

A satellite-style map of Scotland and the surrounding North Atlantic and North Sea. The landmass is shown in shades of brown, tan, and green, with a black outline. The surrounding waters are a deep blue, with white, swirling patterns representing ocean currents or weather systems. The map is oriented vertically, with the top of the page showing the northern part of Scotland and the bottom showing the southern part.

# Scotland's economic powerhouses

a focus on Scotland's city  
economies

Report prepared by:  
Fraser of Allander Institute,  
University of Strathclyde

## Context: The role of cities

Cities play a critical role in organising economic activity and growth, as well as shaping the structure and dynamism of regional and national economies. As urbanisation continues to occur across the world, there is growing policy focus on the potential for cities – perhaps, armed with new and extended economic levers – to re-shape their own economic future. Similarly, the prosperity of any region and indeed nation relies to a great extent upon the growth, economic activity and dynamism of its cities. To a greater degree than ever before, the economic future of non-city areas depends upon the economies of scale, range of employment opportunities and variety of products and services – that large and diverse cities are able to provide. This short paper sets out the major economic contributions made by Scotland’s cities – specifically Aberdeen, Dundee, Edinburgh, Glasgow, Inverness, Stirling and Perth. Although distinctive and different, both in their economic history and scale, Scotland’s cities have an critical role to play in determining the current and future size, scope and competitiveness of the Scottish economy.

## Economic growth and the city

Scotland’s cities dominate Scotland’s economic landscape. They are home to the majority of Scotland’s population, education and employment opportunities, as well as hosting social and cultural amenities that attract and support a skilled labour force. Scotland’s economy is becoming more geographically concentrated in its cities. This raises a number of policy challenges, including understanding more about the drivers of the recent performance of Scotland’s cities, and the consequences of further devolution of economic levers to city-level and its implications for Scotland’s economy.

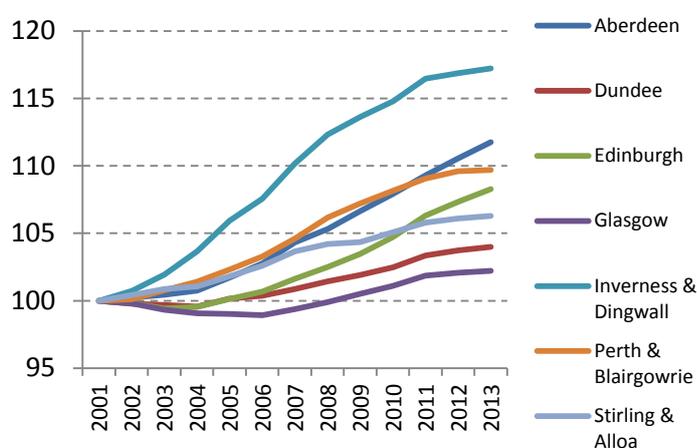
“Scotland’s economy is becoming more geographically concentrated in cities”

## Population and skills

The travel to work areas for Scotland’s seven cities are home to 2.8 million people – over half of Scotland’s population – while in the last decade the population in these areas has grown faster than Scotland’s population as a whole.

“Scotland’s cities are growing and are becoming smarter than ever before.”

**Figure 1: Population in Scotland’s seven cities, (2001=100)**

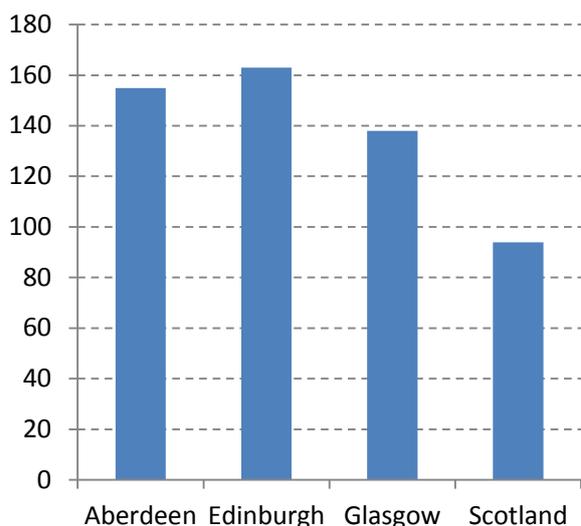


Note: This refers to the population in the Travel to Work Area for each city.

The population of each city in Scotland has increased between 2001 and 2014, and the share of Scotland’s population

living in a city has increased in each year since 2003, and by 6.1% between 2003 and 2014. Scotland’s Cities also have a relatively younger age profile than Scotland as a whole and a significantly greater share of the working age population educated to degree level (32%) than the rest of Scotland (19%). Taken together, these data suggest that Scotland’s cities are growing and the city-based workforce is smarter than ever before.

