the 1990s, suggests how successful collaborations could work between local authorities, higher education institutions, and private sector firms.

Abbas et al., (2019) suggest these relationships work best when government and educational institutions collaborate to develop new knowledge, which is then commercialised by industry to drive innovation and productivity growth. See Diagram 2.

Diagram 2: Theoretical model for Government-University-Industry collaborations



Source: Abbas et al (2019).

Civic University

Furthering the idea of a triple helix relationship, Goddard and Kempton (2016) propose the idea of a civic university.

A civic university is one that integrates knowledge exchange activities within teaching, research, and other academic activities.

Fundamentally, the concept of a civic university recognises that higher education institutions should contribute to the major challenges facing society, and therefore should work to deliver outputs that have a positive societal impact.

Within their paper, Goddard and Kempton (2016) highlight that higher education institutions are often principally influenced by government engagement and policy.

They suggest local authorities should play a central role at developing coherent policies that link territorial development to innovation and higher education.

Furthermore, local authorities should engage all stakeholders in the relationship (higher education and private sector firms), to understand any potential barriers that limit collaboration, and how they can implement evidence-based policies to support innovation and growth that benefits civil society.

How local authorities should engage higher education institutions

Establishing a successful link between universities and industrial partners can depend on several factors.

Curry (2016) proposes several recommendations to ensure successful collaborations between local authorities and universities are formed:

- Identify a shared purpose or vision, and clearly define the roles for each partner.

Time should be spent to understand where the aims of local authorities and universities overlap, and clearly define where opportunities exist for each partner to contribute to the project.

- Establish a culture of openness and responsiveness.

A high-level of responsiveness to the queries and needs of partners, as well as an open and approachable working environment, can ensure relationships are cooperative.

- Building trust over time.

Realistic expectations should be set at the start of the relationship, a dispute-resolution process should be formulated, and partners should be willing to offer their assistance even if it does not generate any direct short-term benefit for themselves.

- Communicate regularly using multiple approaches.

A designated liaison manager could be assigned to ensure ensuring communication channels are kept open, and ensure information flows efficiently between partners.

- Encourage and develop multilayer points of contact.

Stakeholders should engage others beyond those immediately involved, through means such as encouraging student engagement and engaging with research institutions linked to the university.

Examples of knowledge economies

Several regions have benefited from establishing a knowledge economy, such as Mecklenburg-Vorpommern in Germany and Malopolska in Poland.

Mecklenburg-Vorpommern, Germany

Through their initiative, called the 'Masterplan for the Health Economy,' regional authorities in Mecklenburg-Vorpommern developed their own knowledge economy focused around the health sector.

They implemented a range of policies to improve infrastructure, encourage the settlement of new companies, develop research institutes, and expand educational facilities. Business clusters were also established, and a network management company was created to encourage collaboration between local stakeholders.

As a result of this initiative, the health economy sector in Mecklenburg-Vorpommern featured continuous growth since the start of the century, and net-migration in the region grew from -5% in 2000 to +10% in 2015 (Buseti et al., 2018b).

Malopolska region, Poland

Like Mecklenburg-Vorpommern, the Malopolska region of Poland understood the potential benefits of establishing a knowledge exchange economy.

There, the regional government implemented several policies to foster the creation a knowledge economy, primarily focussed on the technology and pharmaceutical sectors.

"We're doing huge amounts of work trying to better align the science base in the region with the economy and industrial sectors"

Policies aimed to improve physical and soft infrastructure, support entrepreneurship and innovation, allocate funding towards R&D investment, and increase cooperation between local businesses. The regional government also set up an initiative to provide consultancy services and academic expertise to regional businesses.

Through these initiatives, the Malopolska region experienced growth in their science and technology industry. Notably, the number of people employed in these roles increased by 60% between 2005 and 2010.

In addition, the Malopolska region featured increased international migration, particularly by students and skilled migrants (Busetti et al., 2018c).

Industrial specialisation

Industrial specialisation can also play a key role in stimulating economic recovery in areas requiring regeneration.

Research from ESPON (2019) suggests that local authorities could benefit from an ‘oasis strategy’, which is a process whereby governments focus support on the region’s most vibrant business sectors.

"We want to focus on things we are good at, what we already have to work with, and what our natural assets are. This acts as the center of our economic policy."

One local council that has implemented a policy of industrial specialisation is the Renfrewshire council.

Recently, they collaborated with partners, such as the Scottish Government and Strathclyde University, to develop the Advanced Manufacturing Innovation District Scotland (AMIDS) initiative. AMIDS has been designed as an internally recognised centre for innovation, research, and manufacturing, specialising in sectors like medicine manufacturing.

Although not yet complete, this initiative has sourced £165 million in investment (Scottish Cities, 2021), providing jobs, infrastructure, and other economic development opportunities.

However, it should be noted that industrial specialisation does come with some risks.

As industries become more specialised in a region, there can be high concentrations of employment in specific sectors and a lack of economic diversity. If specialised industries lose their competitiveness, this can lead to large-scale job losses and high regional unemployment (Shuai, 2013).

This was particularly relevant in cities like Glasgow, where dependence on shipbuilding led to the gradual loss of over 100,000 jobs (Lever, 1991).

Resolve skills mismatches

In areas requiring regeneration, a skills mismatch can occur. A skills mismatch refers to a situation when the skills and expertise of workers in a particular area do not closely match those that firms require. In instances like this, firms and workers may have to relocate, negatively impacting regeneration efforts.

Even before the COVID-19 pandemic, approximately 10 million workers across the UK faced a skills mismatch between their skills and those employers required (Haldane, 2021). Following the pandemic, this skills mismatch has only widened.

"More than 40% of employers say the biggest barrier to growth in the workplace is attracting the right talent."

One group of regional authorities which aimed to align the supply and demand for skills in their regions was Derby, Derbyshire, Nottingham, and Nottinghamshire (D2N2) when they created their Local Enterprise Partnership (LEP).

Through collaborative efforts with the University of Derby, the D2N2 LEP recently published their Local Skills Report in March 2021 to identify skills shortages in the region.

Using this report, policymakers were informed of which skills they needed to foster in the local economy, such as digital skills and those associated with the COVID-19 recovery. Further steps were taken to understand how these skills could be improved, utilising initiatives like boot camps, skills pathways, and engagement with local educational centres (D2N2, 2021).

Encourage firm relocation

New businesses can have a transformative effect when they relocate to a new area.

Since the 1960s, the Tradeston area of Glasgow underwent periods of decline, characterised by low levels of investment and high unemployment (Strachan, 2020). However, this area is currently undergoing regeneration, owing in part to the £330 million investment from Barclays to develop their new financial hub on the banks of the River Clyde.

This new financial hub is expected to bring 2,500 jobs to the area, bringing the total number of Barclays staff employed there to 5,000 by 2023 (Barclays, 2021). 42% of these new positions are expected to be in “high-value” posts, with a promised 340 roles ring-fenced for disadvantaged workers or those with a disability (BBC, 2018).

Importantly, this development is expected to generate more than just jobs for the Tradeston area. Instead, a more comprehensive programme of regeneration is expected, such as:

- Improved local transport infrastructure, such as the refurbishment of the Tradeston Bridge;
- The creation of green spaces, as well as cafés and restaurants;
- New housing developments, such as the 324 affordable rental apartments which are part of a major riverside development;
- Improved lighting, as well as dedicated cycling and walking paths to improve safety; and,
- The development of a curated space where social enterprises and local entrepreneurs can showcase and sell their products.

To encourage projects such as this, regional government intervention can play a crucial role.

In this case, Barclays was incentivised to relocate to the area as part of a £12.8 million package offered by Scottish Enterprise (BBC, 2018).

Regional authorities often justify these incentive packages through increased productivity levels of neighbouring companies when a new high-profile firm relocates to the area.

