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The Fraser of Allander Institute

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Disclaimer

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

The report was commissioned in May 2019 by The Scottish Cities Alliance.

The analysis and writing-up of the results was undertaken independently by the FAI. The FAI is committed to informing and encouraging public debate through the provision of 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

Scottish cities outlook

- Scotland's seven cities (Aberdeen, Dundee, Edinburgh, Glasgow, Inverness, Perth and Stirling) make a significant contribution to Scotland's economy – with over 2/3 of Scotland's economic activity taking place either in city boundaries or surrounding areas.
- Scotland's cities share a number of strengths, from their skilled workforce, their international reputation and their location for some of the country's major economic and cultural assets.
- But they also have marked differences, in terms of their scale, relative performance, resilience and industrial structure.
- Scotland's cities now operate in a much more complex and uncertain policy and economic environment. Pressures on budgets, both through reduced funding and increased pressure in key spending areas, means that there is less resource to support economic growth and development.
- In the decades to come, our economy – and our cities – will go through major structural changes.
- City leaders and their stakeholders remain upbeat about the outlook for their cities (and Scotland as a whole).
- But they also recognise that the approach to supporting growth in Scotland's cities will need to be bolder and more ambitious.
- In this research, we focus upon five key challenges – and opportunities – that Scotland's cities will face in the future:
 - The growth challenge – and the importance of boosting productivity across Scotland's cities;
 - The opportunities from technological change – and the growth of the knowledge-based economy;
 - The transition to a net zero carbon economy – and the importance of supporting new 'green' industries of the future and improving the environment of our cities;
 - The changing nature of our population – and the opportunities to make our cities attractive places to live and work; and,
 - The importance of tackling inequalities – and crucially, providing opportunities for everyone in our cities to fulfil their economic potential and creating opportunities to improving wellbeing.
- Responding to these structural changes will not be easy. Scotland's cities cannot do everything on their own. A partnership approach across all tiers of government, enterprise agencies, higher and further education and the private sector will be required.

■ Our research has highlighted a number of common themes –

- 1. Boldness:** With our economy undergoing major structural change, economic policy needs to be bold and to have a long-term strategic focus. Cities are increasingly adopting such an approach, but more can be done to find out ‘what works’ and to learn from international best practice.
- 2. Collaboration:** Scotland’s cities are maybe ‘small’ on a global scale but can achieve much more than the sum of their parts by working together. Collaboration has improved in recent years, but there is scope to do more.
- 3. Respect for divergence:** All seven cities differ greatly from each other. This makes the opportunities for collaboration – and benefiting from each other’s strengths – even more important. But it also means that a ‘one-size-fits-all’ approach will not work, and there needs to be greater acceptance of local divergence, support for policy experimentation and investing in scale.
- 4. Fiscal flexibility:** Whilst there will always be disagreements over funding, there is support among local policy-makers for greater autonomy over local economic and fiscal policy.
- 5. Better engagement with national policy:** there is a demand for greater local influence over national decision making in skills, transport, housing and the environment. Collaboration will help support the Scottish Government’s priorities of reducing inequalities and promoting inclusive growth.
- 6. Creativity:** Scotland’s cities need to be creative – including in funding models and the use of their economic assets – in the future. This includes working with anchor institutions – such as universities, colleges and local businesses – and rethinking how best to use city assets for tourism, retail, culture and industry.
- 7. Develop unique selling points:** Cities need to get ever better at prioritising what they are ‘known for’. Each city cannot do everything. Clarity of focus, including re-inventing and re-branding over time, can boost resilience. This is not about picking winners, but about identifying key strengths and channelling investments accordingly.
- 8. The importance of place:** The value of place will be key to linking ambitions around growth, tackling inequalities and the low carbon economy. A city’s attractiveness as a place to live and work, its sustainable transport offerings, public realm and quality of housing stock will all be crucial economic levers in the long-run.
- 9. Provide greater clarity to the policy landscape:** There is a perception across city government that the policy landscape in Scotland is not as streamlined or effective as possible. This - over time - can lead to delay, confusion and missed opportunities.
- 10. Leadership:** Ambitious reform agendas require effective leadership at all levels. The hollowing out of local resources has impacted economic policymaking. There is a need for a renewed focus upon capacity building and empowering local leadership.

1

The growth challenge

- Cities are the engines of growth in the Scottish economy. But the outlook remains uncertain. One thing that we can be confident of is that, given current trends, it is likely that the next decade will be just as challenging as the last.
- The right response will be a mix of investment in areas of long-run growth potential alongside core city growth dynamics.
- A strategic focus will vary city-by-city, but will include a focus upon key sectors and sustained investment in the underpinning drivers of growth - i.e. skills & connectivity.

2/3

of Scotland's economic activity takes place in the city boundaries or surrounding areas



70%

of all business led R&D spending was by businesses within the 7 TTWA cities



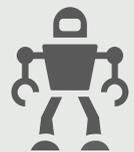
2

Technological change

- If the last 20 years have been dominated by globalisation, the next 20 years will be dominated by technological change.
- There are generally thought to be 3 major trends that will shape growth in the future -
 - Rapidly increasing capability of data-driven decision making;
 - Major disruption of business models by asset-light new entrants; and,
 - New ways of connecting businesses to each other and consumers to markets

3 in 10

jobs involve tasks that are at high risk from automation



Focus: how can the 4th industrial revolution facilitate innovation and tackle inequalities?



Edinburgh's goal is to be the **data capital** of the world



75%

Rate of **economic activity** among females (aged 16-64) in 2019 - up from 72% in 2006

17%

Increase in the **number of businesses** in the Scottish cities over the past 5 years

74%

Employment rate in Scotland's cities as of March 2019 - up from 73% in 2006

3

Transition to net zero carbon economy

- Climate change is not simply an environmental or moral issue but instead, one that will have serious consequences for our economy in the not too distant future.
- Cities have the opportunity to be agents of change in delivering the transition to a low carbon economy.
- It will for example, require major investment in supporting the industries of a net zero future – such as renewable energy to grow and develop at a city level.

50%

reduction in Scottish MtCO₂e emissions between 1990 - 2016



Net Zero

emissions target by 2045 made by the Scottish Government



4

Population change

- The major 'known' long-term economic shift over the next 20 years, which will have a profound effect on Scotland's cities, will be demographic change.
- Cities with pressures on their working-age populations will face acute challenges, as it leads to ever more economic activity being taken out of a local economy.
- Attracting skilled people with young families through high-quality housing and education, vibrant city centres and excellent outdoor leisure and recreation can act as a counterbalance to an ageing population.

79%

increase in the number of those aged 75+ in the next 25 years



An ageing economy will require **more fiscal resources** for public services



Migration can boost the working age population, particularly in cities such as **Inverness**



5

Tackle inequalities

- There is a recognition that there is a risk that, if left unchecked, inequalities may increase in the years ahead if growth continues to be concentrated in parts of the country, and parts of society, that have stronger economic foundations in the first place.
- The focus on 'inclusive growth' will be key - that is growth that tackles inequalities in outcomes and inequalities in opportunities.

Employment on its own is no longer the route out of poverty - evidence suggests that **fair work** is key to tackle inequalities



£670

weekly pay gap between the top 10% of earners and median earners in Aberdeen



The Scottish Government's **inclusive growth diagnostic** approach is an excellent tool for cities to approach this challenge

1. Introduction

Scottish cities outlook

Scotland's seven cities (Aberdeen, Dundee, Edinburgh, Glasgow, Inverness, Perth and Stirling) – “the seven cities” – make a significant contribution to Scotland's economy.

They share a number of strengths, from their skilled workforce, their international reputation and their location for some of the country's major economic and cultural assets. But they also have marked differences.

It is against this backdrop that the Scottish Cities Alliance commissioned the Fraser of Allander Institute to draft this 1st Cities Outlook Report.

The aim is to take-stock of Scotland's city economies, and to look forward to future challenges and opportunities.

Our remit was to –

1. Analyse the economic and policy context within which Scotland's cities operate;
2. Review the progress of Scotland's cities against key indicators, and the contribution toward sustainable, inclusive economic growth; and,
3. Highlight future challenges and opportunities for Scotland's cities.

Our approach was as follows.

Firstly, we reviewed the latest economic data to gain an up-to-date picture of Scotland's cities. This is vital, not only to understand where cities are at the moment, but how well placed they are to respond to future challenges and opportunities.

Secondly, we recognise that an academic exercise can only take you so far. Therefore, we wanted to engage with people directly involved in economic development within Scotland's cities.

To do this, we undertook a series of interviews with senior officials and city leaders from across Scotland. We supplemented this with workshops – in Aberdeen, Perth and Edinburgh – involving representatives from local and national government, public agencies, higher and further education and the private sector.

Five key areas of challenge and opportunity dominated the discussions.

- The growth challenge – and the importance of boosting productivity across Scotland's cities;
- The opportunities from technological change – and the growth of the knowledge-based economy;
- The transition to a net zero carbon economy – and the importance of supporting new ‘green’ industries of the future and improving the environment of our cities;
- The changing nature of our population – and the opportunities to make our cities attractive places to live and work; and,
- The importance of tackling inequalities – and crucially, providing opportunities for everyone in our cities to fulfil their economic potential and creating opportunities to improving wellbeing.

We discuss these themes in the report and reflect upon how Scotland's cities will be impacted by these structural changes. Each city has provided us with their key actions that they are taking within their city – and their future ambitions – to respond to these challenges.

The report is structured as follows –

- In Section 2, we summarise the contribution of Scotland's cities to the Scottish economy;
- In Section 3, we trace their performance over time and highlight some key issues that emerge from the most recent data;
- Section 4 discusses the policy context and trends; and,
- Section 5 provides a discussion of some of the opportunities and challenges that stakeholders highlighted to us as crucial for Scotland's cities in the years to come.

A common theme from our discussions is the need for policymakers and key partners to be ambitious about the future for Scotland's cities.

Many of the trends that we know are coming, whether that be the transition to a low carbon future, demographic or technological change, will transform the way in which cities operate.

If Scotland's cities are to take advantage of the opportunities that these changes will bring, and tackle head on key challenges, then it will require major investment and, above all, ambition.

Box 1: About the Scottish Cities Alliance

The Scottish Cities Alliance is a collaboration of Scotland's seven cities and the Scottish Government.

The Alliance was established in 2011 to progress the government's Agenda for Cities – the strategic framework for how national government would interact with Scotland's cities.

Its aim is to achieve an economically stronger future for Scotland through the joint efforts of Scotland's seven cities and the Scottish Government. It has a focus of promoting Scotland's cities and Scotland through bringing jobs and investment into the cities that will benefit the whole of the Scottish economy. To achieve this it takes both an inclusive and collaborative approach across cities and utilises data, technology and investment opportunities to support inclusive economic growth.

2. Scotland's cities: taking stock

The economic contribution of Scotland's Cities

To fully appreciate the outlook for Scotland's cities, it is important to take stock of the current state of play. Around 3.2 million people live within the Travel to Work Areas (TTWA) that incorporate Scotland's seven cities¹.

