

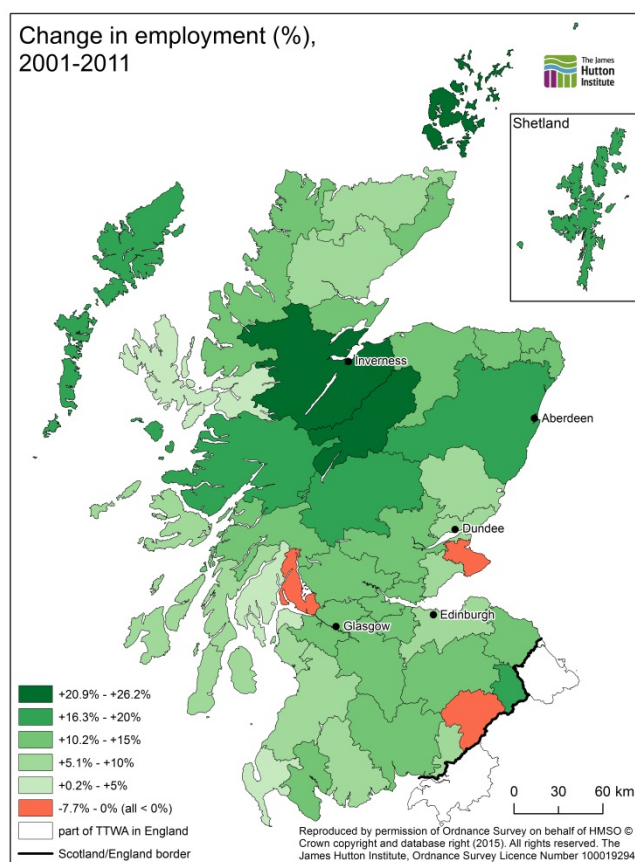
Regional employment growth in Scotland: 2001-2011



Patricia Melo and Nico Vellinga

Between 2001 and 2011 employment in Scotland increased by 11.3%, or 255,614 net jobs. There is however remarkable variation in growth rates across Scotland, varying between -7.7% and 26.2% (see Map 1). Despite these differences, the ranking of regions according to their total employment remained almost unchanged over the period. The most notable changes include the Orkney Islands and Lochaber which improved their relative performance by 3 and 2 positions respectively. On the other hand, Hawick, and Skye & Lochalsh and Kirkcudbright saw their relative performance worsen by 4 and 2 positions respectively.

Part of the regional disparities in employment growth derives from differences in local economic structures. Regions with an industrial mix characterised by fast growing sectors are likely to outperform regions dependent on slow growing or declining sectors, other factors remaining the same. However, industrial mix appears to play only a limited role on overall regional employment growth and hence should not be the sole main focus of regional policy.



Berwick and Carlisle estimates based on data for the Scottish parts of these Travel To Work Areas (TTWA).

Contains data from, and derived from, Ordnance Survey mapping of Travel to Work Areas, contains data derived from Ordnance Survey Strategy® data, Ordnance Survey Boundary-Line™ data and Ordnance Survey 50K map data. Employment data derived from a) 2001 Census data (downloaded from Casweb, <http://casweb.mimas.ac.uk/>), © Crown copyright. b) 2011 Census data (downloaded from <http://www.scotlandscensus.gov.uk/>), © Crown copyright. Data supplied by National Records of Scotland.

Map 1: Employment change between 2001 and 2011

Key Points

- There were large differences in employment growth rates across regions of Scotland between 2001 and 2011. However, the ranking of regions' total employment remained largely stable.
- Disparities in regional employment growth are only partly explained by regions' industry mix. Regional competitiveness, on the other hand, appears to have a greater contribution to local employment growth.
- Regional competitiveness refers to location-specific strengths relating to human capital and skills, accessibility to input and output markets, agglomeration economies, and local institutions and governance.
- Remote rural and small town-based regions focused on high-value natural amenities and the exploration of energy-related natural resources achieved the highest rates of employment growth over the period.



What are the implications for policy?

- Industry mix explains part of the disparities in regional employment growth in Scotland, but to a lesser extent than regional competitiveness.
- Regional competitiveness draws on local strengths relating to skills, soft and hard assets, as well as institutions and governance.
- Interventionist sectoral policies alone may fail to deliver local employment growth, and need to be integrated with other place- and people-oriented measures.