This occurs through a process known as spill-overs, which refers to the idea that bringing people together in one place allows people to benefit from each other’s ideas and become more productive.

Research from Greenstone, Hornbeck, and Moretti (2010) suggests that spill-overs from the presence of a new, high-profile firm can increase the productivity of neighbouring companies by 12%.

3. Address Inequality and Poverty

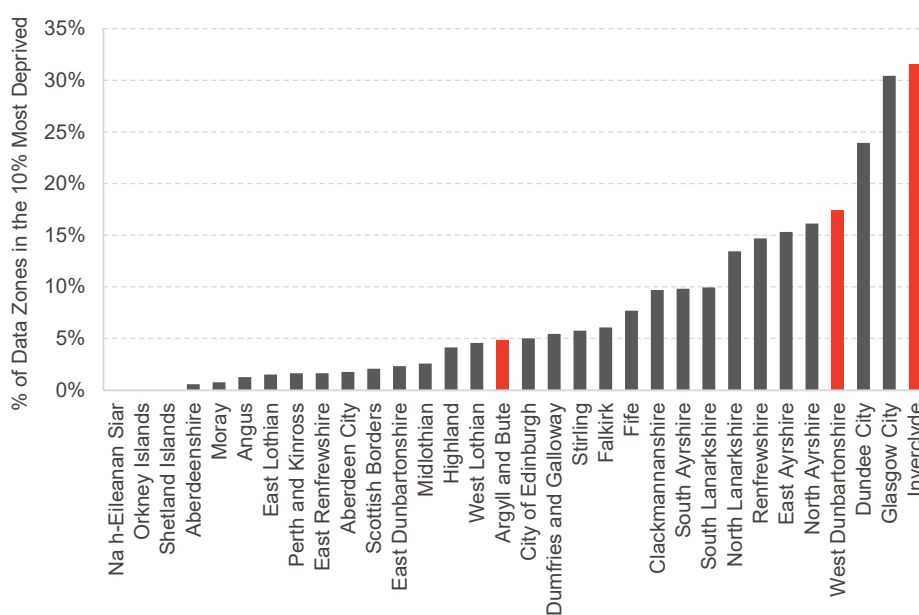
Like many parts of the UK, Scotland experiences poverty, and there are both interregional and intraregional inequalities up and down the country.

The Scottish Index of Multiple Deprivation (SIMD) indicates where deprivation is concentrated across Scotland.

According to the SIMD, Inverclyde is the most deprived area in Scotland.

In 2020, 32% of Inverclyde's data zones were in the 10% most deprived data zones in Scotland, followed by 17% in West Dunbartonshire and 5% in Argyll and Bute. See Chart 3.

Chart 3: Percentage of local authority data zones in the 10% most deprived data zones in Scotland, 2020



Source: Scottish Government (2020)

Several studies highlight that inequality and poverty has been exacerbated by the pandemic (Ferreira, 2021).

"COVID has hit us disproportionately hard, largely due to the makeup of economy. We have a large manufacturing base, and a large reliance on the hospitality and retail sector. A lot of the workers in these sectors were furloughed, which particularly affected young people and those from BAME backgrounds."

Inequality and poverty can have far reaching effects.

Not only can inequality and poverty impact health, education, and social outcomes, but they can also limit the opportunities individuals have available, making it difficult for those who grew up in poverty to escape themselves (Balboni., et al, 2020).

To address issues of inequality and poverty, policymakers have several initiatives they could consider.

These include –

- Encourage inclusive growth;
- Employment initiatives;
- Social lending initiatives;
- Community engagement; and,
- Retrofitting homes and buildings.

Encourage inclusive growth

Inclusive growth – growth that benefits everyone – is economic growth that is distributed fairly and equally across society (Joseph Rowntree Foundation, 2017).

In recent years, policies centred around inclusive growth have grown in popularity having been suggested as one way to target issues of poverty and inequality (Poverty and Inequality Commission, 2019).

In 2018, the West Midlands Combined Authority established the Inclusive Growth Unit (IGU) - an initiative intended to support policymaking throughout the West Midlands associated with inclusive growth.

This unit collaborates across different sectors of the economy and society, blending academic expertise with citizen insights to provide resources, research, and community engagement. Policymakers consult the IGU to inform their vision of inclusive growth, the areas required for action, and how they embed inclusive growth policies within the region’s long-term economic plan (CPP, 2019).

As stated by WMCA (2021), initiatives of the IGU refer to the creation of:

- The West Midlands Inclusive Growth Audit, which tracks issues such as job inclusivity;
- The Population Hub, which monitors health outcomes to encourage pre-emptive action; and,
- The Inclusive Growth Toolkit, which measures how investment decisions support inclusive growth outcomes.

Employment initiatives

Central to the concept of inclusive growth, higher participation in the workforce and more rewarding and well-paying jobs is essential to ensure the proceeds from economic growth are shared equally throughout society (OECD, 2014).

As stated by the United Nations (2007):

“The creation of productive employment opportunities is essential for achieving poverty reduction and sustainable economic and social development”.

Creating ‘good jobs’ - those which pay decent wages, have predictable hours, offer sufficient training, and provide adequate professional development opportunities -, could perhaps be one of the major drivers of poverty and inequality reduction (United Nations, 2014).

The development of business clusters is one initiative that could encourage the creation of high-quality jobs (Delgado, Porter and Stern, 2014).

Research from Fowler and Kleit (2013) found that in areas where the concentration of business clusters was high, there were lower levels of poverty.

Develop Business Clusters

The term business clusters was defined in 1998 by Porter as:

“A geographic concentration of interconnected companies and institutions in a particular field.”

In simpler terms, business clusters refer to groups of companies, suppliers, and institutions that benefit from working near each other.

In the UK, several business clusters have emerged. For example, Dundee has been an established centre for gaming innovation since the 1980s, London created its East London Tech City in 2010, and Hull secured funding in 2020 to become a leader in offshore wind technology.

Business clusters often arise naturally from a self-selection process by firms (Morgan and Cooke, 1998).

However, several policies can encourage their development.

These include (McKinsey, 2014) –

- Facilitating a link for collaborations between higher education institutions and local entrepreneurs;
- Introducing policies which reduce the administrative barriers that business owners and foreign workers face when they want settle in a new region;
- Supporting the development of suitable infrastructure; and,
- Introducing policies which improve business connectivity, encourage networking, and facilitate the exchange of knowledge, technology, and information.

Furthermore, in a review of the literature, the Department of Trade and Industry (2004) suggested three key drivers to business cluster development:

These include -

- The presence of functioning networks and partnerships across companies, institutions, and higher education partners;
- A strong innovation base, with supporting research and development investment; and,
- The existence of a skilled and knowledgeable workforce.

Not only can the creation of business clusters bring “good jobs” to an area, alleviation issues of poverty and inequality, but they can also yield several other benefits.

Notably, they have been found to improve economic vitality (Wennberg and Lindqvist, 2008), increase wages in clustered industries (Chrisinger, Fowler and Kleit, 2015) and support regional prosperity (Ketels and Protsiv, 2021) – each of which has been found to translate into welfare gains at a regional and national level (OECD, 2005).

Social lending initiatives

Like introducing more ‘good jobs’ to an area, social lending has been suggested as one initiative that could reduce inequality and poverty.

Often, people living in poverty don't have access to financial services like overdrafts or credit cards. As a result, these groups often turn to pay-day loans in emergencies, where the high rates of interest can create an additional burden on their finances (Hartfree and Collard, 2014).

To address this issue, the Joseph Rowntree Foundation (2016) has suggested the concept of social lending.

Social lending is an initiative whereby local authorities provide emergency loans to those in poverty at speeds which can compete with pay-day loans (without the unaffordable rates of interest).

