Plan for Good Growth Sector Analysis for South Yorkshire

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Introduction

This document outlines the results from a project supporting the South Yorkshire Plan for Good Growth, carried out by Y-PERN, that examined the region's economic sectors. It aimed to answer the following questions.

- What are SY's existing sectoral strengths? How has that changed over time?
- What parts of South Yorkshire's economy have grown significantly more than others? (Compared both within South Yorkshire and to other places in the UK)

The following sections give the project's answers to these questions.

Full details of the data and methods (including reproducible code) is available at bit.ly/regionalecontools

South Yorkshire's structure and strengths

The project began by looking at which sectors have a greater representation in South Yorkshire compared to the rest of the UK. This identified the region's most prominent sectors by size and showed how the economy's structure has changed over time.

From 1998 to 2007, South Yorkshire had a high concentration of sectors that were shrinking nationally, making the region's economy more vulnerable. These were mostly in manufacturing (see "South Yorkshire's historical structural change" below). In the same period, growth sectors across the UK - largely services - were under-represented in South Yorkshire. Other places in the North also had a slightly higher concentration of growth sectors than South Yorkshire.

For the period after 2007, there has been a more positive structural shift: many sectors more concentrated in South Yorkshire – that is, sectors the region specialises in - returned to growth. As well as ICT and human health, manufacturing returned to growth following its earlier shrinkage.

Between 2016 and 2021, growth sectors that were also more concentrated in South Yorkshire compared to the UK made up 29.2% of the economy's GVA (human health alone was 8.9%).

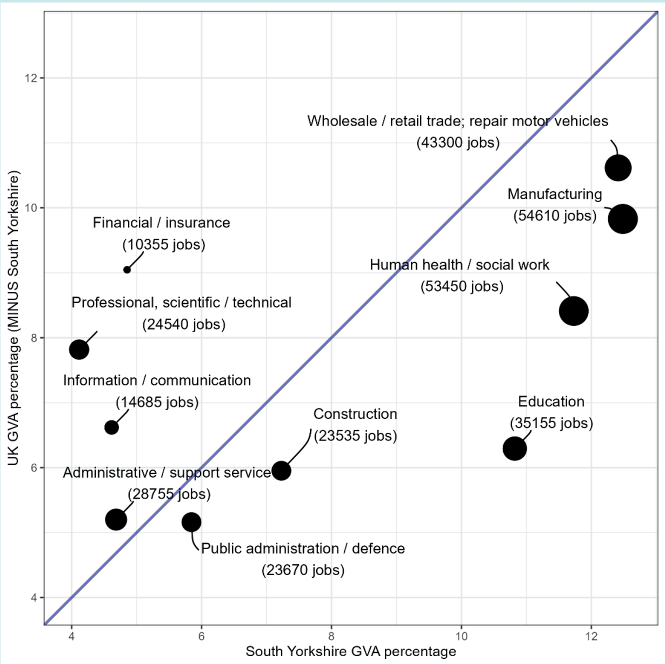

Figure 1: South Yorkshire's top ten broad sector proportions by GVA percent 2021 and their percent in the rest of UK. Sectors to the right of the diagonal line are more concentrated in South Yorkshire. Dot size represents job count.

Which South Yorkshire sectors have grown significantly?

The next stage of the project analysed which sectors in South Yorkshire had strong enough growth to stand out nationally, as well as from other sectors within South Yorkshire. Only a small number of sectors achieved this. In twenty broad sector categories, **ICT in South Yorkshire had by far the strongest growth story, averaging 18.7% a year (±15-22.4%), statistically ahead of all but five other places in the UK.** This is partly because ICT has grown so much everywhere in the UK. But in South Yorkshire, the sector was especially resilient through COVID. **ICT's raw growth between 2015 and 2021 (now approaching 5% of the economy compared to manufacturing's 12.5%) has outpaced manufacturing (£680 million compared to £500 million for manufacturing).** While ICT overall is not concentrated in South Yorkshire (compared to the UK), some subsectors like telecommunications have a higher than average presence in Sheffield. **Manufacturing growth is the other statistically clear growth pattern (2015-21 GVA growth of 3.7% ±2-5.4%).**

Two other sectors with significant growth are both very small elements of South Yorkshire's economy. Electricity, gas and steam (0.87% of the economy) grew by 4.9% ±0.9-9.1%; water supply and sewerage (1.3%) grew by 2.4% ±0.5-4.3%. Health and education both grew prior to COVID (see chart below) but not significantly more than many other South Yorkshire sectors or elsewhere in the UK.