Whilst large on a Scotland-wide basis, Scotland's cities are relatively small on a global scale. This provides its own challenges and opportunities.

Around 58.5% of Scotland's population live within one of the Travel to work Areas of Scotland's cities.

Source: National Records of Scotland

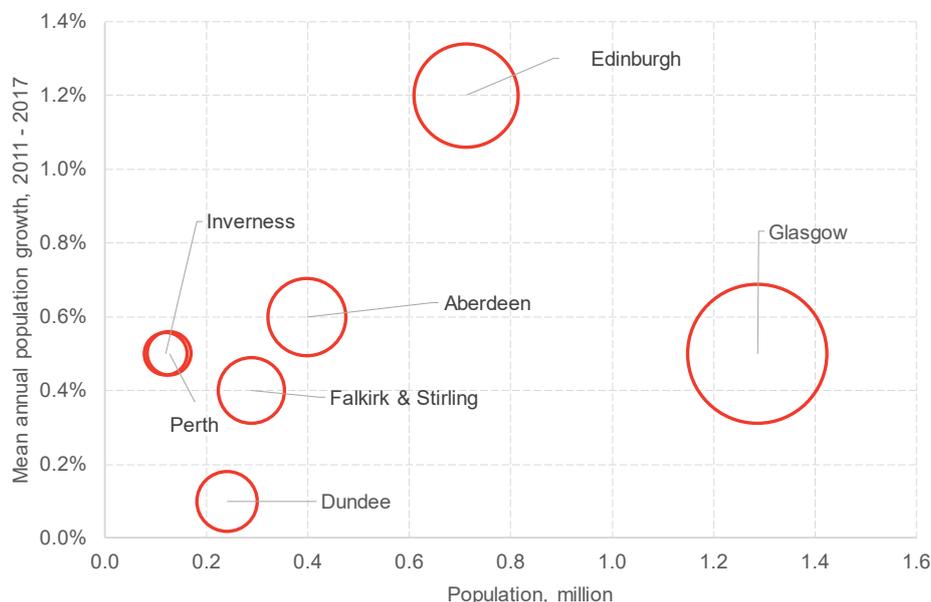
In recent years, their population has grown more quickly than the rest of the country.

Between 2011-17, 7 Cities TTWA population grew by an average of 0.6% per annum vs. 0.4% for Scotland.

Source: National Records of Scotland

The chart below shows Scotland's seven cities, their size and the relative growth in their population since near the start of the decade.

Chart 1: Population levels and growth in Scotland's 7 TTWA cities: 2011 - 2017



Source: Scottish Government

A key challenge in looking at city data is the way in which information is collected and presented. Throughout this report, we use the best available data. This does however mean that we sometimes use travel-to-work information, local authority or regional data – see Annex A.

¹ See Annex A for the definition of what constitutes a city for the purposes of this report.

“The challenges of policymaking across complex boundaries – and often different boundaries depending upon what policy area is being discussed – should not be underestimated. On many occasions you can be dealing with different people, from different bodies, all of whom are operating under different structures and reporting to different political masters”
- *Feedback from Edinburgh Workshop*

Unsurprisingly, given their scale, cities make a significant contribution to day-to-day activity in the Scottish economy.

The nine NUTS 3 regions containing the seven cities make up 67.3% of Scotland’s GVA².

Source: ONS

The wider Glasgow Region – comprising Glasgow City, Inverclyde, Renfrewshire, Dunbartonshire and Helensburgh & Lomond – accounts for just over 20% of activity in Scotland. Next is Edinburgh and the Lothians at 19%³. Dundee, Perth, Stirling and Inverness together account for only around 10%.

This means that the success of the overall Scottish economy depend, to a significant extent, upon the performance of its cities - and how they respond to the future challenges and opportunities outlined in this report.

Scotland’s cities are not just economically important because of their size or simply their ability to draw upon large numbers of workers or businesses.

GVA per head in the nine regions is £29,930 compared to £25,485 for Scotland.

Source: ONS

Cities, and the types of activities that they support, can contribute more than the sum of their inputs through agglomeration and clustering activities⁴.

Around 1,650,000 people are employed in Scotland’s TTWA cities – around 63% of the Scottish workforce.

Source: BRES, ONS

These can boost growth by improving the depth and quality of labour supply, improving access to specialised markets and technologies, and creating knowledge spillovers.

They can also unlock investment and provide an environment for innovation and internationalisation. They often act as hubs – for culture, government and tourism – helping to support wider regional and national growth.

Looking beyond traditional metrics of economic outcomes

Quite rightly, policymakers are increasingly looking at a wider suite of outcomes to obtain a more rounded picture of ‘economic wellbeing’ (or ‘inclusive growth’). As we highlight later on, Scotland’s cities can often host some of the greatest gaps between rich and poor in society.

² GVA estimates are available at local authority areas and the cities under this classification make up 51% of Scottish GVA as of 2017. NUTS 3 regions are used here for consistency throughout the report as the local authority GVA data is more limited than the NUTS 3 data.

³ Based upon current trajectory, it is not inconceivable that Edinburgh and surrounding areas could soon overtake Glasgow within the next decade.

⁴ Agglomeration activities take place when businesses from across sectors benefit from locating near each other. Clustering gives rise to benefits that are associated with geographic concentration of firms within sectors.

A word of caution, some studies attempt to create aggregate measures of ‘inclusive growth’, or ‘wellbeing’. Whilst helpful in informing debate, such measures – in our view – should be viewed with caution⁵.

A better approach is to provide a dashboard, which allows people to focus on the outcomes most important to them. Such an approach also allows the tricky discussion of trade-offs to be evidence based⁶ - see Annex B.

On measures of inequality, the figures are stark.

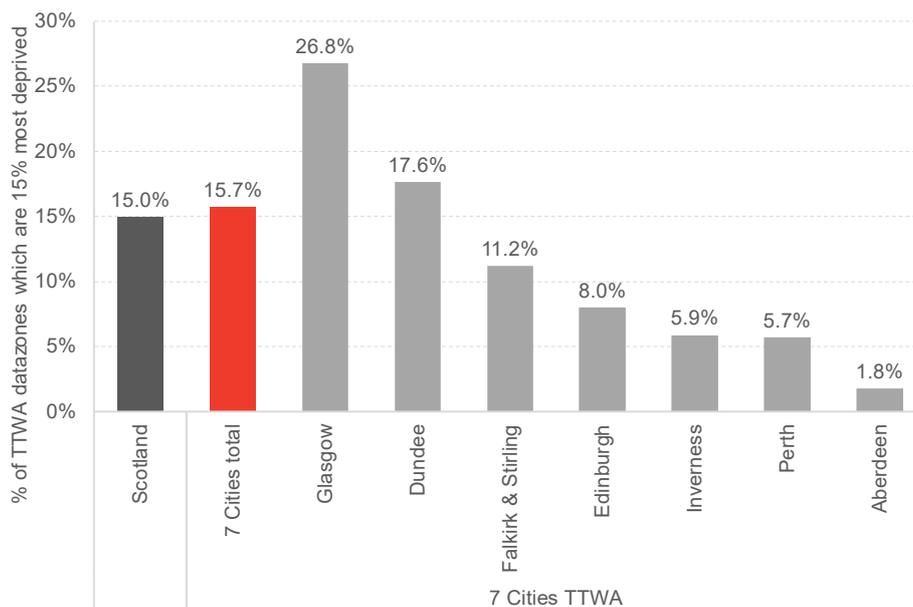
For example, over 25% of Glasgow’s TTWA datazones – small local economic areas of around 800 people – are classified as being in the 15% most deprived within Scotland. See Chart 2.

Of the 5% most deprived datazones in Scotland, Glasgow contains over half; Aberdeen and Perth contain none.

Source: SIMD, Scottish Government

This impacts right across economic and social outcomes. Turning around these figures will be key to future success in a number of key cities.

Chart 2: % Of the TTWA’s datazones that are the 15% most deprived in Scotland, 2018



Source: SIMD

Glasgow City local authority, the city with the lowest employment rate amongst Scotland’s cities as of March 2019 (66 percent) would need over 37,000 of its residents to find employment to reach the Scottish average of 75%.

Source: APS, ONS

5 Such ‘aggregate’ measures embed subjectivity into their results, which may or may not be the values held by the general population. They also suffer from technical issues that arise from combining different metrics (each with different measurement uncertainties).

6 This is the approach underpinning the Scottish Government’s National Performance Framework which remains the best and most effective approach to measuring outcomes at a national and regional level.

As we look forward, the potential for technological change brings enormous opportunities but it has the potential to widen some inequalities.

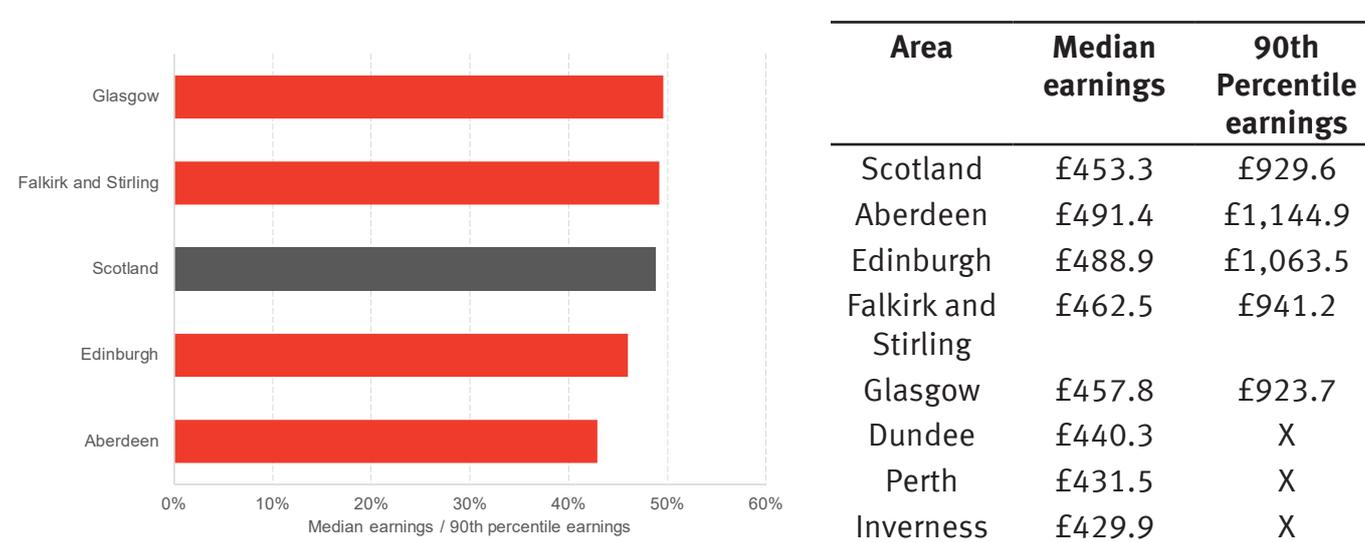
Elsewhere, inequalities can be more subtle. For example, in cities that have experienced rapid growth in recent years, such as Edinburgh, concerns are mounting over an ‘hour glass shaped’ economy – i.e. a growing gap between the top end of the income/wealth distribution and the rest.