In 2015, Sheffield's local council implemented a social lending scheme called 'Sheffield Money'. This council-funded service works alongside community partners to provide a website, physical store, and phone application, to provide a range of services and quick access to loans (in as little as 15 minutes).

Through the programme's implementation, Sheffield Money has been projected to save low-income residents £20 million a year by reducing their reliance on high-cost lenders (Rodrigues, 2016).

Community engagement

Bristol City Funds is an initiative that demonstrates how governmental bodies can engage communities to tackle issues that matter to them.

Led by community engagement with the charities and organisations directly responsible for improving local communities, Bristol's City Funds was established to mobilise local investment to high-priority areas.

Each year, the programme identifies several priorities they want to address and then directs investment towards these areas. Areas that have recently been targeted include food poverty, economic inclusion, and environmental transformation.

As of March 2021, £10 million had been raised for social investment, with £2.4 million already invested (Bristol City Funds, 2021).

Retrofitting homes and buildings

Policies supporting the retrofit of old homes and buildings have also been suggested as one way to reduce inequality and poverty.

"We have several policies focused on retrofitting. This could create career opportunities for our population, with a particular focus on providing jobs for young people."

Not only does retrofitting homes and buildings reduce carbon emissions and build resilience to climate change, but it can also bring down heating costs, reduce fuel poverty, improve health outcomes, and create thousands of new, local, green jobs (Bankers for Net Zero, 2021).

The Association of Directors of Environment, Economy, Transport and Planning (ADEPT) suggest local authorities should plan to retrofit all public sector buildings, as well as incentivise all private homeowners to do the same.

They suggest local authorities could set a goal of retrofitting all public buildings to bring them up to an energy efficiency ratings of EPC 'C' by 2030, with a particular focus social housing.

Additionally, at a private sector level, they suggest incentives could be offered to businesses and private landlords in the form of green mortgages, low-cost financing options for energy retrofitting, or grants to encourage more efficient heating methods such as heat pumps.

Research suggests policies like this wouldn't just achieve the social benefits above but could also generate considerable financial benefits.

Notably, the Energy Efficiency Infrastructure Group (2017) found that for each £1 invested to improve the energy efficiency of homes, £3.20 was generated in Gross Domestic Product (GDP).

Understanding the potential benefits of retrofitting, Glasgow City Council has recently allocated £10 billion as part of their 'Greenprint for Investment' to upgrade the insulation of all homes in the Glasgow City region by 2030.

Summary

Following a comprehensive review of the literature, several interesting policy initiatives were identified that could address each of the three grand challenges. However, during this stage of the report, we ran into several challenges, most notably relating to gaps in the literature.

We found that secondary data sources – such as books, reports, and journals – often cited national policy initiatives.

As this report set out to provide tailored policy recommendations to the three councils we found many of these policy recommendations unsuitable.

Additionally, we found there were often numerous policies that could be useful, but that had not yet had their impact measured. This created a challenge as we wanted to include policies that had a known impact – either quantitatively or qualitatively – in our list of recommendations.

In response to these challenges, later sections of this report set out to explore primary sources.

Of these primary sources, interviews were deemed the best way to address any gaps in the literature.

The first step of this process involved identifying Local Enterprises Partnerships (LEPs) that came up in the 'what works' section as pioneers of innovative policy initiatives (the D2N2 LEP and GBS LEP), and then to identify "sister" areas to the local authorities of Inverclyde, West Dunbartonshire and Argyll and Bute that face the same underlying challenges and are likely to be tackling these issues with a range of innovative policies that the three councils could adopt too.

2. Identifying "sister" areas

In this section, the three councils of Argyll & Bute, Inverclyde, and West Dunbartonshire are compared to local authorities in Great Britain (GB).

The aim of this analysis is to identify local authorities in Great Britain that are experiencing similar challenges to the three councils so that they can be included in the qualitative research in Section 3.

To determine the relative performance of the three councils, a range of indicators across the following themes are considered -

■ Demographics

- Population: % change in population (1991-2020)
- Population density: Inhabitants per sq km (2020)

■ Industry

- Labour productivity: GVA per hour worked (2019)
- Industrial change: percentage point change in GVA share from primary industries (1998 – 2019)

■ Labour market

- Unemployment: unemployment rate (%) (2020)
- Education/skills: % with no qualifications (NVQ) – aged 16-64 (2020)

■ Poverty

- Income: gross disposable household income per capita (£) (2020)
- Life expectancy: healthy life expectancy at birth (2019)
- Housing deprivation: % of socially rented dwellings (2020)

First, comparisons are made between the three councils and the GB average to better understand the overall performance of each council relative to the rest of the country. Then, a similarity index is used to determine GB local authorities that are most similar to each of the three councils.

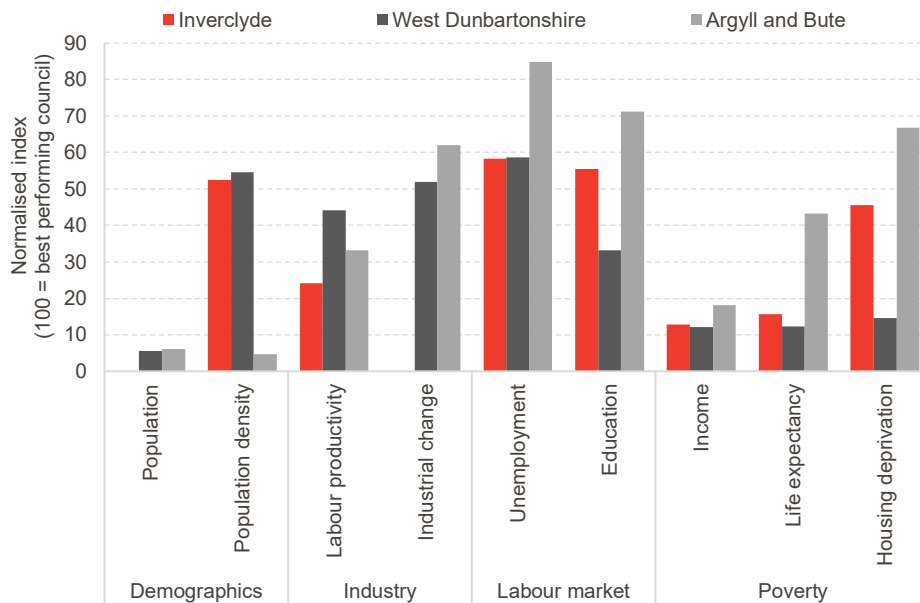
The methodology used to construct the indices used throughout this section can be found in the methodology section.

Overall performance of the three councils

The 3 councils are geographically close and face three key challenges: population decline, economic regeneration, and inequalities.

But, there are some areas where the 3 councils differ. See Chart 4.

Chart 4: Performance across different measures for demographics, industry, labour market and poverty



Source: ONS, FAI calculations

- Argyll & Bute is the second largest council area in Scotland, adjoining West Dunbartonshire, the Highlands, Perth & Kinross, and Stirling. Argyll & Bute is made up of a mainland economy and small island economies, like the Isle of Bute, and hence has a much lower population density compared to the other two councils. While Argyll & Bute has a well-qualified workforce, a low unemployment rate, and a low share of socially rented housing, it suffers from poor productivity and has many residents on low income.
- Inverclyde borders Renfrewshire and North Ayrshire, and is home to coastal villages like Inverkip which lies on the shoreline of the Firth of Clyde. Inverclyde performs fairly well on labour market indicators however, of all local authorities, Inverclyde performs the worst in terms of population and industrial decline. Inverclyde’s industrial decline over the past 20 years has seen GVA from production industries contract by 26 percentage points.
- West Dunbartonshire is home to towns such as Clydebank and Dumbarton, and it borders Argyll and Bute, along with East Dunbartonshire, Renfrewshire and Stirling. West Dunbartonshire has the best labour productivity among the three councils, and is the most densely population. However, it performs worse than Argyll and Bute and Inverclyde across all poverty indicators, and education presents a challenge for the area.