**Figure 2: GVA per head, Three Scottish cities and Scotland (UK=100)**



Note: These data refer to the Gross Value Added in the NUTS3 regions that including these cities. For Edinburgh and Glasgow this closely aligns with the respective local authority boundaries.

### Economic activity and employment

Scotland’s Cities contribute 60% (almost £69 billion) of Scottish economic activity (2014), and 54% of all employment in Scotland. This employment is also heavily focused in sectors that are typically more outward-facing and higher-productivity sectors focused in

“Continuing at the same rate, two-thirds of Scotland’s economic activity will be in Cities by 2030”

external markets, such as manufacturing plus private business and services sectors which constitute one third of the employment in Aberdeen, Glasgow and Edinburgh (2013). Unfortunately, the lack of trade data at a sub-regional level prevents us from commenting further on the extent of the trade activities of

Scotland’s cities. The past fifteen years have also seen Scottish cities post higher economic growth than the Scottish economy as a whole, adding to the growing geographic concentration of Scotland’s economic activity in cities. If this continues at the same rate, two-thirds of Scotland’s economic activity will be in Cities by 2030.

**Figure 3: Share of Business Expenditure on R&D undertaken in Scotland’s cities, 2013**



Note: This refers to R&D expenditure in the Travel-To-Work Area for each city.

### Innovation and Research & Development

Getting the right infrastructure as well as the mix of innovation, entrepreneurialism and a skilled labour force are fundamental to the long-run productivity and economic performance of an economy. Scottish businesses do much of their R&D work in Scotland’s cities, as well as the cities being home to many of Scotland’s Universities and Colleges, of which five feature in the top 200 of the latest Times Higher Education world rankings. Further, as world-recognised centres of innovation, Scotland’s universities

have created 310 “spinout” companies since 2000, and 259 “start-ups”, each more than any other region of the UK. Further, in 2013, two-thirds (66%) of all business R&D expenditure - totalling £526.8mn - were made in the seven Scottish cities. Since 2009, R&D spending in Glasgow and Edinburgh rose by 105% and 30% respectively, while in Scotland it rose by 26%. A higher skilled workforce is key to raising productivity and wages, however there is a lack of data to permit productivity calculations at the city level. Nevertheless, we would expect that higher productivity would be reflected in higher wages: a point we return to in more detail later in this report.