Chart 3 shows the gap between median earnings and the top 10% - only available on a local authority basis. The gap in Aberdeen and Edinburgh is above the Scottish average. The gap in Edinburgh is widening⁷.

Of course, inclusive growth is about much more than levels of inequality, but wider measures of economic ‘prosperity’.

Life expectancy for example, can vary greatly both between and within cities. Tackling such issues will require a coordinated approach across the full suite of economic, health, and social policy.

Chart 3: TTWA work-based median earnings (gross weekly pay) as a share of top 10% of earnings, 2018



Source: ASHE (ONS)

To improve the agenda on inclusive growth, a number of cities are looking at a suite of indicators.

“The Scottish Government are requesting examples of how inclusive growth is supported by local policy decisions – what would be helpful to draw upon would be more evidence of how this is being implemented in national policy-making”
 - Feedback from Perth Workshop

Annex B highlights the attractive qualities of some ‘inclusive growth’ indicators but also some of the challenges.

Developing these indicators, and tracking their progress over time, is an important development in

⁷ The 90th percentile earnings are not reported for Dundee, Perth and Inverness because the extent of variation in these estimates is too large to be considered “reliable for practical purposes”. Box 2 explains further the statistical issues faced when estimating local indicators.

policy making. It allows for a more rounded assessment of policy and an analysis of synergies and trade-offs than has perhaps been possible in the past.

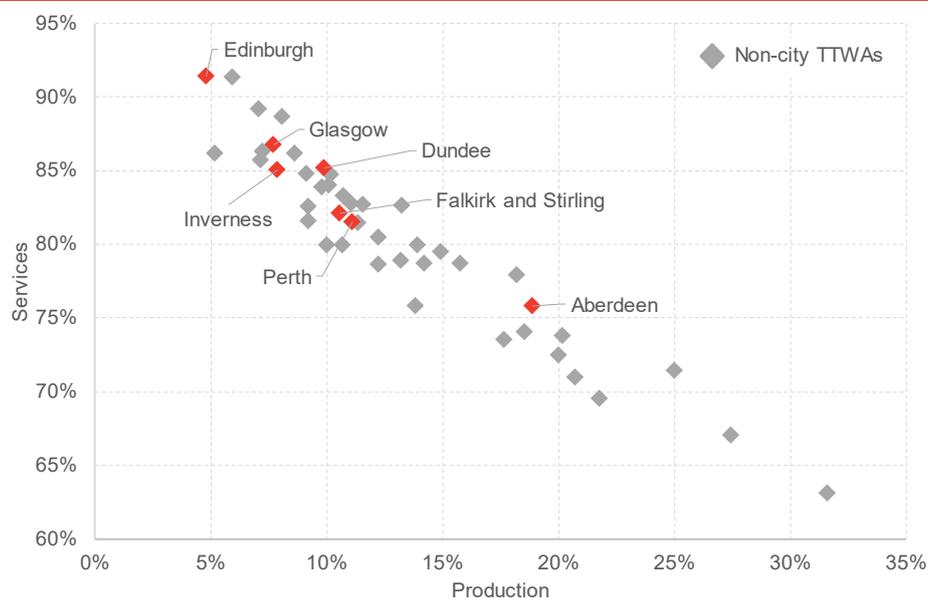
The diversity across Scotland's cities

One final reflection in this short overview of Scotland's cities is their diversity - and not just in scale (see Chart 1.)

But there are other differences. They differ in their economic history, geography and roles as regional/national hubs.

For example, Edinburgh – as the national capital and home to successful finance and tourism industries – is dominated by services. Aberdeen, in contrast, with its links to oil and gas, has a greater proportion of production sector jobs. See Chart 4.

Chart 4: Employment in services and production sectors in TTWAs, %, 2017



Source: BRES, ONS

Scotland's cities also vary in the role of both the public and private sectors.

In 2017, there were over 24,000 people in the local authority of Dundee working in the public sector - 31% of those in employment. This was 8 percentage points greater than the Scottish average of 23%.

Source: BRES, ONS

This has a number of implications.

Firstly, understanding and respecting each city's distinct comparative advantages is crucial in developing appropriate policy priorities. A 'one-size-fits-all' approach does not work.

Secondly, national policy agendas – for example, a focus upon growth sectors or international trade etc. – will have different implications for (and impacts on) each city.

Just as importantly, how cities are placed to respond to future opportunities differs markedly⁸.

“Scotland’s cities have arguably just as much to differentiate themselves from each other as they have in common. But learning from difference and respecting the different needs and opportunities of each city is just as important as looking for areas of similarity and joint working.”
- *Feedback from Aberdeen Workshop*

Many of the economic challenges that our cities face are shared. All of them are wrestling with a more uncertain macroeconomic environment. And all of them face challenges of inequality, with issues of transport connectivity, quality of housing stock and tight budgets also common themes.

But here again, there are differences. For example, a number of stakeholders highlighted the challenges for cities ‘not in the central belt’ – both in terms of their remoteness from national decision making and challenges around connectivity. Elsewhere, Glasgow and Dundee in particular, continue to deal with the scarring of industrial decline in the 20th century.

As the quote from the Aberdeen workshop highlights, this diversity provides an opportunity as well as a challenge. There are risks from trying to adopt a ‘single’ answer to future opportunities and challenges. But if diversity is respected, then there is an opportunity to learn from each other, work together on areas of genuine complementarity and take advantage of each other’s strengths.

Summary

Scotland’s cities make a significant contribution to the Scottish economy. The scale of that contribution – and its nature – differs from city to city.

They also share a number of strengths, but also challenges. Some of these have been around for some time, whilst others are either new or becoming more prevalent.



Between 2011-17, 7 Cities TTWA population grew by an average of **0.6% per annum** vs. 0.4% for Scotland



The nine NUTS 3 regions containing the seven cities make up **67.3% of Scotland’s GVA**



Edinburgh City is dominated by **services** with its prominent finance and tourism industries. Aberdeen has more **production** sector jobs due to its oil and gas resources



Median earnings in Aberdeen, Edinburgh, Falkirk & Stirling and Glasgow (TTWAs) are **above the Scottish median**



Of the 5% most deprived datazones in Scotland, **Glasgow contains over half**; Aberdeen and Perth contain none.

⁸ Aberdeen for example, is well placed – not just in Scotland but in the UK – to support the transition to a low carbon energy future. As a hub for the highlands, Inverness has an opportunity to gain from the growth in global tourism.

3. Scotland's cities: recent performance

Reflection of the national picture but growing divergence

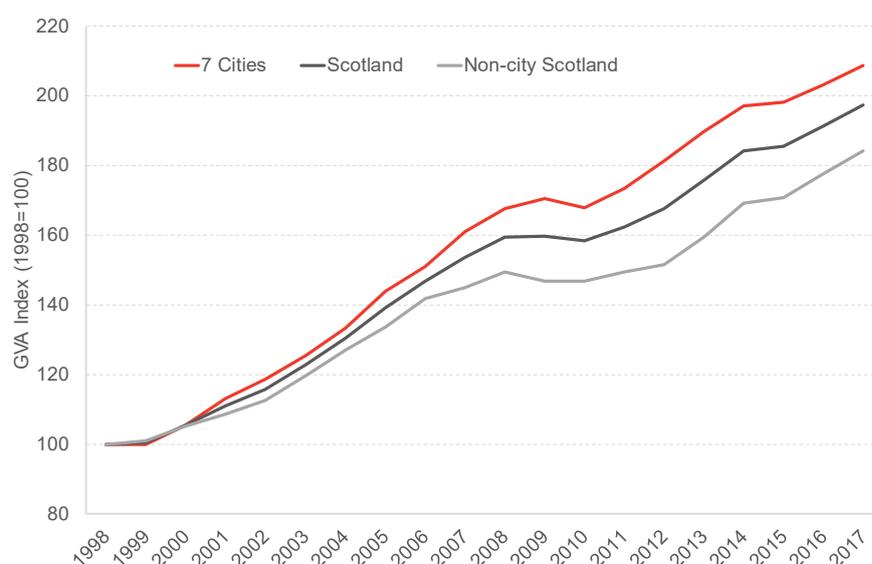
In the main, the performance of Scotland's cities in recent years are an extension of the national picture.

Since the financial crisis, growth – whilst positive – has remained fragile. Labour markets have performed strongly, but productivity has been squeezed. Not all of the improvements in the economy have been shared. Turning this performance around in the years ahead will therefore be a key challenge. City leaders, CEOs and their stakeholders all appreciate the scale of the challenge but remain upbeat about the outlook.

The growth performance of Scotland's seven cities

Scotland's 7 cities have grown slightly faster than the Scottish average over the past twenty years. However, there are often differences between cities (and over time). See Chart 5 and Table 1.

Chart 5: Nominal GVA for NUTS 3 city areas and non-city areas, 1998 - 2017



Source: ONS

Table 1: Average growth rates in GVA, 1998 - 2017

Area	1998-2017	2007-12	2012-17
Angus and Dundee	3.2	1.0	3.5
Glasgow	3.6	1.8	3.4
Perth, Kinross & Stirling	3.9	2.4	4.4
Aberdeen City and Aberdeenshire	4.0	4.1	0.4
Inverness, Nairn, etc.	4.4	3.3	1.6
Edinburgh	4.7	1.8	4.3
Scotland	3.7	1.8	3.3

Source: ONS

The coverage of the data used needs to be borne in mind. For example, the pace of growth in cities will be influenced by the performance of their wider regions – e.g. Aberdeenshire in the case of Aberdeen. See Box 2.

Over the past 5 years, the number of businesses in Scotland’s 7 local authority cities have grown by 17%. Scotland’s business count as a whole increased by 16% over the same period.

Source: ONS

Box 2: Local area and city statistics

Care is needed when examining statistics at a city level.

Firstly, there are challenges in measuring the economy at a sub-national level. Much of the data is collected through methods designed to be representative for the national economy. This means that there is greater margin for error in city statistics¹¹.

As an illustration, Chart 6 highlights the confidence intervals for youth employment in Aberdeen City, Highlands and Stirling¹².

The youth employment of 66.7% in the Highlands had a confidence interval of 12.8 % points which means we are 95% confident that the true value lies between 53.9% and 79.5% - a large margin. This makes interpreting small changes over time across local authorities a challenge.

If confidence intervals were not included and only the red points (central estimate) were reported then one might conclude that the Highlands has the highest youth employment. But, these intervals show us that this might not be the case as the true value could be as low as 53.9%.