Based on our aggregate index West Dunbartonshire and Argyll & Bute are the most similar. Under this aggregate index, Inverclyde performs slightly worse compared to the 2 councils. See Chart 5.

Furthermore, compared to the rest of GB, the 3 councils rank towards the bottom end of all local authorities in terms of overall economic performance

Box 1: GVA - a workplace measure

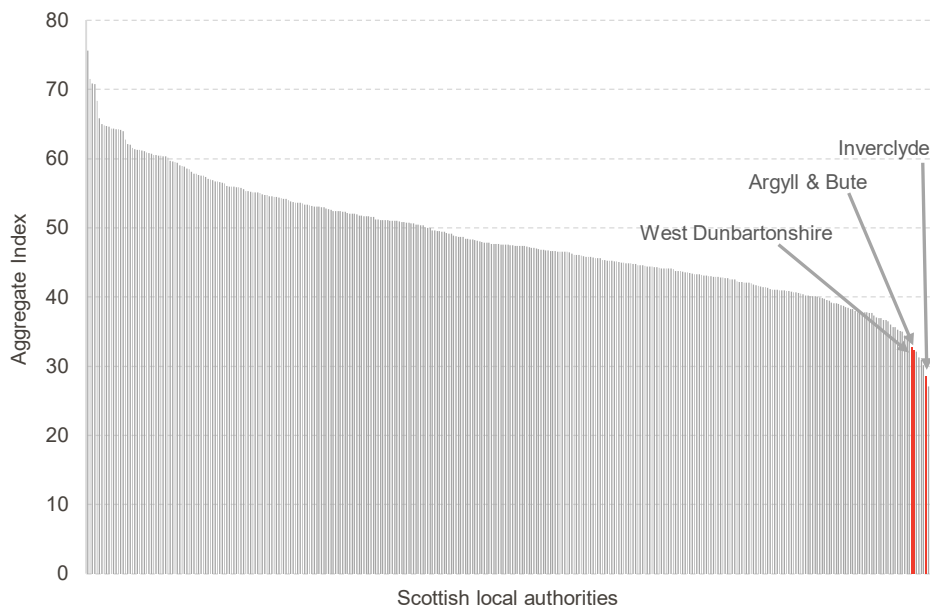
It is worth noting that GVA is a workplace-based measure, which means that cities typically perform better than the areas surrounding them because people commute into cities for work. Cities also benefit from clusters of businesses and public sector activity which further supports their economic output.

For example, looking at GVA alone for somewhere like East Lothian would lead you to believe that the area faces economic challenges. For example, GVA per head in East Lothian and Midlothian is just above that of East Ayrshire and North Ayrshire – two regions in Ayrshire that struggle with deprivation.

Because of its proximity to the capital, East Lothian has a large number of residents that commute into Edinburgh City for work. If we look at a wide range of other metrics, it is clear that East Lothian is an affluent area in Scotland.

Therefore, areas like the three councils typically perform worse on GVA-based indicators.

Chart 5: Aggregate performance index, 357 local authorities across Great Britain



Source: ONS, FAI calculations

Similarity index

In this section, each of the three councils is paired with a group of LAs in Great Britain that have similar characteristics.

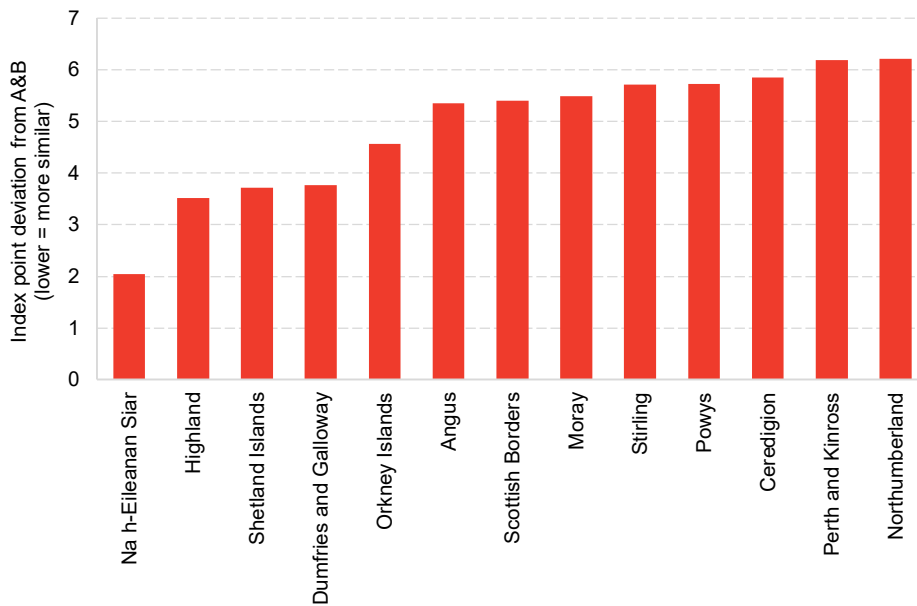
Unsurprisingly, we find the three councils to be most alike to Scottish LAs, largely due to similarities in measures like population density. Therefore, we focus on areas outside of Scotland for our analysis to allow for a wide range of policies across the whole of GB to be considered.

Results: Argyll & Bute

Na h-Eileanan Siar, the Highlands, the Shetland Islands, and Orkney are the most similar local authorities to Argyll & Bute. This is mainly driven by the fact that they are also local authorities with a low population density.

Powys, Ceredigion, and Northumberland are local authorities, outside of Scotland, that have been identified as being the most similar to Argyll & Bute. See Chart 6.

Chart 6: Most similar local authorities to Argyll & Bute



Source: FAI calculations

Powys

- Welsh local authority.
- One of the lowest labour productivities in GB.
- Low household income.
- Low population density, and suffering from population decline.
- Particularly similar to Argyll & Bute on measures of poverty.



Ceredigion

- Welsh coastal area.
- Low productivity and low household income.
- Experiencing population decline.
- Slightly higher life expectancy, population density, and share of social housing compared to Argyll & Bute



Northumberland

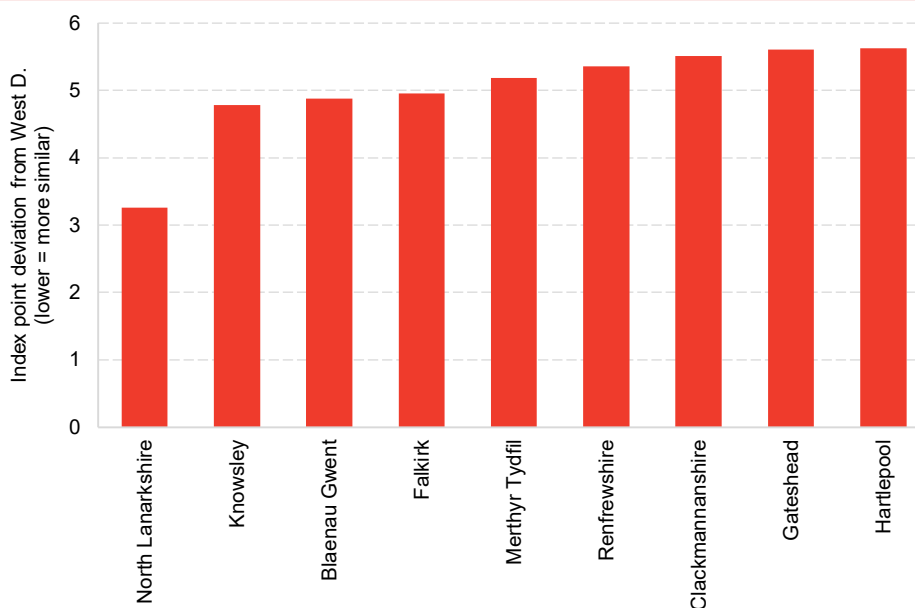
- North-East England local authority that borders Scotland.
- North Sea coastline.
- Low productivity and low household income
- Low population density, and suffering from population decline.