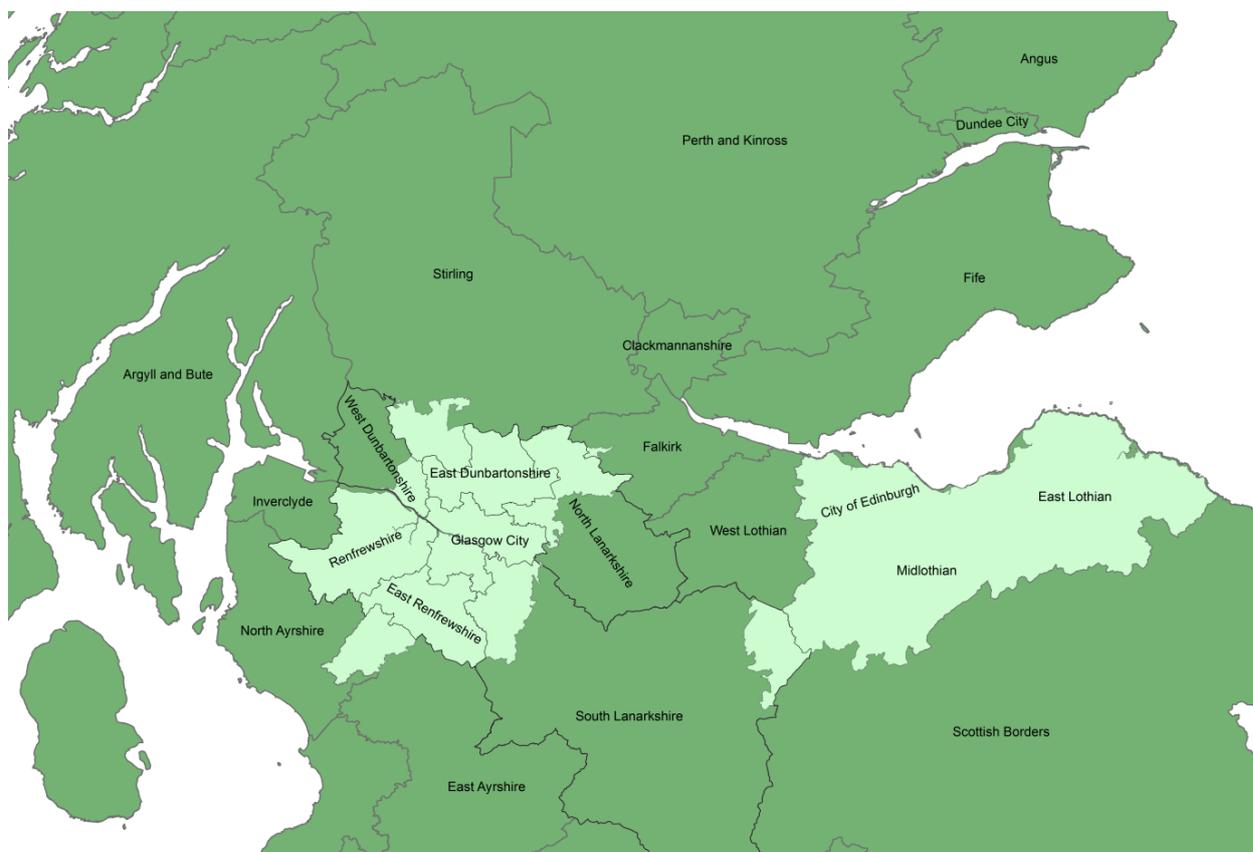
### Cities as hubs of economic activity

“...cities are not isolated; instead they are a vital part of Scotland’s economic landscape.”

Scotland’s cities help Scotland. Cities are not isolated; instead they are a vital part of Scotland’s economic landscape. Investment in cities creates significant spillover effects for neighbouring areas.

Investment in research and development, or improved transportation links, help to increase employment and business revenue in cities, but -given existing travel-to-work patterns- it increases consumption and tax revenues in surrounding local authorities too. In any number of ways, changes in economic circumstances in Scottish cities have impacts that reach right across the Scottish economy.

**Figure 4: Glasgow and Edinburgh Travel to Work Areas, and Local Authority boundaries**



## Cities have significant employment reach

The intraconnectedness of Scotland's cities is well demonstrated by overlaying the travel to work

“[TTWAs]... let us visualise, for our cities, their functional economic geography.”

areas (TTWAs) with local authority boundaries, as in Figure 4 above. TTWA's are areas within which the bulk of the resident population also work and, in

effect, let us visualise, for our cities, their functional economic geography. Figure 4 shows the border of the Glasgow and Edinburgh TTWAs, alongside local authority boundaries. We can see that the Glasgow TTWA encompasses the entirety of the Glasgow City Council, Renfrewshire Council, East Dunbartonshire Council and East Renfrewshire Council areas, and parts of the North Lanarkshire Council, South Lanarkshire Council, Falkirk, Stirling, West Dunbartonshire and East Ayrshire Council areas. The Edinburgh TTWA similarly spans a number of local authority boundaries.

“The city is the hub and focal point around which...economic activity revolves.”

TTWAs help explain the geography of the 'City Deals' and their focus on infrastructure investments across the wider metropolitan area. Getting workers to their jobs more efficiently, reducing travel times, getting products to market quicker and more cheaply, are all targets of this infrastructure investment. The city is the hub and focal point around which this economic activity revolves. However if people and products cannot flow quickly and freely from the spokes of this economic area to the central hub, the growth of the city will be impacted as will its positive impact elsewhere in the economy.