Chart 6: Confidence intervals for employment rate of those aged 16-24, Apr 2018 - Mar 2019



Source: APS, ONS; FAI calculations

Secondly, sub-national statistics require careful interpretation. For example, there can be differences between indicators measured on a workplace or residence basis¹³ as a result of commuting patterns.

“The Government has made good progress to improve the coverage of local economic statistics, but gaps remain. With the focus upon regional inclusive growth – and the importance of place – this needs to continue to be prioritised.” - *Feedback from Perth Workshop*

For cities, the growth question is typically a mix of building upon existing comparative advantages whilst, at the same time, looking to re-invent aspects that have faced more challenging times.

“Cities are in a much better place than they were 10 years ago – with better leadership, a greater focus upon ‘what works’ and a higher level of ambition about what can be achieved”
- *Feedback from senior business leader*

The relative focus will vary from city to city. For example -

- In Edinburgh, our stakeholders discussed the challenges associated with managing a strongly growing economy in a sustainable and inclusive way;
- In Aberdeen, much of the discussion focused upon diversification, whilst maintaining its strength as a leading centre for oil and gas (and wider energy) technologies and services;
- In Glasgow and Dundee, we discussed the opportunities to build on existing key strengths but also of the importance of re-energising and re-generating existing economic assets;
- Whilst in Perth, Inverness and Stirling, there was a concentrated focus upon their attractiveness as a place to live and work, whilst recognising the distinct strengths each city has to offer – for example, in key sectors – and developing strategic investments around such strengths.

Over time, the success of Edinburgh as a source of economic activity has become more apparent.

This is not to say that the other city economies have declined, it is just that Edinburgh has grown more quickly.

When comparing GVA per head for the NUTS3 areas, it is clear that Edinburgh’s growth has been substantially greater than the other cities. Scotland and Glasgow’s GVA per head in 2017 were 58% and 71% of Edinburgh’s respectively.

Source: ONS

If anything, the pace of growth in Edinburgh has quickened in recent years. Of course, this is a positive, but this presents its own challenges in terms of inclusivity and sustainability.

The number of people employed in Edinburgh is up 11% since 2015. This compares to average growth across Scotland of 2%.

Source: ONS

Interestingly, Edinburgh stands out not just in comparison to Scotland and Scottish cities but to the UK as a whole.

Nominal GVA per head growth (1998 – 2017) in the NUTS3 regions of Edinburgh City and Aberdeen City & Aberdeenshire grew faster than the Scottish average, with 105% and 85% growth respectively – Edinburgh even grew faster than the (NUTS1) London average of 99%.

Source: ONS

Employment growth in Scotland's cities

A clear positive story of Scotland's economy in recent years has been the steady increase in levels of employment, supported in part by a significant and sustained rise in female participation.

Between 2006 and 2019 the economic activity of females (aged 16 – 64) in the 7 local authorities with cities increased from 72% to 74.5%, exceeding the Scottish female participation rate.

Source: APS, ONS

Chart 7 highlights that employment in the 7 local authorities with a city has performed broadly in line with Scotland as a whole in recent years. But there is significant variation on a city-by-city basis.

Chart 7: Employment rate in Scotland's local authority's cities, March 2006 - March 2019



Area	Apr 2005 - Mar 2006	Apr 2018 - Mar 2019
Scotland	73%	75%
7 Cities	73%	74%
Glasgow	63%	66%
Dundee	69%	67%
Stirling	74%	73%
Aberdeen	77%	76%
Edinburgh	75%	78%
Highland	78%	80%
Perth & Kinross	76%	81%

Source: ONS

One key area stakeholders highlighted to us as being important in the years ahead was around resilience.

In the past performance has been mixed. An indication of the relative resilience of city labour markets is perhaps best given in a comparison of the percentage change in total employment aged 16-64 following the financial crisis.

Chart 8 demonstrates this. Each dot represents a local authority and indicates –

- The % change in employment (16-64) 2008 to 2013 (i.e. the decline phase) on the horizontal axis; and,
- The % change in employment 2008 to 2018 (i.e. the recovery phase) on the vertical axis.

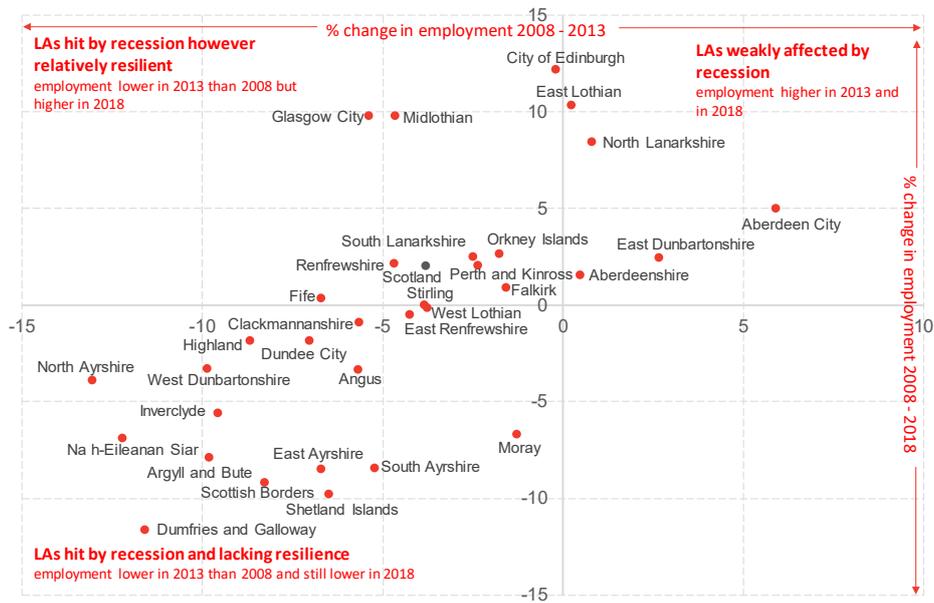
We see Edinburgh, Glasgow, Perth & Kinross and Stirling all having more people in work in 2018 than back in 2008. All of them, with the exception of Aberdeen suffered job losses during the aftermath of the financial crisis but have since bounced back.

In contrast, employment levels in Dundee – and the Highlands – are still to recover.

Boosting resilience is not straightforward. It will require a greater spread of employment opportunities to be created - in both the public and private sectors - and close working with key ‘economic assets’ of a city (such as their universities and further education institutions). It will also require a focus upon skills development and re-training.

“The financial crisis and the changing nature of retail has ushered a challenging period for our city centres. We need to re-imagine what they will look like in the future – as locations for more knowledge-based businesses, as market towns for the region and cultural and leisure hubs.”
 - *Feedback from Perth Workshop*

Chart 8: Percentage change in employment across Scottish local authorities since 2008



Source: ONS

“We have seen a welcome pick-up in employment, but the quality of work is not always as strong as it should be – with pressure on wages, in-work benefits and job security all having a detrimental impact on outcomes. Employment is no longer the guarantee to a better outlook that it once was.” - *Feedback from senior policy official*

Since the financial crisis in 2008, real median weekly earnings in the local authority cities has declined for all 7 cities, particularly in Perth & Kinross where real weekly earnings are £64 lower.
 Source: ASHE, ONS; OBR

Productivity growth in Scotland's cities

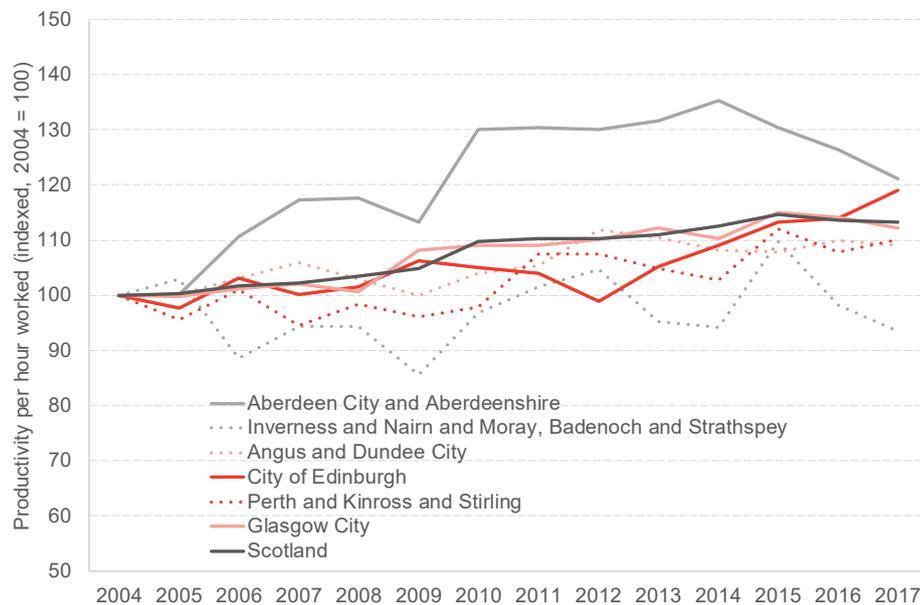
On productivity – like most advanced economies as a whole – the recent story has been challenging.

Chart 9 shows that productivity among the cities has been relatively weak in recent years, with only Aberdeen and Edinburgh exceeding the growth in Scotland since 2004⁹.

With relatively strong employment rates, future growth will only come through a pick-up in productivity.

Across many cities, whilst employment has risen, a proportion of these jobs have been in relatively low productivity sectors. This so-called ‘hollowing-out’ of the labour market and the loss of ‘middle-skilled’ professions¹⁰ is not only a challenge for growth but, if it continues, is likely to further widen inequalities.

Chart 9: Real GVA (B) per hour worked in Scottish cities (NUTS3 areas), indexed 2004 = 100, 2004 - 2017



Source: ONS

In Glasgow there has been a rise in elementary occupation employment (SOC 9) of around 10,000 since 2008 but a fall in middle-skilled jobs (SOC 4-8) of over 4,000. This is equivalent to a 35% rise in low-skilled jobs. Low-skilled jobs accounted for 13% of Glasgow's workforce in 2018. Since 2008 there has been a rise in high-skilled jobs (SOC 1-3) of over 23,000 - a 22% increase.

These so-called ‘hollowing-out’ trends are being seen in many economies.

For Scotland, there has been a 4% decrease in SOC 4-8 jobs, and a 14% and 4% rise in SOC 1-3 and SOC 9 since 2008.

Source: APS, ONS

⁹ Aberdeen unsurprisingly took a dip after 2014. Edinburgh has increased its GVA per hour worked by over 20% in 5 years.

¹⁰ For example, administrative and secretarial, skilled trade, caring & leisure, sales and customer service, and process and machine operative occupations.

Summary

In the main, the recent performance of Scotland's cities appears to mirror that of Scotland as a whole. However, the strong performance of Edinburgh stands out as a key outlier, not just in Scotland but across the UK. Employment outcomes have improved within most cities. But there are concerns about the sustainability of this pick-up and wider outcomes, such as job earnings continue to be squeezed.