Results: West Dunbartonshire

North Lanarkshire is the most similar LA to West Dunbartonshire. Knowsley, Blaenau Gwent and Merthyr Tydfil are non-Scottish LAs which have the most in common with West Dunbartonshire. See Chart 7.

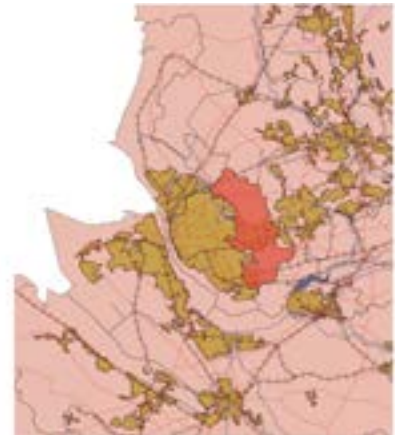
Chart 7: Most similar local authorities to West Dunbartonshire



Source: FAI calculations

Knowsley

- Village in Merseyside, England.
- Very similar to West Dunbartonshire in that it has low productivity and low household income, and it is experiencing population decline.
- Lower share of socially rented housing than West Dunbartonshire.
- Slightly higher population density & life expectancy than in West Dunbartonshire.



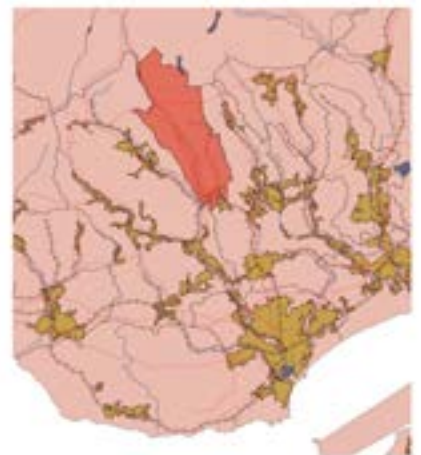
Blaenau Gwent

- Southern Wales borough.
- Very similar to West Dunbartonshire on most measures.
- Slightly better performing on social housing & life expectancy than West Dunbartonshire.
- However, this area has experienced a stronger industrial decline.



Merthyr Tydfil

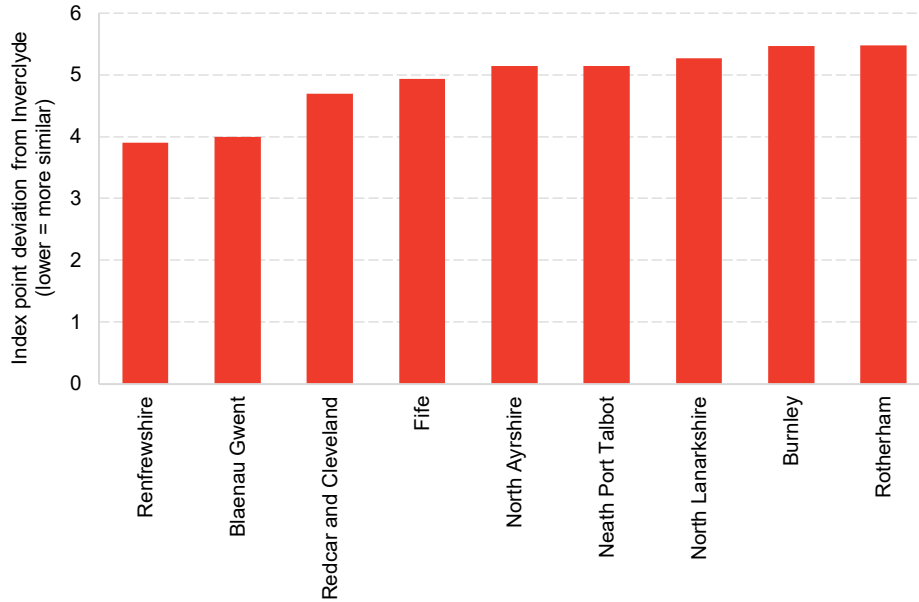
- Welsh town just 23 miles north of the capital, Cardiff.
- Characterised by: low-qualified workforce, low productivity, low household income, and population decline.
- Similar to West Dunbartonshire in its industrial decline



Results: Inverclyde

Renfrewshire is the most similar LA to Inverclyde. The most similar non-Scottish LAs to Inverclyde are Blaenau Gwent, Redcar and Cleveland and Neath Port Talbot. For Blaenau Gwent – see the West Dunbartonshire section. See Chart 8.

Chart 8: Most similar local authorities to Inverclyde



Source: ONS, FAI calculations

Redcar and Cleveland

- Coastal area in North Yorkshire, England.
- Low productivity, low household income, and strong population decline.
- Has less social housing than Inverclyde.
- Higher life expectancy and less strong industrial decline compared to Inverclyde



Neath Port Talbot

- Coastal borough in Southern Wales.
- Low productivity, low household income, and population decline.
- Has less unemployment and social housing than Inverclyde.
- Slightly lower population density compared to Inverclyde



Summary

Our findings have identified the following "sister" authorities for our three councils -

- **Argyll & Bute:** Powys, Ceredigion, and Northumberland (part of North East LEP).
- **Inverclyde:** Blaenau Gwent, Redcar and Cleveland (part of Tees Valley combined authority and LEP) and Neath Port Talbot.
- **West Dunbartonshire:** Knowsley (part of Liverpool city region combined authority and LEP), Blaenau Gwent and Merthyr Tydfil.

The following section includes qualitative interviews, with economic development policymakers in the similar or "sister" local authorities (or associated bodies linked to these areas, like overseeing Government departments, enterprise partnerships, or umbrella bodies) to understand the policies that have been successful in tackling some of these challenges.

The literature review also highlighted areas that have successfully tackled some of these grand challenges which we therefore interviewed as part of our primary research. These areas are the Greater Birmingham & Solihull (GBS) Local Enterprise Partnership (LEP) and the D2N2 LEP.

3. Primary research results: examples of best practice

Qualitative research

In the first quarter of the year we engaged with and/or interviewed policymakers in local government, umbrella bodies, enterprise bodies, combined authorities, and national government.

Throughout these interviews, questions were centred around which policies have been successful at addressing issues of population decline, economic regeneration, and inequality and poverty.

We found our discussions surrounding policies implemented to tackle these grand challenges to be centred around the following areas -

- Policy context, in particular recent trends in the economic development landscape;
- Skills & knowledge economy;
- Attracting investment;
- Foundational economy; and,
- Infrastructure and housing.

This section highlights 'What Works' and 'What's in the Works' in tackling the three grand challenges of demographic change, economic regeneration, and poverty and inequalities.

Policy Context

Through the course of our primary research, there were reflections from many policymakers on the impact that the pandemic had, both on their local areas and the capacity of local economic development. Despite many cuts in economic development functions at a local level in the years running up to the pandemic, many reflected on the critical role local government had to support local businesses and households.

Particularly when considering the inequalities in their areas, many were concerned that the experience of the pandemic was likely to have exacerbated existing inequalities.

"The policies that were a success in the run up to the pandemic are not going to be enough anymore to deal with the issues in our area."

Additionally, there was considerable reflection from policy makers on the trends in the economic development landscape over the past decade or so, and in particular, the impact that recent developments around the Levelling Up agenda have had.

There was a concern about the uneven levels of economic development capability across different local authorities, which constrains the ability of some local authorities to bid for and benefit from challenge style funds, such as the Levelling Up Fund and Community Renewal Fund. This was emphasised as a worry for what may come as part of the UK Shared Prosperity Fund.