The same pattern was found when examining productivity growth (GVA per full time job). **There have been statistically clear per-worker productivity gains in ICT, manufacturing, and finance/insurance within South Yorkshire, but productivity growth in ICT again stands out (central estimate of 15% per year compared to manufacturing at 6.6%).**

We also examined job count change for 691 sectors to get a more granular picture of employment growth. We found greatest job growth in **human health** – five subsectors generated 9.4% of South Yorkshire's employment in 2021 - and **transportation and storage**, where four sub-sectors made up 6.7% of employment. Eight **manufacturing** sub-sectors generated 4% of employment in that year.

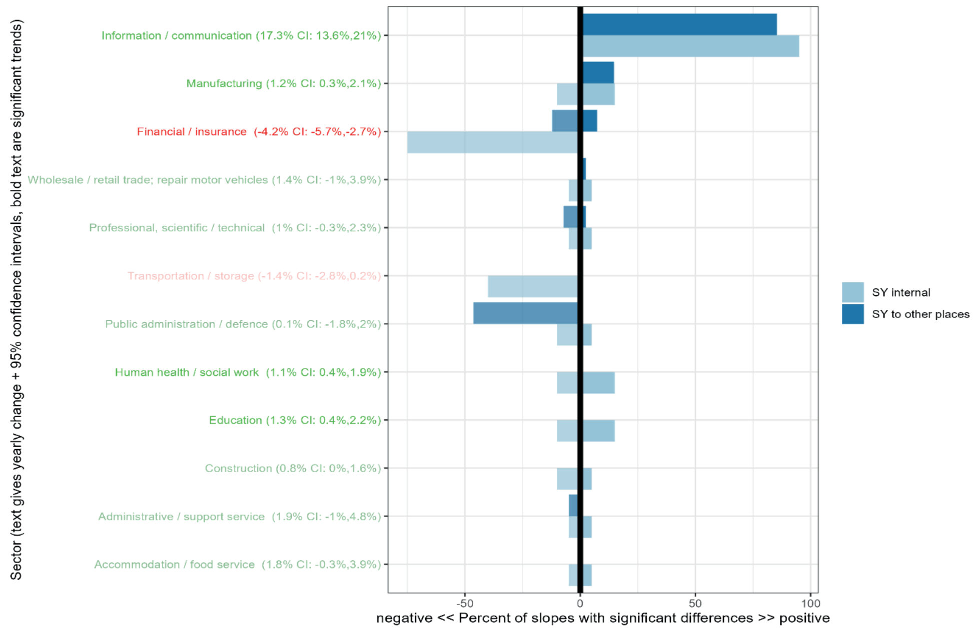

Figure 2: Proportion of GVA slopes significantly more positive (right of black line) or negative (left) than other sectors in South Yorkshire (light blue) and the named sector in other places in the UK (dark blue), 2013 to 2019. Sector text gives yearly change and confidence intervals; bold text is significant slopes (95% confidence growth/shrinkage was more/less than zero). Showing broad sectors more than 2% of South Yorkshire's economy. For example, ICT (top row) grew significantly more than 35 out of 41 other places in the UK, and more than all but one other sector in South Yorkshire (confidence intervals overlap with manufacturing).

South Yorkshire's historical structural change

Figure 3 compares two time periods, looking at how South Yorkshire's broad sector mix changed in comparison to the rest of the UK, between 1998 and 2007 (in subplot A) and then in more recent years, from 2015 to 2021 (subplot B). Plot A (1998 to 2007) shows only sectors that became proportionally a smaller part of the mix of South Yorkshire's economy. By far the biggest structural change was in manufacturing – it shrank as a proportion of the whole UK economy (dropped on the vertical axis) but this impacted South Yorkshire more, as it was more highly concentrated (to the right of the diagonal line).