Trends in overall employment change

Scotland's economic landscape experienced significant changes between 2001 and 2011. Some of the structural changes included the continuation of previous trends such as the decline in manufacturing, in particular the collapse of the electronics sector in the early 2000's, and in agriculture, forestry & fishing. This is clear from Figure 1, which shows the change in employment by industry group in Scotland between the two census years and the size of each industry. Employment in manufacturing and agriculture, forestry & fishing fell respectively by -35% and -9% over the period. On the other hand, the importance of services continued to increase. The fastest growing sectors during this period were health & social work (+35%), education (+28%), transport, storage, information & communications (+28%), hotel & restaurants (+22%) and mining & quarrying (+21%). Electricity, gas, water supply, sewage and waste was the fastest growing sector (+74%), but accounts only for a very small share of employment (2%). Overall, public sector related industries account for nearly one-third of total employment, of which half relates to health & social work activities. The fast increase (+35%) in this already large sector (15%) may reflect the ongoing population ageing in Scotland.

The period between 2001 and 2011 is also special in that it captures, although partially, the two economic recessions in 2008-09 and in 2011-12, following the financial crisis of 2008. Reductions in government spending affected particularly the public sector with resulting negative impacts on rural and small town economies, where public sector is often the largest employer.

Why employment growth differs across regions?

Variations in regional employment growth can be studied using *shift-share analysis*, a method which separates regional growth into three key components (Armstrong and Taylor, 1993): (1) 'national share' reflecting the national trend in employment growth; (2) 'industry mix', which measures the employment growth arising from a region's economic structure; and (3) 'local share', which measures the employment growth due to regional competitiveness in local industries. The main advantage of shift-share analysis is the simplicity it offers in the measurement of the relative importance of industry mix and local competitiveness to regional growth (or decline).

The national share effect is the same for all regions, whereas the industry mix and local share effects vary by region. A positive industry mix means that the region has a "favourable" economic structure, with above average share of employment in fast growing national industries. A positive local share means the region's employment growth is greater than the growth which would be expected given its industry mix, which in turn indicates the presence of competitive advantages in local industries.

Figure 2 shows the relation between industry mix and local share for Travel-to-Work Areas (TTWAs), which are the best geographic measure for labour markets. The size of the bubbles measures regions' total employment: there appears to be no obvious relation, at least not a linear one, between total employment and employment growth. The figure also indicates that the industry mix component tends to have a smaller contribution to regional employment growth than the local share