Nominal **GVA per head** growth (1998-2017) in the NUTS 3 region of Edinburgh City grew faster than the Scottish average with 105% growth - a rate **higher than London's average** of 99%



Between 2006 and 2019, the economic activity of females (aged 16-64) in the 7 local authority cities increased from **72% to 74.5%**



Since the financial crisis in 2008, **real median weekly earnings** in the local authority cities has declined for all 7 cities, particularly in Perth & Kinross where real weekly earnings are **£64** lower.



Over the past 5 years businesses in Scotland's cities have grown **17%**



Edinburgh, Glasgow, Perth & Kinross and Stirling all having **more people in work in 2018** than back in 2008.



The number of people employed in Edinburgh is up **11%** since 2015 - this compares to a 2% rise in Scotland



Productivity among the 7 cities has been weak in recent years with only **Edinburgh and Aberdeen City** exceeding the Real GVA per hour worked growth rate of Scotland since 2004

4. Scotland's cities: the policy context

An increasingly complex landscape

The outlook for Scotland's cities - and the ability of policymakers to shape that outlook - will depend greatly on the policy environment in which they operate.

A regular comment from our stakeholder engagement was that city economies increasingly operate in a complex policy landscape:

- Firstly, there are national agendas – such as the Scottish Government's Economic Strategy and UK Government's Industrial Strategy – that shape the overall policy environment;
- Secondly, many of the levers of growth – such as education, skills, enterprise, transport, housing etc. – are heavily influenced by national policy directives;
- Thirdly, local policies are increasingly driven, not just by city governments, but by nearby authorities, regional partnerships and the like. These interactions, and who is involved, can often vary depending upon the particular policy area¹¹; and,
- Finally, there are wider strategic debates around funding, local governance reform and – more political – concerns around a centralisation of power and reduced local autonomy.

There is a clear appetite across Scotland for a more streamlined policy landscape.

Scottish Government Economic Strategy

The Scottish Government's Economic Strategy is the vehicle through which Ministers seek to deliver faster sustainable economic growth. At the heart of the approach are two pillars: increasing competitiveness and tackling inequality.

Boosting productivity is crucial. To do this, the government seeks to support four drivers: Investment, Internationalisation, Inclusive Growth and Innovation.

But as we have seen above, boosting productivity – in cities and across the economy as a whole – remains a key challenge.

As Table 2 shows, underlying the aggregate figure for Scotland is significant variation across Scotland's cities. Some of this reflects the sectoral mix of economic activity, but some of it reflects a more general weakness within the business base.

An issue that was discussed extensively during our stakeholder discussions – was the debate between the 'fat middle' and the 'long-tail' of productive companies.

As Chart 10 highlights, for the three Scotland's cities where data are available there are effectively two very different types of companies¹². A tail of highly productive firms; and a larger group of businesses 'making do'¹³.

11 The number of policy initiatives that now exist – from Tax Incremental Financing, Growth Accelerator Models etc. – all add a further layer of complexity.

12 The chart shows the proportion of firms in each city at different levels of productivity.

13 Businesses can have negative GVA per worker at a given time when reported purchase values exceed total turnover.

The distributions show the proportion of firms at different levels of GVA per worker. The height of the curve shows the proportion of firms which have a certain GVA per worker, there are therefore many firms in Scotland with GVA per worker between £15,000 - £60,000 (the hump) while there are much fewer between £75,000 - £210,000 (the long tail). This is mirrored in Glasgow and Edinburgh.

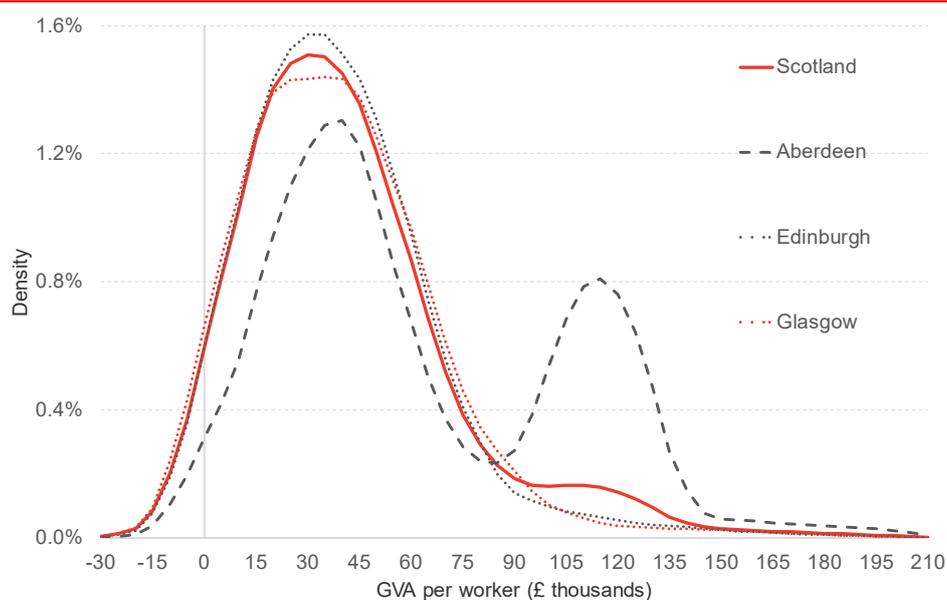
Aberdeen’s double hump is driven by the presence of their large oil and gas supply chain. This means that whilst Aberdeen has a large share of workers with productivity of around £30,000 - £45,000 each, they also have a fairly large share of workers with productivity of around £105,000 - £120,000 each.

Table 2: GVA per hour worked index by NUTS 3 region, UK = 100, 2016

Region	Nominal GVA per hour worked index
United Kingdom	100.0
Scotland	99.4
Glasgow City	93.6
Angus & Dundee City	96.1
Inverness etc.	98.3
East Lothian & Midlothian	99.5
Inverclyde & Renfrewshire, etc.	99.6
Perth & Kinross and Stirling	102.4
E. & W. Dunbartonshire, etc.	102.8
Aberdeen City & Aberdeenshire	111.4
Edinburgh, City of	112.3

Source: ONS

Chart 10: Distribution of labour productivity by firms in Scotland, Aberdeen, Edinburgh & Glasgow, 2015



Source: ONS; FAI

In looking forward, shifting productivity levels within this core business base in Scotland's cities will be crucial¹⁴.

This is perhaps less about attracting large-scale international investment, top-end R&D and the like, but more about core digital skills, basic process innovation, fair work, and better management practices. It is also about creating the right underlying productivity dynamics within a city, such as better infrastructure.

“There needs to be more incentives and opportunities for cities to innovate – a new innovation fund in which cities can bid for new resource would be a great way of encouraging and rewarding bold thinking” - Feedback from senior business leader

On the drivers of innovation, investment, internationalisation and inclusive growth, unsurprisingly cities make a significant contribution.

For example, many businesses in Scotland choose to locate their R&D activities in cities to take advantage of links to universities and a network of similar businesses. A similar story is true for exporters and inward investment. This provides a strong base to build upon.

“Perception is crucial. As a nation, we need to focus more on ‘what is good’ with our cities.” - Feedback from Edinburgh Workshop

Over 70% of all business led R&D spending was carried out by businesses within the 7 city TTWAs.

Source: BERD, Scottish Government

Of the TTWA cities, Aberdeen had the greatest number of innovation patents per 100,000 of the population in 2017 with over 8 patents per 100k. Perth, Dundee & Glasgow all fell below the Scottish average of 2.9.

Source: Intellectual Property Office; National Records of Scotland

Interestingly, many stakeholders highlighted a change in focus with regard to international investment with an increased focus upon job “quality” rather than simply job numbers. This reflects a greater maturity and understanding of the recent performance of city economies and the importance of productivity.

Scotland's 7 local authority cities make up 40% of Scotland's total international exports, which have a total value of around £30bn.

Source: Scottish Government

¹⁴ Some businesses in this core base will always have relatively lower levels of productivity – e.g. local services such as hairdressers, small scale shops etc. But even accounting for them, there is clearly scope to boost core productivity.

Inclusive growth agenda

Inclusive growth is a key pillar of the Government's Economic Strategy:

'Growth that combines increased prosperity with greater equity; that creates opportunities for all and distributes the dividends of increased prosperity fairly'

Broadly speaking, there are two – distinct but related – aspects of this agenda.

The first, concerns tackling levels of inequality within society – gender, ethnicity, social background etc – no matter the location. As highlighted earlier, cities lie at the heart of solving levels of inequality as they are often areas where it is the starkest.

Most of the cities that we spoke with are developing strategies and plans for delivering their own agenda for inclusive growth¹⁵.

“Inclusive growth is the right approach. But this should not be at a risk of downplaying our strengths – and prevent growth in the parts of the country that can improve the performance of the nation as a whole. We should not apologise for success.”
- *Feedback from senior policy official*

The second, concerns differences in economic performance based upon geography – i.e. the so-called regional inclusive growth agenda.

Much of this debate has concentrated upon differences between regions and/or local authority areas. Cities can often make these worse by drawing-in activity from outlying regions¹⁶.

However, our stakeholders argued that it is important not to lose sight of city-wide inequalities. Some of the greatest levels of 'regional' inequality in terms of economic outcomes exist *within* cities.

As an illustration, Chart 11 shows levels of income and employment deprivation across Glasgow datazones (the grey dots) vs. the same measures at a local authority level (the red dots).

Employment deprivation is calculated by using data on indicators such as the claimant count and the number of people receiving employment support allowance and disability allowance.

Income deprivation is determined by factors such as the number of recipients of job seekers allowance and universal credit, and the number of adults and children dependent on adults in receipt of tax credits.

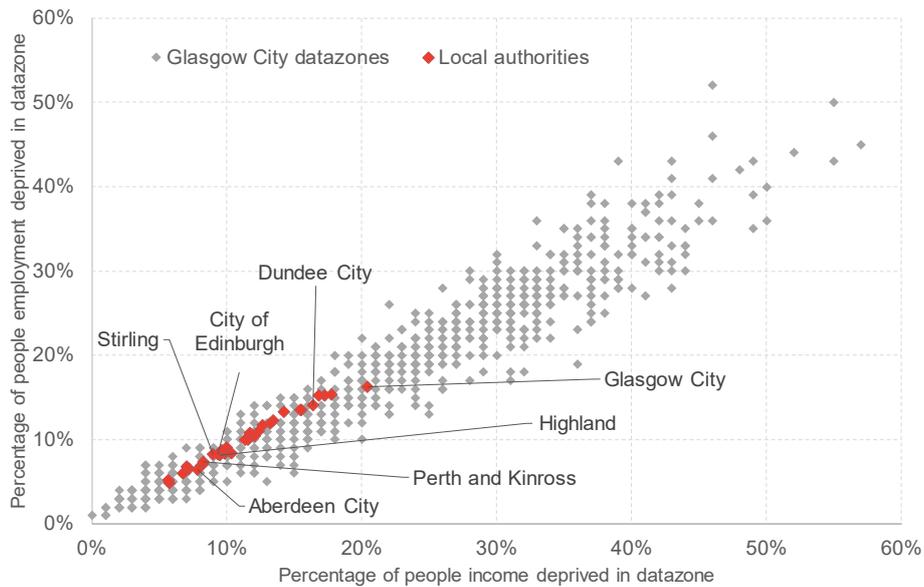
The chart highlights how Glasgow City faces much greater income and employment deprivation than Stirling or Aberdeen, and a good share of its datazones that face deprivation are well above the levels of the other local authorities and cities.