Plot B shows sectors that increased as a proportion of the South Yorkshire economy since 2015. A number of broad sectors more concentrated in South Yorkshire have increased their presence. Manufacturing is becoming a larger proportion again (while continuing to shrink elsewhere in the same time period). Note - ICT, while less concentrated than the rest of the UK (left of diagonal line), increased its proportion of South Yorkshire's mix more rapidly than elsewhere during this time period.

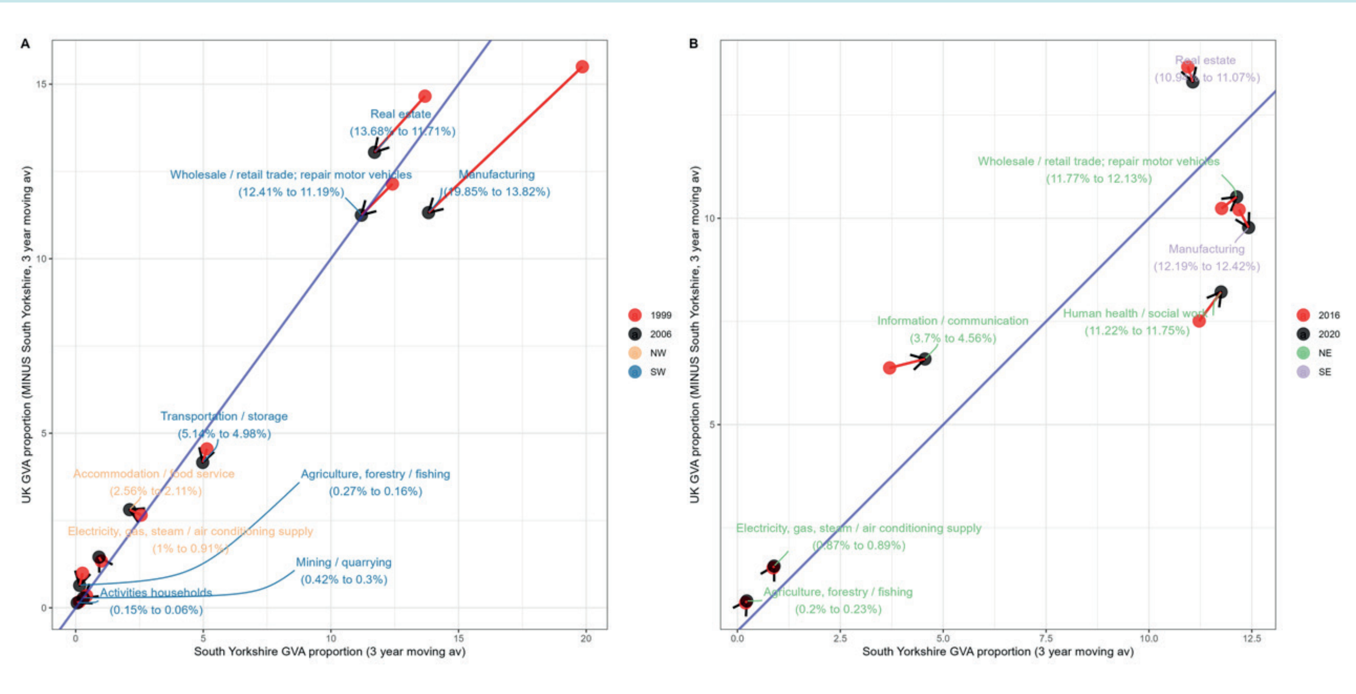

Figure 3: South Yorkshire's broad sector proportions by GVA percent versus their percent in the rest of UK – showing change between two time points. Sectors to the right of the diagonal line are more concentrated in South Yorkshire. Arrows point toward the latest year. Plot A (1999 to 2006) on the left shows sectors going 'north-west' and 'south-west' - shrinking in South Yorkshire, and either shrinking or growing elsewhere. Plot B (2016 to 2020) on the right shows sectors going 'north-east' and 'south-east' - growing in South Yorkshire, and either shrinking or growing elsewhere. Data points are an average of three years either side of the named year.