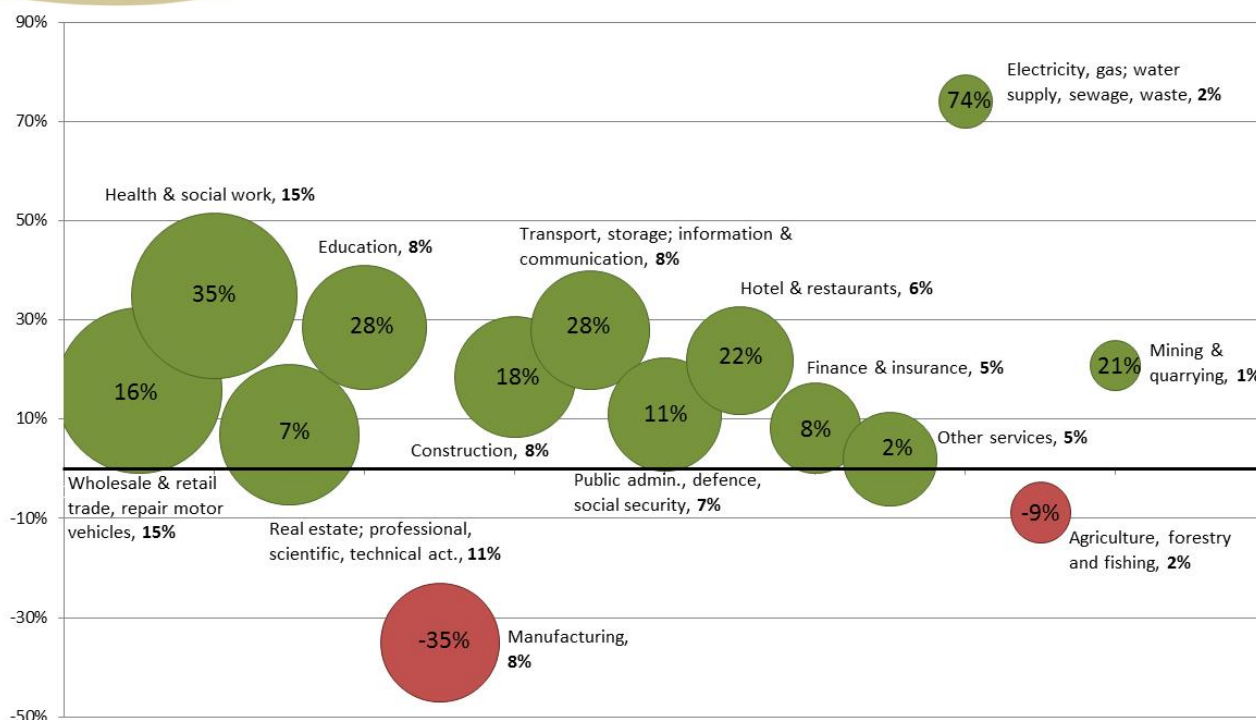


Figure 1: Employment growth by industry 2001-2011 (inside bubble) and industry size in 2011 (outside bubble)

component. This means that regional competitiveness can be more important to economic growth than industry mix. The full set of results is available from the authors upon request.

The regions with positive industry mix and local competitiveness (in green) are in their majority remote rural areas (e.g. Badenoch, Eilean Siar, Orkney, Pitlochry and Shetland), with the exceptions of Aberdeen and Inverness & Dingwall. Natural resources are strong in these economies, either in the form of tourism- and leisure-based industries (e.g. Badenoch, Lochaber and Pitlochry) or energy-related resource extracting industries (e.g. Aberdeen, Orkney and Shetland Islands).

The regions with negative industry mix and local competitiveness (in red) consist of remote small town and rural areas in the south (Hawick, Carlisle, Kirkcudbright) and small urban areas in the fringes of Glasgow (Greenock, Ayr & Kilmarnock, Irvine & Arran). These economies tend to have large shares of local employment in declining sectors such as manufacturing and/or agriculture, forestry & fishing.

The majority of regions exhibit a mixed performance (in orange). Regions with positive industry mix but negative local share include both large urban areas (Edinburgh, Glasgow) and small urban areas (Perth & Blairgowrie,

Stirling & Alloa, St. Andrews & Cupar) in and around the Central Belt, and some remote small town based areas (Oban, Dunoon & Bute, Wick) and remote rural areas (Skye & Lochalsh, Dornoch & Lairg, Lochgilphead). These regions are relatively specialised in fast growing national industries (see Figure 1), but the local performance of their industries tends to be below average.

Regions with negative industry mix but positive local share include small urban areas and remote small town based areas in the North East (Fraserburgh, Peterhead, Moray, Forfar & Montrose, Banff) and urban areas in the Central Belt on the fringes of Glasgow and Edinburgh (Lanarkshire, Falkirk, Livingstone & Bathgate, Galashiels & Peebles, Kelso & Jedburgh, Dunfermline, Kirkcaldy & Glenrothes). Although employment in these regions is relatively more specialised in declining and slow growing national industries (particularly manufacturing), there are other local strengths that make the performance of some of these economies above average.

There appears to be an interesting difference between rural economies and small town economies in which natural resources play a strong role. Employment growth performance is generally positive for local economies with a higher relative specialisation in industries relating to the consumption of high-value natural amenities via tourism-