Tackling such issues requires major investment into housing, health outcomes, etc. and a decisive shift in policy priorities. There is clearly an appetite within cities to promote inclusive growth.

¹⁵ See for example: [Stirling Council](#); [Glasgow City Council](#); [Edinburgh City Council](#).

¹⁶ Many regions in Scotland, such as North Ayrshire, face significant challenges and lack the pull of a city or many of the key 'economic assets' of a city, such as a large population or a large scale higher and further education sector.

Chart 11: % Of people who are income and employment deprived in Scottish data zones, 2016



Source: SIMD, Scottish Government

The macroeconomic policy context

It is clear that we are entering an unprecedented period of economic and political uncertainty. In such times, it is vital that policy remains flexible and responsive to change.

Brexit overshadows much of the outlook. Leaving the EU will represent the most significant change to the Scottish economy in a generation.

Over 45% of Scottish international exports are destined for the EU.

Source: Scottish Government

Many of the impacts are hard to assess. A great many will be relatively subtle but long-lasting.

Nearly 144,000 jobs were linked to EU demand for Scottish exports in 2015.

Source: Fraser of Allander Institute (2019)¹⁷

Scotland's cities cannot expect to be immune from such changes. As key sources of exports and inward investment, they will be impacted whatever the final terms of the UK's exit from the EU.

One area of particular concern for Scotland's cities is around population.

Net migration to Scotland has meant an inflow of working age migrants in recent years.

There were around 223,000 EU nationals living in Scotland in January - December 2018. This was equivalent to around 4.2 per cent of the total population.

Source: APS, ONS

17 See [Fraser of Allander \(2019\): Brexit and the sectors of the Scottish economy](#)

Migration can have a number of advantages, particularly in places – like parts of Scotland – where there is a shrinking working age population. This is particularly important for certain sectors and businesses.

“Our city has benefited greatly from international investment with many companies choosing to locate here to access the EU – we need to remain open to international opportunities”
- *Feedback from Edinburgh Workshop*

Overseas in-migration into Scotland in 2016-17 was estimated at around 33,000, with the 7 local authority cities accounting for 75% of this. The Highlands that will require sustained migration in the years to come as population projections estimate that by 2041, the working age population will be 5% lower than it was in 2016 and the 75 and over population will have almost doubled.

Source: National Records of Scotland

Another key theme throughout our discussions was the impact of ‘austerity’.

After a period of growth in spending in the early years of devolution – with resource budgets up almost 50% in real terms between 1999 and 2007 – over a decade of consolidation has followed. Since 2010-11, the Scottish Government’s resource budget has shrunk by 7% (in real terms).

Source: Scottish Government

The squeeze on resources has taken place at a time of a growing population and rising demand. The cuts to ‘non-protected’ areas – of which local government has been one – have been particularly tough.

With health spending likely to account for an ever-increasing share of the Scottish Budget, and more and more of local resources tied up on social care, it is clear that the fiscal outlook for Scotland’s cities will remain challenging for the foreseeable future.

“The funding mechanism for city/local government is in need of a radical overhaul. At the very least there needs to be more autonomy to shape economic development.”
- *Feedback from Aberdeen Workshop*

In our discussions with stakeholders, there was a consensus that budget cuts have hampered the ability of city governments to invest in their economies. Other areas of spending – particularly those where there are statutory responsibilities – have had to be prioritised.

The number of officials involved in economic development has fallen rapidly over the past 10 years. This loss of capacity has severely affected the ability of local policymakers to support their economies.

“With major changes coming, this will require different ways of thinking about economic policy, the skillsets of those in economic development will have to change”
- *Feedback from Perth Workshop*

The local policy context: including City Region Deals

To counteract, at least in part, this squeeze on local resources, there has been an increase in the number of initiatives and ‘innovative’ mechanisms in the field of local and city economic policy.

Whether this suite of interventions – from new tax incentive schemes and new financing regimes – have had the fully desired effect remains open to debate.

The major new policy development has been the roll-out of City Region Deals. City Region Deals are agreements between the Scottish Government, the UK Government and local government designed to bring long-term strategic approaches to improving regional economies.

In the main, stakeholders see city deals as a very positive development. Firstly, they have unlocked additional public and private funding. Secondly, they have helped to foster collaboration between local, regional and national partners.

There was also a sense that city deals have helped to boost local autonomy but in the main, most people thought that there is scope to do more. Recent moves around a Transient Visitor Levy and the Workplace Car Park Levy were welcome. There was mixed views on whether or not local-national engagement had improved.

“The degree of cross-boundary working – between cities and their regional partners – is much improved and we have City Deals to thank for that.”

- *Feedback from senior policy official*

Some stakeholders did highlight some challenges.

Firstly, whilst City Deal spending is welcome, it represents a fraction of the scale of cutbacks on city economies more generally.

Secondly, some of the funding seems to be ‘what is available’ rather than ‘what is needed’. The focus upon capital spending, as oppose to revenue spending, was seen as a key constraint.

Thirdly, there was a demand for greater clarity over ‘what next’. Are the current city deals a one-off, or a signal of a new long-term approach to boosting growth in Scotland’s cities? Regional partnerships are viewed as a positive development.

“Economic policy in Scotland often feels opportunistic and tactical – i.e. new initiative after new initiative. City Deals are good at delivering a longer term focus but is this going to continue?”

- *Feedback from senior policy official*

Summary

City economic policy making is operating in an ever more complex environment. It would appear that this complexity is here to stay. There was a belief amongst the majority of stakeholders that the autonomy of cities has been curtailed in recent years. This is likely the result of the government’s council tax freeze, the ring-fencing of grants and recent cuts to local government budgets. There is a clear demand from city policymakers for more responsibility, both in terms of local decision-making and their ability to inform and shape national policies.

Some cities were seeking to take forward their own agendas wherever possible. But the challenging economic and fiscal environment makes this difficult. City Deals have been viewed as a positive development, with an appetite to build on their success in the years ahead.

5. Opportunities and challenges

The importance of a bold and strategic approach

In the final part of the report, we reflect upon some of the key opportunities and challenges facing Scotland's cities.

In the current economic and political climate, it is understandable that people's confidence in the outlook has been shaken. But this makes focussing upon where we can be confident of future opportunities all the more important.

All of the stakeholders that we engaged with were optimistic about the outlook both for their city and Scotland.

Scotland's cities have an enviable skills base, trusted institutions, strong infrastructure, resilience and an increasing sense of 'place' in which it is attractive to live in. There was also an acknowledgement that – whilst there is scope to improve – the closer collaboration between business, higher and further education and government is paying dividends.

This provides cities with a platform to look forward with confidence to the future. Not all of this will be easy. Tackling inequalities in our cities remains a tough nut to crack; whilst shifting to an economic model that puts less strain on our planet's natural resources will require a fundamental shift in day-to-day activities.

As highlighted above, the best strategic policy approach will vary from city to city.

In this final section of the report, we highlight some key opportunities and challenges for Scotland's cities.

“Many of Scotland's cities are already showing major new ambitions to transform their economies with ambitious new plans – whether that be via Aberdeen's bond issue; the V&A in Dundee; Glasgow's Connectivity Report or Inverness' new innovation hub”
- *Feedback from senior policy official*

As we might expect, a number of different themes and topics emerged from our discussions.

We have chosen to focus on five key areas that dominated our discussions with stakeholders.

These were seen as being the key opportunities and challenges for cities in the years to come:

- The growth challenge
- Technological change
- The transition to a net zero carbon economy
- Population change
- Tackling inequalities

Whilst all five are intertwined with each other, for ease of discussion we take each one in turn.

The growth challenge

As highlighted above, national growth has been tracking well below trend since the financial crisis.

By the end of 2018, output per head in Scotland was only around 2% higher than before the financial crisis. That same indicator grew by nearly 10 times that amount in the preceding decade.

Source: Scottish Government

The outlook remains uncertain. One thing that we can be confident of is that, given current trends, it is likely that the next decade will be just as challenging as the last.

The need to prioritise sustainable growth across Scotland's cities will therefore be crucial.

“If we're being honest, we are always going to face challenges around scale given our size. We need to recognise that and collaborate to deliver genuine international impact”
- Feedback from Aberdeen Workshop

The right response will be a mix of targeted investment in areas of long-run growth potential alongside core city growth dynamics. A strategic focus will vary city-by-city, but will include:

- A focus upon key sectors: whilst we do not know the specific industries that will drive growth in the future, the changing structure of our economy is likely to mean growth in knowledge-focused businesses¹⁸, and,
- Sustained investment in the underpinning drivers of growth such as digital, skills and connectivity within and between Scotland's centres of economic activity.

Cities have to be realistic about where their advantages lie. Regional growth plans across the UK – and internationally – reveal that every area is chasing the same ‘prizes’ in the digital economy, life sciences, low carbon and advanced manufacturing.

Finding particular niches - i.e. on or two comparative advantages - and then targeting efforts towards them is likely to pay dividends. This will cut across strategic local, regional and national infrastructure and policy priorities.

“The focus upon ‘industries of the future’ is the right thing to do. But we need to avoid spreading ourselves too thinly. We also need to recognise that every other city in every other country will be developing their own plans – we need to be realistic about where our strengths lie”
- Feedback from senior policy official

Supporting entrepreneurship and business growth - of scale - more generally, will help create a more dynamic economy and one that is resilient to change. City planning and development will need to recognise this, including for example, ensuring new businesses have the flexible and modern space to grow that they need.

“The level of engagement with local partners in academia and business is much improved and there is a genuine sense of partnership and working together to support our city economy”
- Feedback from senior policy official

¹⁸ Other sectors will include those where demand is likely to increase because of demographic shifts, such as in sustainable tourism and health & social care.

Cities will also need to use the full suite of levers to support growth. For example, the conventional view is that housing is primarily a social role for government. But in reality, sufficient affordable housing at reasonable distances from where people work is crucial to increasing participation and productivity.

“We need to think radically about how our housing and transport policies can be used to promote growth - our city continues to operate a public transport system that has not changed in 50 years”
- *Feedback from senior business leader*

Finally, a successful approach will also include tackling the long-term economic barriers that exist in many cities. We touch on these later.

Technological change

If the last 20 years have been dominated by globalisation, the next 20 years will be dominated by technological change. Even in the last decade, we have seen major changes in sectors from retail to banking. Market access is becoming easier with more automated and tracking systems.