It was also flagged by a number of contributors that the focus on direct and challenge funds to local authorities could be seen as a bit of a "backwards" step, after the more strategic regional funding that had been provided through city and region deals in recent years.

"It is important that funding for growth deals benefits rural areas as well as big cities."

“Between growth deals, local strategies and national agendas like Levelling Up, there are a lot of parallels with many committees discussing the same issues”

The range of powers that are available in the combined authority model was highlighted as a way that more regional powers were -

“able to offer the package of powers that are more able to holistically address the issues in our region, and ensure that we are offering opportunities to young people, in terms of economic development, employment opportunities, skills and housing.”

Skills & Knowledge Economy

In their recently published [skills report](#) D2N2 identified technological change, COVID-19, and Brexit as the cause of some pronounced skills mismatches in the regional economy. One in five adults lacked the digital skills required by employers, a statistic that is likely more pronounced in areas with concentrated unemployment, inactivity and deprivation.

One initiative was to engage with further and higher education providers to understand where the current skills mismatches lie, and what action could be used to address these issues.

Governments could provide critical incentives to education providers to offer courses that may not be in demand now, but will be essential to address the future challenges emerging from Brexit and climate change.

“In order to meet our climate targets, we need more people with green skills and we need enough training provisions in place to support the development of these skills.”

Encouraging engagement between higher education providers can also yield benefits. Colleges in the D2N2 region and now starting to engage in deciding what courses to offer. This has allowed different colleges to specialise in certain subjects, as well as provide a wider range of courses to the regional population.

“Our colleges are working together on what courses we provide. This has allowed us to specialise in courses that better suit the demands of our local economy.”

Many areas mentioned the importance of partnerships with their higher and further education providers, not only in the area of skills development but also ensuring the research and development might in an area was focussed on the challenges of the local economy. It was highlighted that this is an ongoing challenge when engaging with particularly HE institutions which are globally focussed.

More recently, there are concerns that the ongoing COVID-19 pandemic has exacerbated issues surrounding skill development, particularly for young people, making overcoming these challenges all the more difficult -

“Data shows not only a worsening of pre-pandemic challenges in areas such as unemployment and skills, but also a dramatic increase in mental health issues and a loss in confidence among young people.”

To address these challenges, and concentrate support towards young people, the Greater Birmingham and Solihull LEP implemented their Youth People Strategy in 2021.

This Youth Strategy adopts a triple helix structure to bring together business, education, and local government leaders to ensure decision making is collaborative and evidence-based.

Several interesting policies have been implemented as part of this strategy. Some of the most notable include -

- Tailored career guidance, which identifies individuals existing skills and experience and makes them aware of opportunities relating to employment, apprenticeships, work experience, and entrepreneurial support.
- Including young people in the decision-making process, notably including a youth-advisor on the board to ensure they have a say in decisions affecting strategic direction, as well as where funding and resources are allocated.
- The development of a Skills and Apprenticeship Hub, which acts as a single point of access for employers to advertise jobs, apprenticeship schemes to be conceived and developed, and training opportunities to be run to develop young people's skills and employability.
- Offering high-quality work experience and volunteering opportunities that improves young people's employment outlook, and build skills and experience that develops their CV.

Additionally, in 2013, the Gatsby Foundation commissioned Sir John Holman to identify international best practices and understand what good careers guidance looks like.

Based on this research, Holman proposed eight principles known as the Gatsby benchmarks. Between 2016 and 2019, the Gatsby benchmarks were piloted in England's North East school curriculum. Owing to the success of the pilot, the GATSBY careers framework has now been rolled out as a national policy.

The eight Gatsby principles include –

- A stable careers programme;
- Learning from career and labour market information;
- Addressing the needs of each pupil;
- Linking curriculum learning to careers;
- Encounters with employers and employees;
- Experience of the workplace;
- Encounters with further education and higher education; and
- Personal guidance.

Schools that implemented the Gatsby careers framework were found to experience a 39% increase in student careers readiness scores, significantly improved GCSE results, better student engagement, raised student aspiration, as well as a better understanding of the skills required for different jobs (Hanson., et al, 2021).

“We have our own skills team, which has led on the Gatsby benchmarks to embed skills education across our schools and colleges. This has been hugely successful in changing people's understanding of the job structure in the region, and what the future of jobs could be like.”

Providing youth-targeted support in line with the initiatives above could improve the regional opportunities available for young people, and help to address challenges relating to demographic shifts and population decline.

“A big challenge for us is that many young people move to the capital for university. As a rural authority, what we need to do is provide enough opportunities that these young people come back once they get their [higher] education.”

One way of attracting young people back to the local area was by offering business start-up grants of £5,000 -

“Councils in North Wales have implemented enterprise support for school children. One programme gave 16-17 year olds £5000 to start their own business. This has worked well in my opinion - It has opened up opportunities for young people, and made them understand they don’t just have to go into medicine or agriculture, but can instead start their own business.”

Attracting investment

One method of attracting investment in local economies is through the creation of an entrepreneurial ecosystem like that in Birmingham.

In 2020, Birmingham saw the highest number of new company start-ups outside of London. There were 18,394 new enterprises started in 2020, an uplift of 26.8% when compared to 2019 (Covill, 2021).

Entrepreneurial ecosystem has several benefits. Not only does it create employment opportunities for the local population, but it can also drive productivity, increase innovation, and promote human capital accumulation (Mason and Brown, 2014). Notably, start-ups were also found to employ a greater proportion of disadvantaged groups than other companies, such as the long-term unemployed (Coad et al., 2014).

To encourage a start-up culture, several initiatives have been implemented in the Birmingham and Solihull region.

Much of these initiatives centre around the LEP’s Growth Hub, which provides one-to-one business support, R&D insights, collaboration opportunities with universities, skills development, funding opportunities, and advice on conducting business internationally (Greater Birmingham and Solihull LEP, 2022).

Additional initiatives include the creation of a Midlands Engine Investment Fund to facilitate the region’s finance needs, a ‘scale up’ programme to support businesses with high-growth potential, and over 30 accelerators, incubators and business support programmes to support digital and technology start-ups (Greater Birmingham and Solihull LEP, 2016; Birmingham Tech, 2022).

“We have worked hard to develop entrepreneurship incubators, as well as start-up support. We also have a partnership with the intellectual property office to help SMEs, including start-ups, understand intellectual property and protect it.”

Innovation-delivery partnerships have been found to be useful by the North-East LEP in stimulating investment and growth.

IDPs are cross-sectional partnerships centred around business ecosystems and clusters, intended to bring together the right people, organisations, and assets, to exploit market opportunities and accelerate innovation-led growth (Finance for Sustainable Growth, 2021).

Potential benefits of IDPs include –

- Higher levels of R&D investment;
- Increased levels of innovation-led business activity;
- Better engagement with universities and other research-intensive institutions; and,
- A more competitive and productive regional economy.

One of the LEP's most notable IDPs refers to the North East Energy Catalyst.

“We have something called the North East Energy Catalyst, which is a collaboration of public, private, research, and institutional sectors, that aims to bring people together to address future energy challenges. It has been really successful, we have got £300 million worth of collaborative projects in the pipeline there.”

By facilitating these IDPs, the North East LEP can fill the innovation gap in the region, with the aim of ensuring R&D from universities is translated into market outcomes.

“We are trying to understand where future markets will be, and explicitly bring together partners that have the assets to build innovation collaborations in these different sectors. We have about 12 [projects] ready to go in sectors like energy, chemicals, pharmaceuticals, and life sciences.”

Additionally, through our interviews we have identified examples of incentives that have encouraged investment in particular areas.

The Tees Valley provides examples of incentives that have been used to regenerate large Brownfield sites, most notably the British Steel site in Redcar and Cleveland.