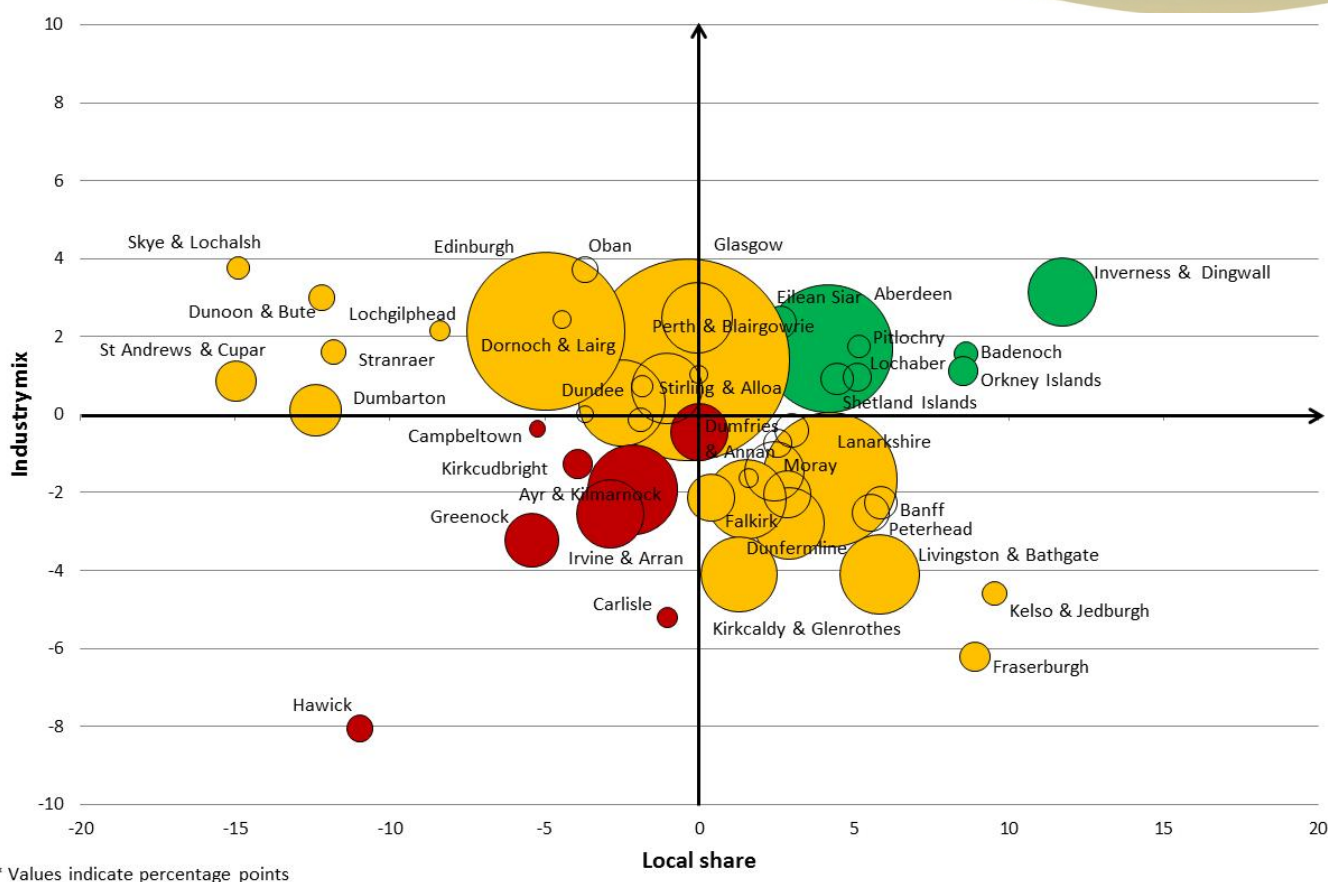


Figure 2: Shift-share analysis performance matrix for TTWAs in Scotland

based industries and energy-related extracting industries and support service industries, whereas it tends to be negative or below average for local economies with a relatively larger specialisation in agriculture, forestry & fishing.

On the other hand, regions in the main urban corridor between, and around, Glasgow and Edinburgh tend to exhibit relatively unfavourable economic structures, still characterised by a declining manufacturing. Yet, some of these regions do well in terms of competitiveness.

The shift-share analysis suggests that regional competitiveness is a key driver of employment growth, often more so than industry mix. However, the analysis does not explain which factors underlie regional competitiveness. Existing evidence indicates that these factors include human capital, access to input and output markets, and local institutions and governance. Moreover, employment growth does not necessarily bring along economic and social prosperity if the majority of jobs created are low skill and low pay. Future research will explore these issues.

Further information

Armstrong, H. and Taylor, J. (1993) 'Regional Employment Growth', in H. Armstrong and J. Taylor (eds.), *Regional Economics and Policy*, Harvester-Wheatsheaf, London.

Contact

Patricia Melo patricia.melo@hutton.ac.uk
Tel: 01224 395316



The James Hutton Institute
Social, Economic & Geographical Sciences
The James Hutton Institute
Craigiebuckler
Aberdeen AB15 8QH



This research is funded by Scottish Government's Rural and Environmental Science and Analytical Services Division (RESAS) under Theme 8 'Vibrant Rural Communities' of the Food, Land and People Programme (2011–2016). The views expressed are those of the authors and do not necessarily reflect those of the Scottish Government.