There are generally thought to be 3 major trends that will shape growth in the future -

- Rapidly increasing capability of data-driven decision making;
- Major disruption - or potential for disruption - of business models by asset-light new entrants; and,
- An overhauling of the traditional way of connecting businesses to each other and consumers to markets

This poses both a challenge and opportunity¹⁹ for Scottish cities - particularly given their position as key centres of economic activity.

“We can develop the best ideas around, but ultimately our success will depend upon the effectiveness of leadership within the city - the most successful cities in the world often have visionary and charismatic leaders” - *Feedback from Aberdeen Workshop*

Cities should focus on how the 4th industrial revolution can boost productivity, support high quality jobs and investments, facilitate innovation and internationalisation, and tackle inequalities will be key.

One area where technological change will have a major impact will be on future labour markets.

Many current jobs will be replaced. But at the same time, many new jobs will be created. In a recent report - *Scotland: 2050*²⁰ - we estimated that around 3 in 10 current jobs in Scotland involved tasks were at high risk from automation.

Jobs in the future are likely to depend much more on highly-skilled workers, innovation and a robust services sector that provides ongoing support to digital firms, knowledge-based activities, sustainable tourism, health and social care and advanced manufacturing.

Looking at the business make-up, skills-base and overall city environment that will support growth in the technological age needs to be a key focus for cities across Scotland.

¹⁹ We have already seen the challenges that the switch to online retail has had on high streets. Re-imagining the role of city centres, and being flexible to change, was a key theme of much of our discussion with stakeholders.

²⁰ See [Fraser of Allander \(2019\): Scotland in 2050: realising our global potential](#)

For a country such as Scotland, there are likely to be two sources of opportunity.

Firstly, an opportunity to position Scotland's cities to take advantage of new innovations and technologies as they emerge.

Secondly, there is potential for businesses and higher and further education institutions to lead the development of new technology directly.

So what might this look like in practice?

- The scale of ambition will clearly vary. Edinburgh's goal to be the data capital of Europe is clearly at one end of the spectrum but supporting the greater use of technology and digital across all sectors – and all aspects of city government – will benefit everyone;
- As ever, some cities will find attracting such industries easier than others. So each city will have to prioritise its distinct niche and business offer;
- As the importance of intangible capital - i.e. the power of ideas - rather than traditional drivers of growth becomes ever more important, the significance of making cities attractive places to live and work provides new opportunities to grow clusters, attract workers and boost economic wellbeing; and,
- Reskilling and upskilling must also become the norm – at all ages of the workforce.

“As a city we're working hard – with our partners – to identify the 1 or 2 things that as a city we want to be known for in 10 to 15 years and then aligning our approach to deliver this ambition.”
- *Feedback from senior policy official*

The transition to net zero carbon emissions

Global emissions are on track to rise significantly in the decades to come. Climate change is not simply an environmental or moral issue. But instead, one that will have serious consequences for our economy in the not too distant future.

In May 2019, the Scottish Government set a target to reach net zero by 2045²¹. Already, a number of cities have indicated that they wish to go further, and achieve net zero 'well before' 2045²².

“More of the same rhetoric on climate change is no longer going to cut it – policy and business need to move more quickly if we are to meet our targets by the middle of the century”
- *Feedback from senior policy official*

However, there are questions about whether or not current policy – at all levels of government – is sufficiently ambitious to achieve these targets²³.

Between 1990 and 2016, Scotland reduced mtCO₂e emissions by just under 50% - the 5th largest reduction out of all EU member states. Scotland produced 7.14 tonnes CO₂e per capita in 2016 compared to the EU average of 8.29 tonnes CO₂e.

Source: Scottish Government

For cities, this will require a radical shift in policy and the way in which a city operates.

Cities have the opportunity - arguably more so than other parts of the country - to be agents of

21 'Net zero' refers to the achieving an overall balance between emissions produced and emissions taken out of the atmosphere.

22 Edinburgh has set its target to 2030.

23 See for example, [the UK Committee on Climate Change](#)

change in delivering the transition to a low carbon economy.

It will for example, require major investment in supporting the industries of a net zero future – such as renewable energy to grow and develop at a city level²⁴. It will also require initiatives to develop supply chains in a ‘circular economy’ focused upon more local production, low waste and recycling.

“Climate change is a challenge and opportunity for Scotland’s cities – both in terms of industrial opportunities and re-thinking how we move people around our cities for business and leisure”
- *Feedback from Aberdeen Workshop*

But will also require radical changes in day-to-day policies. And here cities have an opportunity to show leadership. Housing will have to be transformed to cope with construction and refurbishment in low carbon design. The heating of homes, schools and offices will need to shift to shared forms of renewable heat.

Advice for businesses and households to improve resource efficiency, reduce energy costs and develop more sustainable business practices - whilst perhaps a more indirect approach - will, over time, help to deliver the step-change in behaviours that are required.

Connectivity – between but especially within cities – will also have to change. Relying on increases in the number of electric vehicles will not be sufficient on its own. Greater investment in public transport, especially intra-urban / city regional will be essential.

Cities will also have to be at the forefront of initiatives to improve air quality and reduce emissions. This will require well-run public transport systems that link people to jobs and city centres.

Not all of this will be easy²⁵. And it may lead to challenging trade-offs, particularly in the short-run. For example, constraints on connectivity may rub-up against other objectives around growth and measures to tackle inequality²⁶.

Population change

The major ‘known’ long-term economic shift over the next 20 years, which will have a profound effect on Scotland’s cities, will be demographic change.

The number of people aged over 75 is expected to increase by 79% over the next 25 years.

Source: National Records of Scotland

Chart 12 shows the expected demographic shift in Scotland’s cities 20 years from now. The Highlands by far has the biggest demographic challenges ahead with a population growth difference between the working age population and those aged 75+ at almost 100 percentage points.

The biggest threat to our city is the decline in our working age population – and the continued outflow of our young people to Edinburgh and London. We must turn this around if we are to have any chance of creating a dynamic and resilient city for the mid-21st century.

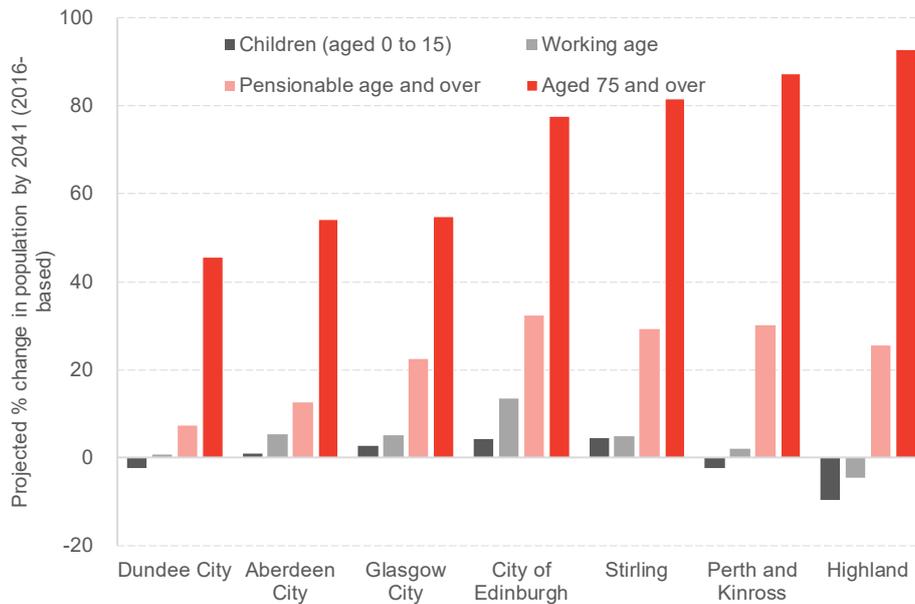
- *Feedback from senior policy official*

²⁴ Scotland is – in principle – well placed to lead such technologies. Aberdeen’s history as Europe’s oil and gas capital provides opportunities to diversify into other alternative energy sources.

²⁵ Scottish Power estimate that across the country as a whole, renewable energy capacity is likely to have to quadruple and electricity generation to double before the target could be met.

²⁶ For example, see recent debates played over Air Departure Tax.

Chart 12: Projected % change in population by age structure in 2041 by local authority (2016–based)



Source: National Records of Scotland

Cities with pressures on their working-age populations will face acute challenges, as it leads to ever more economic activity being taken out of a local economy. It will also require more fiscal resource – in health and social care – to be devoted to public services that support such a significant demographic shift.

Scottish Government spending on health has risen from 37% of day to day devolved spending in 1999/00 to 48% in 2019/20, and is set to continue on this trajectory into the medium term.

Source: Scottish Government

“Anchor institutions are good for cities. Our cities benefit from great universities. There is an opportunity to build a new relationship with them – not just in educating the future workforce of the nation – but as sources of graduates for the local community and as the developers of new business opportunities” - *Feedback from Aberdeen Workshop*

But as with any challenge, there are opportunities -

- Cities are actively considering new ways of engaging people in the economy as they get older;
- Many are re-thinking the role of cities as places to live and enjoy at all stages in life; and,
- All agree that attracting new talent to cities – particularly in the digital age – provides an opportunity to help turnaround some of these dynamics. Attracting skilled people with young families through high-quality housing, first-class education, vibrant city centres and excellent outdoor leisure and recreation can act as a counterbalance to an ageing population.

And whatever happens with Brexit, the importance of remaining attractive to inward migration - both international and from the rest of the UK - cannot be over-estimated.

Tackling inequalities

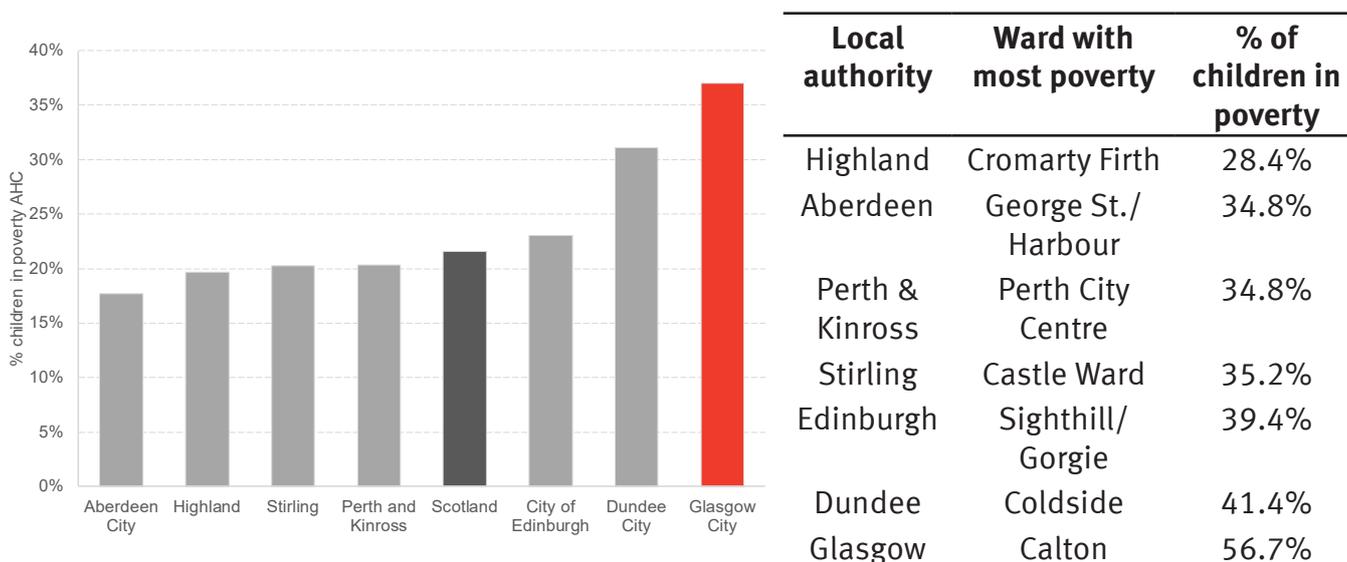
The final theme – and one that has been common throughout our engagement with stakeholders – is the importance of tackling inequalities.