“We have a huge area of land that used to be owned by British Steel. When they left, they took around 8,000 jobs with them. This is now Europe's largest brownfield site, and we are trying to create a hub for clean energy and advanced manufacturing. To do this, we need to attract the right kind of businesses to the area.”

The policies implemented in Tees Valley have included:

- The designation of the area as a “Special Economic Area”, which allows the area to retain rates to reinvest in the site
- Locating both one of the UK's Freeport sites and Carbon Capture and Storage sites here to incentivise investment and build jobs and supply chains
- Creation of the South Tees Development Corporation which was the first Mayoral Development Corporation out of London

Whilst there are a range of incentives available to regenerate large Brownfield sites, some solutions, i.e. Carbon Capture and Storage Sites, are better suited to regions that have existing links with UK Continental Shelf activity, i.e. Aberdeen, Bacton, and Teesside.

Additionally, The D2N2 region is home to two of the UK's leading business clusters: the high-tech manufacturing cluster centred around Rolls Royce in Derby, and the digital tech cluster located in Nottingham's Creative Quarter.

Certain types of policies can encourage the relocation of high-profile firms to a region, provided the correct types of incentives are offered.

During our primary research, it was highlighted that grants, not loans, had been particularly effective at attracting high-profile firms to the area.

“In other areas, they tried a very similar programme last year but with loans [not grants] as the offer, and they received almost no interest.”

This was epitomised by the relocation of SmartParc to the region, owing in part to a £12 million grant offered by the D2N2 LEP. As a result of SmartParc’s relocation, over 5000 jobs were created in the D2N2 region (D2N2, 2021).

“Our latest capital programme, our Low Carbon Fund, has been four times oversubscribed which clearly demonstrates the demand out there for grant incentives.”

National government can also play an important role in bringing jobs to local areas.

For example, recently it was announced that the UK Government would move 200 Government staff to the North East in Darlington.

The Darlington site will now have over 1,700 civil servants working across the Treasury, the Department for Business, Energy and Industrial Strategy (BEIS), Office of National Statistics (ONS), and the Department for Levelling Up.

“This investment has not only generated the employment benefits directly. We have also seen additional jobs generated in the wider professional services sector, giving a hub agglomeration benefit, providing a range of high quality graduate job options.”

The UK Government is also set to move 1,000 civil service jobs to Scotland, with 500 Cabinet Office staff being relocated to Glasgow, the Office's 'Second Headquarters', by 2024.

These relocations aim to better involve communities across the UK into national government decision making, whilst also bringing new jobs and investment into areas in need of it.

Foundational economy

The foundational economy refers to organisations and businesses that provide basic services and products within their communities that support everyday life. Jobs in the foundational economy most notably refer to health, care, education, housing, utilities, tourism, food supply and high street retail.

“Foundational economy jobs are there for the long haul, they are always going to be needed.”

When the Centre for Research on Socio-Cultural Change (CRESC) developed the idea of the foundational economy, they suggested policymakers often neglect the side of the economy that creates and distributes essential goods and services. Instead, they suggest policymakers focus on the allure of high-tech, R&D intensive sectors which may not be well suited to their region.

“COVID-19 has highlighted how essential [foundational sectors] like health and care are to local economies.”

Setting policies that invest in the foundational economy could ensure vital sectors of the economy are well supported, offering the chance to reverse the deterioration of employment conditions, reverse the leakage of money from communities, and address the environmental costs of extended supply chains.

Investment, promotion and support of the foundational economy are being particularly pursued in some parts of Wales.

In addition to the sectors that make up the foundations of a regional economy, it is important that there is investment into a region's most vibrant business sectors – outlined in the 'what works' section of this report as the "Oasis Strategy".

Teeside Valley recommend that regions consider where their strengths lie – what skills, resources, and infrastructure they have available.

"We want to understand what assets we have available and how to maximise their benefits. We have a very strong chemical and processing sector – arguably the largest in Europe – which is a big player in our local economy. As part of that, we have existing specialities in areas like hydrogen production where we produce 50% of UK hydrogen. We have the infrastructure, technical skills, and business base to support a hydrogen economy."

Government support concentrated towards these vibrant business sectors has helped these industries compete nationally. Notably, the productivity of key sectors like chemicals and processing, as well as digital, was higher in the Tees Valley than in the rest of the UK (Tees Valley Combined Authority, 2019).

Infrastructure & Housing

The case for strategic regional planning, involving a range of local stakeholders, was particularly strong when focussing on infrastructure investment. Those we talked to saw a key role for combined authorities and LEPS to bring together the relevant parties to more easily make progress. So, for example, from one contributor -

"We have taken the position that within our next capital budget, we would insist that if you are building a road for example, then we want to see evidence that you are also talking to the water, gas, and telecoms companies to ensure – as much as possible – that there is a holistic approach to infrastructure development."

During our primary research, the rollout of the Rhondda Cynon Taf Empty Homes Scheme was brought to our attention.

This is a programme intended to bring vacant homes across the Welsh Valleys back into use, providing regeneration benefits to towns and communities.

The Valleys taskforce was instrumental in the introduction of this policy, bringing together key partners such as the Welsh Government, local authorities, registered social landlords, and the Development Bank of Wales.

During its initial rollout, £10 million was contributed to the scheme, enabling applications to apply for a grant of up to £20,000 (Valleys Taskforce, 2021).

By September 2020, over 600 applicants had applied for the scheme, providing direct benefits to those who received funding to refurbish a previously unusable home, supporting local tradesman with up to 2000 hours of work per grant awarded, regenerating local areas, and providing a sustainable, cost-effective solution to housing shortages as it is often much cheaper and environmentally friendly to refurbish a home than to build a new one.

In our engagement, there was a notable focus on the benefits of mapping out supply chains, and the economic and social benefits that come from spending public money in the local economy.

"A challenge for us is that whenever there is a large scale construction project we need to outsource because we do not have large enough construction firms in our local area to meet the demands of the project. This means that not all of the economic benefits are felt in the communities where the projects are taking place."

One interesting initiative was a grant offered by the United Welsh Housing Association as part of a partnership in Blaenau Gwent. This grant enabled the housing association in Blaenau Gwent to map out their supply chains and understand how their spending power could be used to support local suppliers and benefit communities.

Through this initiative, a greater percentage of public money is reinvested in the local economy, thus providing a steady pipeline of work for local suppliers and contractors.

"There has been a lot of emphasis on social value in procurement, looking at a wide range of social benefits."

Another interesting policy with similar links to public spending was implemented by Swansea Council. As part of their Community Benefits Policy, they now ensure community benefit clauses are attached to any development or regeneration projects where public money is spent.

These clauses can include:

- Supply chain initiatives that are committed to local sourcing;
- Targeted recruitment e.g., focused on the long-term unemployed;
- Environmental benefits during works and at completion; as well as,
- Community consultations to ensure contractors act considerately.

This process of using community clauses aims to ensure the maximum amount of added value is generated from all public sector spending.

"We don't just want to build houses, we want to have community benefits on the back of it."

4. Conclusions

The three local authorities of Argyll & Bute, Inverclyde, and West Dunbartonshire are distinctive council areas in Scotland that face similar long-term challenges, known as 'Grand Challenges'.

These Grand Challenges include -

- Population Decline;
- Economic Recovery in areas requiring regeneration; and,
- Dealing with poverty and inequalities.

This report set out to find out 'What Works', in terms of economic policies, to tackle these three issues

Whilst desk-based research proved useful in highlighting examples of best practice in the UK and internationally, primary research, i.e. talking to areas facing similar challenges and asking them 'What Works' and 'What's in the Works', provided us with information on a far greater range of levers that local government can use to tackle these issues.