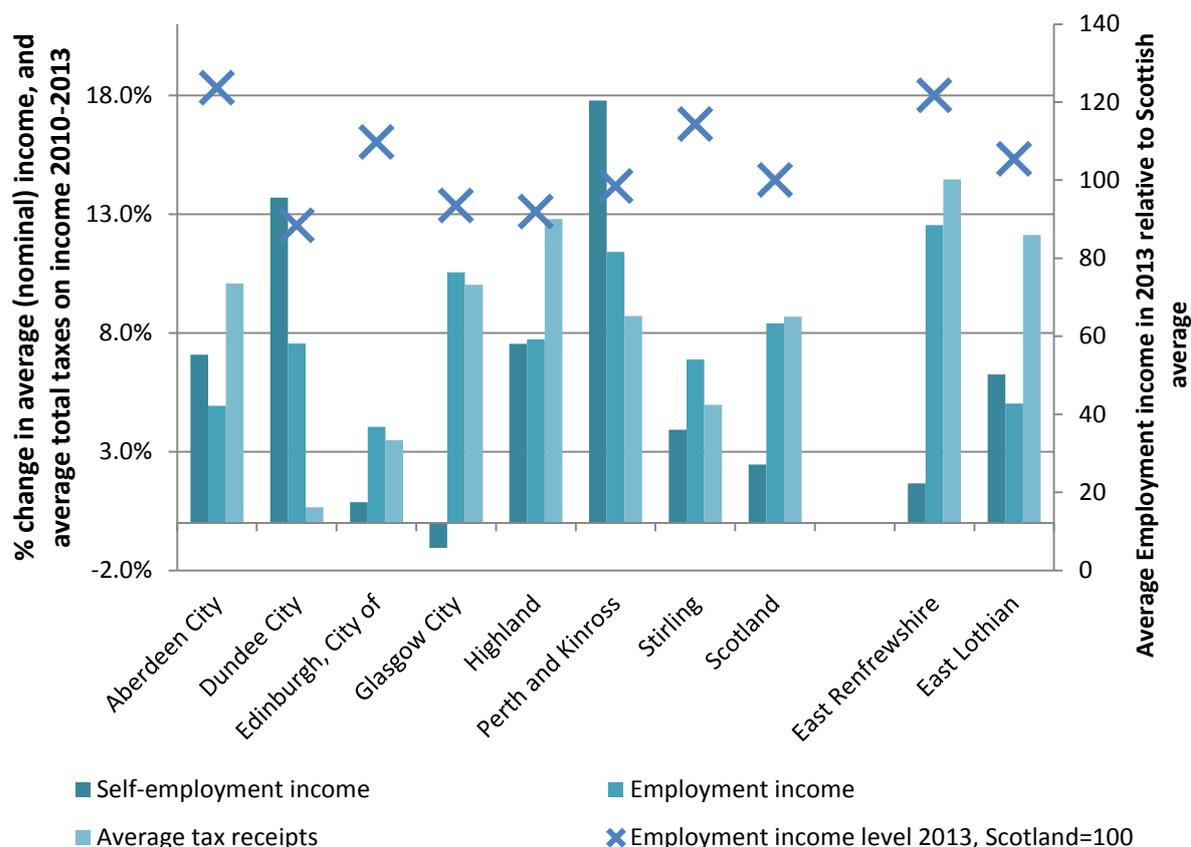
## Tax and funding public services

These economic interdependencies also manifest themselves through the tax system. Cities provide the place of employment for many workers in each TTWA, and give rise to the associated income taxes, as well as corporation tax paid by their employers. Similarly, many workers choose to consume housing and other services outside the city, incurring local 'Council' tax and consumption taxes in the wider metropolitan area. While economies of scale may mean that some key services, such as university education, are located in the city, these too have employment effects throughout the rest of the metropolitan area. Through investment in skills and knowledge, these activities can help grow the tax base of our cities and the wider metropolitan area.

Figure 5 shows the growth in average incomes from self-employment and employment in each of Scotland's seven local authority areas that contain a city, as well as the associated growth in taxes on income. It is clear that, with the exception of Glasgow and Edinburgh, each city has posted faster growth in income from self-employment between 2010 and 2013 than Scotland as a whole (in Perth & Kinross for example, growth was nearly 18% over this period compared to 2.5% for Scotland as a whole). Edinburgh still has a much higher average income from self-employment than Scotland as a whole (in 2012-13 it was 167% of the Scottish average), albeit recent growth has been more muted. This illustrates another important issue about levels versus growth. Figure 5 also shows (on the right hand axis) average income from employment in financial year 2012-13 compared to Scotland as a whole. It can be seen that those cities with the weakest growth in

income from employment in this period (Stirling, Edinburgh and Aberdeen) are those with the highest average income levels. In this sense the other cities are ‘catching up’ through this period. A final point to note from Figure 5, is that we have selected two non-city, but “city-neighbouring”, local authorities (East Renfrewshire and East Lothian) to show that the growth in employment income in these areas (which recall are within the travel to work areas for Glasgow and Edinburgh respectively) has been higher than for the city; this is a function of the strength of employment spillovers in these areas.

**Figure 5: Average growth in incomes and taxes on income<sup>1</sup> (2010-2013) and employment income levels (Scotland 2013 = 100)**



### Conclusion: placing our trust in our cities

There is clear evidence on the extent of the positive economic impacts of cities on their wider metropolitan regions; cities provide the economic platform to drive growth and innovation throughout

the wider region. Policy seems now to recognise the key role that cities play in growing the wider economy. However, putting in place the support mechanisms to help cities to grow is key to enabling Scotland’s cities to grow and develop further and to continue to spread growth across

“Providing cities with the tools to support job creation and to help businesses to grow will help the entire region to develop.”

<sup>1</sup> These are produced in nominal terms, and so omit the impact of inflation on incomes. This is likely to have a broadly equal impact on incomes across regions, so reporting the growth in real terms would likely reduce each growth rate by a broadly equivalent amount. The comparison of the average employment income across cities and other regions in 2013 are not affected by this as these are given in level terms.

the Scottish economy. Providing cities with the tools to support job creation and to help businesses to grow will help their entire regions to develop – and for Scotland’s economy to develop. Targeting investment in our transport infrastructure to help our cities will help businesses to transport their products and for workers to reach jobs. Policy could go much further to increase city autonomy as a means to spur Scotland’s wider – and more inclusive - economic development.