A common theme identified by stakeholders has been the importance of tackling inequalities and there is an understanding that if left unchecked, inequalities may increase in the years ahead if growth continues to be concentrated in parts of the country, and parts of society, that have stronger economic foundations in the first place.

Many commentators have predicted that inequalities may rise in the future should technological change erode the value of labour²⁷. Given the scale and nature of possible change in the digital economy, the potential for this to impact across a larger number of households and wider distribution is that much larger.

Scotland’s economic history is full of the legacy effects of industrial change. Levels of child poverty for example, are highly correlated with structural change in our economy.

Chart 13: % Of children in poverty after housing costs by local authority, 2017/18



Source: End Child Poverty

A pro-active approach to supporting individuals, households and parts of our cities to change will be essential.

At the same time, there is a growing recognition that employment on its own is no longer the ‘route out of poverty’ it once was. A growing body of evidence suggests that ‘fair work’ is key to tackling inequalities, but it is also crucial in boosting productivity through better management practices and employee engagement.

“The Scottish Government should be commended for its leadership on inclusive growth. None of this is easy, and improvements will take time. But their clarity of focus is bringing welcome leadership” - *Feedback from Edinburgh Workshop*

27 See pages 50-51 of: [McKinsey Global Institute. Inequality: A persisting challenge and its implications](#).

The focus on ‘inclusive growth’ will be key - that is growth that tackles inequalities in outcomes and inequalities in opportunities²⁸.

Many of the interventions that will make a difference will take time to have an impact. Policies to narrow the attainment gap or to narrow health inequalities will take years to feed through to have their full impact. Putting in place structures that will deliver results over the long-term - and building a political consensus around the value of such an approach - poses a challenge.

A common theme in our discussion with stakeholders was of the challenges in developing an inclusive growth evidence base and narrative that moves beyond civil servants and local government officers and out to businesses and local communities.

At the same time, all stakeholders were clear that more needs to be done to transform this ambition and vision into practical results. Large scale investments are likely to be required over sustained periods of time. Stakeholders were also clear that there is a need for clear, unambiguous policies around inclusive growth.

There is now much greater recognition that - in the long-run - poverty and its consequences are bad for the economy. But in reality, there can often be challenging trade-offs (at least in the short-run). Should investment be targeted at dealing with pressures on infrastructure in strongly growing parts of cities, or at trying to generate growth in the first place in weaker areas?

With this in mind, the Scottish Government’s inclusive growth diagnostic approach is an excellent mechanism for cities to approach the inclusive growth challenge.

Figure 1: Inclusive growth delivery



Source: Scottish Government

Such an approach encourages cities, and local communities within cities, to be much more focused on their key strengths and weaknesses, before providing a framework to help them prioritise where their interventions should be targeted.

28 See: [Scotland’s Centre for Regional Inclusive Growth \(SCRIG\)](#)

Summary

The past decade has been a challenging one for Scotland's cities through a combination of weak growth and a challenging budget environment.

In looking forward, it is clear that the next decade will usher in major structural changes to our economy, from the transition to a low carbon economy, demographic change and technological change.

This will bring significant challenges, but also opportunities.

Each of Scotland's cities have been clear that they believe that they should have the freedom to respond to these changes in their own distinct way. Some will be better placed than others and will have to adapt their approach accordingly. This will require greater local autonomy and more incentive mechanisms for cities. At the same time, cities will have to be realistic about what they can and cannot achieve within their locality, given their starting position and the competitive environment in which they operate.

Above all it is likely to require a step change in approach and new ways of working.

6. Conclusion

Opportunities and challenges

Scotland's cities make a crucial contribution to Scotland's economy. That role has changed in recent years, and will change again in the future.

Our research has shown that those involved in supporting economic prosperity in our cities remain upbeat about the outlook. Whilst none believe that the future will not be without challenges, the underlying strengths of Scotland's economy and cities provides reason to be optimistic.

Our research has highlighted a number of common themes –

- 1. Boldness:** With our economy undergoing major structural change, economic policy needs to be bold and to have a long-term strategic focus. Cities are increasingly adopting such an approach, but more can be done to find out 'what works' and to learn from international best practice.
- 2. Collaboration:** Scotland's cities are maybe 'small' on a global scale but can achieve much more than the sum of their parts by working together. Collaboration has improved in recent years, but there is scope to do more.
- 3. Respect for divergence:** All seven cities differ greatly from each other. This makes the opportunities for collaboration – and benefiting from each other's strengths – even more important. But it also means that a 'one-size-fits-all' approach will not work, and there needs to be greater acceptance of local divergence, support for policy experimentation and investing in scale.
- 4. Fiscal flexibility:** Whilst there will always be disagreements over funding, there is support among local policy-makers for greater autonomy over local economic and fiscal policy.
- 5. Better engagement with national policy:** there is a demand for greater local influence over national decision making in skills, transport, housing and the environment. Collaboration will help support the Scottish Government's priorities of reducing inequalities and promoting inclusive growth.
- 6. Creativity:** Scotland's cities need to be creative – including in funding models and the use of their economic assets – in the future. This includes working with anchor institutions – such as universities, colleges and local businesses – and rethinking how best to use city assets for tourism, retail, culture and industry.
- 7. Develop unique selling points:** Cities need to get ever better at prioritising what they are 'known for'. Each city cannot do everything. Clarity of focus, including re-inventing and re-branding over time, can boost resilience. This is not about picking winners, but about identifying key strengths and channelling investments accordingly.
- 8. The importance of place:** The value of place will be key to linking ambitions around growth, tackling inequalities and the low carbon economy. A city's attractiveness as a place to live and work, its sustainable transport offerings, public realm and quality of housing stock will all be crucial economic levers in the long-run.
- 9. Provide greater clarity to the policy landscape:** There is a perception across city government that the policy landscape in Scotland is not as streamlined or effective as possible. This - over time - can lead to delay, confusion and missed opportunities.
- 10. Leadership:** Ambitious reform agendas require effective leadership at all levels. The hollowing out of local resources has impacted economic policymaking. There is a need for a renewed focus upon capacity building and empowering local leadership.

To create a sustainable and diverse economy tackling inequalities within the cities will be crucial and achieving inclusive growth will pose both challenges and opportunities for Scotland's cities. There are economic barriers ahead however, a focus on equal opportunities will deliver a more equitable economy in Scotland's cities for the future.

Annex

Annex A: Travel to Work Areas

One of the challenges when analysing ‘city economies’ is the definition of what constitutes the economic footprint of a city.

In many cases, political or administrative boundaries – e.g. local government, City Region Deal, Regional Partnership etc. – reflect a variety of factors including traditional geographical and governance areas, rather than economic factors.

Some local authority structures – including Dundee, Aberdeen, Edinburgh and Glasgow – the political boundary is contained within a city. But in Stirling, Perth and Inverness, the boundary is much wider.

Economists typically focus upon Travel to Work Areas – i.e. areas where most commuters travel to and from city areas to work or do business. Even here however, there are challenges.

For example, they are based on census information and can become dated. They also do not always correspond to standard statistical measurement areas, such as Eurostat’s Nomenclature of Territorial Units for Statistics (NUTS) regions that govern national economic data.

Aside from being an important statistical issue, the definition of a ‘city economy’ has important policy implications. For example, what might make sense from a regional economy perspective, might cut-across political boundaries creating tensions and problems of coordination.

Annex B: Inclusive Growth Indicators

	Example indicators	Examples of advantages & disadvantages
Productivity	<ul style="list-style-type: none"> ■ GVA ■ GVA per head ■ GVA in key sectors ■ Productivity (GVA per hour worked) 	<ul style="list-style-type: none"> ■ GVA measures the value added to the economy ■ Estimates are transparent and published regularly ■ Challenges include – measurement (including revisions); contrasts between workplace and residence metrics; and they do not capture inequality, wellbeing or environmental sustainability
Participation	<ul style="list-style-type: none"> ■ Employment ■ Unemployment & economic activity ■ ‘Occupation type’ ■ Part-time/full time ■ Underemployment ■ Earnings ■ Source of income – e.g. % in receipt of social security ■ Earnings distribution 	<ul style="list-style-type: none"> ■ Employment key income source for most households ■ Viewed in round, unemployment, occupation type, part-time/self-employment, underemployment can indicate ‘health’ of labour market ■ Earning information helps to illustrate how much of any improvement in the economy is captured by households ■ Information on distribution helps to illustrate levels of inequality in an economy ■ Challenges include – margins of error particularly within sub-groups; difficulty measuring underemployment and job security; correlation between qualification, skills and outcomes are not as strong as in the past
Population	<ul style="list-style-type: none"> ■ % With level of qualification ■ Life expectancy by area, household distribution 	<ul style="list-style-type: none"> ■ Information on skills and skills gap helps to indicate effectiveness and vibrancy of policy. ■ Life expectancy is a good indicator of the population’s health ■ Challenges – margin for error can be high except for big cities.
Place	<ul style="list-style-type: none"> ■ CO2 emissions ■ Air quality 	<ul style="list-style-type: none"> ■ Such indicators help to capture the ‘outcomes’ we want from our economy ■ Challenges – outcomes can be influenced by a great many factors, so attribution tricky; many ‘wellbeing’ metrics of interest – e.g. mental health outcomes – remain difficult to collect on a consistent basis at a regional level.
People	<ul style="list-style-type: none"> ■ Poverty rates ■ Child poverty rates ■ Fuel poverty rates ■ SIMD16 - housing, access to services etc. 	<ul style="list-style-type: none"> ■ Poverty measures typically correlated with ‘economic opportunity’ ■ Scottish Index of Multiple Deprivation (SIMD) useful tool for outcomes in housing, health, access to services, crime etc. ■ Challenges – SIMD data published infrequently; poverty measures suffer from measurement issues at a local level.

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