Our discussions with policymakers in local government, umbrella bodies, enterprise bodies, combined authorities, and national government, were centred around the following areas -

- Policy context, in particular recent trends in the economic development landscape.
 - The range of powers available in the combined authority model was highlighted as a way that more regional powers could address key problems in areas, ensuring opportunities surrounding economic development, employment, skills, and housing.
- Skills & knowledge economy.
 - Collaboration between further and higher education institutions was discussed as being a critical way for regions to address skills mismatches in the local areas, allowing education providers to specialise in fields demanded by the local economy. Government incentives were highlighted as a way to support education providers in offering courses that may not be in demand now, but will be essential to address future challenges such as Brexit or climate change.
- Attracting investment.
 - A range of policies aimed at encouraging the relocation of high-profile firms to a region are available to local authorities. One of which is the offering of grants, not loans, to large enterprises. Whilst there are a range of incentives available to regenerate large Brownfield sites, some solutions, i.e. Carbon Capture and Storage Sites, are better suited to regions that have existing links with UK Continental Shelf activity.
- Foundational economy.
 - Throughout our engagement, investment in the foundation economy, i.e. essential goods and services in hospitality, retail, etc., was outlined as being essential in ensuring vital sectors of the economy are supported, offering the chance to reverse the deterioration of employment conditions, reverse the leakage of money from communities, and address the environmental costs of extended supply chains.

- Infrastructure and housing.
 - Focussing on the economic and social benefits that come from spending public money in the local economy was highlighted as a crucial way of ensuring development or regeneration projects support local supply chains and local jobs. Some areas attach clauses to projects to ensure maximum community benefits from infrastructure/housing investments whilst other areas have mapped out their supply chains to ensure that a greater percentage of public money is being reinvested into the local economy.

This report highlights a number of best practice policies, from across the UK and internationally, to tackle the three grand challenges of population decline, economic regeneration, and poverty and inequalities.

Whilst some policies may be better suited to some areas than others, there are five key themes that can support the three councils of Argyll & Bute, Inverclyde, and West Dunbartonshire in overcoming these issues facing their economies.

The five themes discussed throughout this report each play a role in tackling each of grand challenges facing the three councils. For example, policies relating to infrastructure and housing can act to regenerate local areas, creating jobs and opportunities for local consumers and producers, attracting people to the region, and therefore tackling inequalities and demographic change.

COVID-19 and Brexit has exacerbated existing issues, not just in the three council areas, but across the UK, making them all the more difficult to overcome.

However, the significant changes experienced in our economy over the past two years provides local governments to rethink how they tackle issues in their local area, offering a shift in how policy making is done.

Policies that worked pre-pandemic will no longer be enough to overcome these grand challenges.

Methodology

To determine the relative performance of local authorities (LAs) we consider a range of indicators across the following areas:

- Demographics;
- Industry;
- Labour market; and,
- Poverty

There are 374 district local authorities in the UK. Due to methodology differences between Northern Ireland and Great Britain in estimating some of the indicators, estimates for Northern Irish LAs (of which there are 11) are removed. Also, 6 LAs (5 in England and 1 in Wales) do not have estimates for every indicator needed for the index and so they are also dropped. This leaves the total number of Great British LAs in this index to 357.

We use the following indicators and weights to construct an aggregate performance index and similarity index for 357 local authorities in Great Britain (GB). See Table 1.

Table 1: Aggregate performance index and similarity Index components

Area	Indicator	Weight	Measurement	Source	
Demographics	Population	15%	% change in population (1991 - 2020)	NOMIS - Population estimates	Green
	Population density	25%	Inhabitants per sq km (2020)	ONS	Green
Industry	Labour productivity	10%	GVA per hour (£) (2019)	ONS	Green
	Industrial change	10%	ppt change in GVA share from primary industries (1998 - 2019)	NOMIS - BRES	Red
Labour market	Unemployment	5%	Unemployment rate (%) (2020)	NOMIS - LFS	Red
	Education/skills	5%	% with no qualifications (NVQ) - aged 16-64 (2020)	NOMIS - APS	Green
Poverty	Income	10%	Gross disposable household income per capita (£) (2020)	ONS	Green
	Life expectancy	10%	Healthy life expectancy at birth (2019)	ONS	Red
	Housing deprivation	10%	% of socially rented dwellings (2020)	Ministry of Housing, Communities & Local Government, NRS, Stat Wales	Red

Note: Highest value = 100 (green), Lowest value = 100 (red)

Source: Source: Fraser of Allander Institute

To construct the index, we first normalise each measure to take a value between 0 and 100 depending on how a given LA ranks in comparison to the other LAs.

We normalise to allow comparisons to be made between each indicator. That is, normalisation allows an indicator like GVA per hour, measured in pounds, to be comparable to an indicator like the unemployment rate, measured in percentage terms.

A value of 100 represents that the LA performs better than all other LAs for a particular measure, whereas a value of 0 means that the LA is the worst-performing.

Equation 1 represents the calculation carried out for indicators whereby a higher number brings the overall index down (i.e. unemployment), whilst Equation 2 represents the calculation carried out for indicators in which a higher number is positive for the index (i.e. labour productivity). Once normalised, all indicators are comparable – See Equation 3.

$$K_{l,i(neg)} = \frac{(k_{l,i(neg)} - \max(k_{i(neg)}))}{(\min(k_{i(neg)}) - \max(k_{i(neg)}))} \times 100 \text{ (eq. 1)}$$

$$K_{l,i(pos)} = \frac{(k_{l,i(pos)} - \min(k_{i(pos)}))}{(\max(k_{i(pos)}) - \min(k_{i(pos)}))} \times 100 \text{ (eq. 2)}$$

$$K_{l,i(neg)} = K_{l,i(pos)} = K_{l,i} \text{ (eq. 3)}$$

Where: k represents the indicators, i reflects each specific indicator (e.g. unemployment rate, population density, labour productivity), i(neg) represents indicators which have a negative relationship with the index performance (i.e. unemployment), i(pos) represents indicators which have a positive relationship with the index performance (i.e. labour productivity), and K is equal to the normalised index of an indicator for each local authority, l. The maximum and minimum values here represent the maximum and minimum values for each indicator across all 357 local authorities.

We then calculate two separate measures: an aggregate performance index and a similarity index.

The aggregate performance index is calculated as follows:

$$A_l = \sum_{i=1}^9 K_{l,i} \times Weight_i \text{ (eq. 4)}$$

Where: A is the aggregate index of all indicators, i (of which there is 9), for each local authority, l, and Weight represents the weight associated with each indicator (5%, 10%, 15% or 25%).

The aggregate performance index is used to estimate where the local authorities rank in comparison to the rest of GB, whereas the similarity index is used to find out which local authorities are the most similar to one another.

The similarity index penalises large differences more heavily than the aggregate index.

In order to construct the similarity index, we estimate the deviation of each of the 357 local authorities across the 9 indicators from each of the 3 council areas:

$$D_{c,l,i} = (K_{l,i} \times Weight_i) - (K_{c,i} \times Weight_i) \text{ (eq. 5)}$$

$$Sum\ of\ squares_{c,l} = \sum_{i=1}^9 (D_{c,l,i})^2 \text{ (eq. 6)}$$

Where: D is the difference between the normalised indicators for each local authority, l, against the three councils (Argyll & Bute, Inverclyde, and West Dunbartonshire), c.

Finally, we take the square root of the sum of squares to obtain an “index point deviation” for a given local authority from one of the 3 councils:

$$Index\ point\ deviation_{c,l} = \sqrt{Sum\ of\ squares_{c,l}} \text{ (eq. 7)}$$

The local authority which is most similar to each of the three councils has the lowest index point deviation from that council.

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Fraser of Allander Institute

University of Strathclyde
199 Cathedral Street
Glasgow G4 0QU
Scotland, UK

Telephone: 0141 548 3958

Email: fraser@strath.ac.uk

Website: fraserofallander.org

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