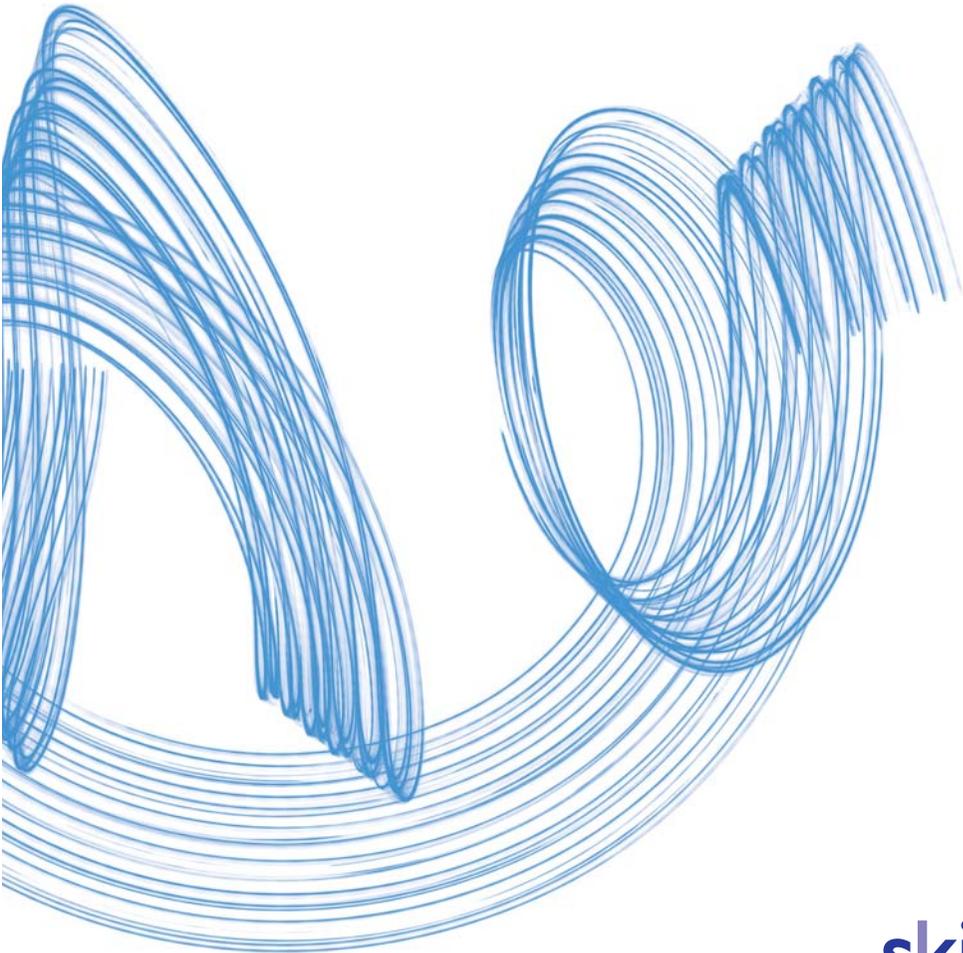


EXECUTIVE SUMMARY

SECTORAL PRODUCTIVITY DIFFERENCES ACROSS THE UK

RESEARCH REPORT 13
OCTOBER 2005



EXECUTIVE SUMMARY

The research was commissioned to enhance our understanding of what is driving national productivity and in particular what might explain the gap between the UK and some of our international competitors. Previous work has suggested that the productivity gap has a strong sectoral and spatial dimension and it was important to enhance our understanding of this. This report analyses differences in labour productivity - defined as output per person in employment - between the countries and regions of the UK over the period 1992-2002. The study was intended to explore the variations in productivity across the UK and in particular to shed more light on the contribution that the sectoral distribution of employment makes to spatial productivity differences.



Method

The study uses a modified shift share analysis to analyse the productivity differentials within each country and region of the UK. The aim of the analysis is to decompose the differential and to deduce how much of the variation is due to the sector composition and specialisation in high performing sectors regionally and/or nationally.

The research employed output (Gross Value Added in 1995 prices) and employment (total number in employment) data developed for the Sector Skills Development Agency's (SSDA) Working Futures projections of occupational employment by sector and region. These data were used to estimate labour productivity (namely output per person in employment). The data were derived from the Cambridge Econometrics (CE) multi-sectoral, regional macroeconomic model (RMDM). The CE model produces consistent regional and sectoral estimates of output and employment over time. One major advantage of using the CE output and employment projections is that this model-based approach mitigates the extent to which measurement problems (especially of output) can affect the differentials if alternative, grossed-up, survey-based estimates are used. They are also consistent over time.

The sectoral definitions utilised in this paper are those defined by the sector and industry groupings used in the Working Futures projections and in the SSDA Sector Matrix. The analysis of spatial productivity was replicated for 1992, 1997 and 2002 in order to assess any changing patterns over time.

Results

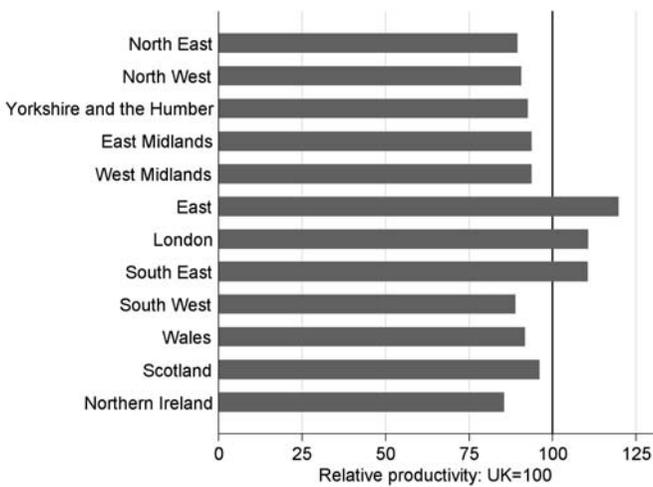
Over this period, the East, South East regions and London are seen to have consistently higher labour productivity than the rest of the UK. There is some evidence that spatial productivity differentials are widening over time. In 2002, labour productivity in the most productive region (East) was almost 35 percentage points higher than in the least productive area (Northern Ireland).

¹ Wilson et al (2003, 2004) and Green et al (2004).

² Wilson et al (2003, 2004) and Green et al (2004).

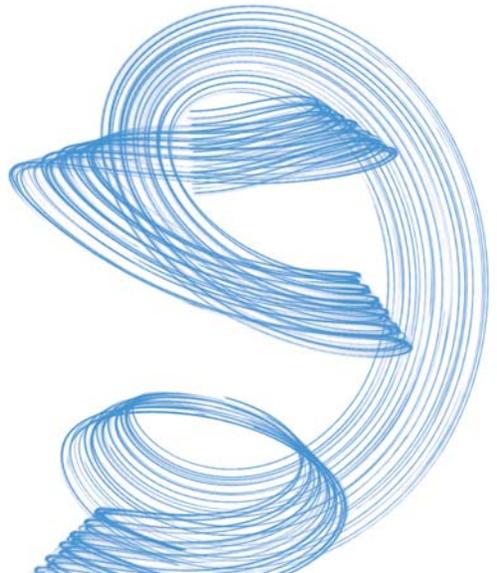
³ Details of the sectoral groupings utilised are provided in Annex A of the main report. These are broad sectors and are not necessarily coterminous with the SSC footprints.

Distribution of relative productivity by country and region, 2002

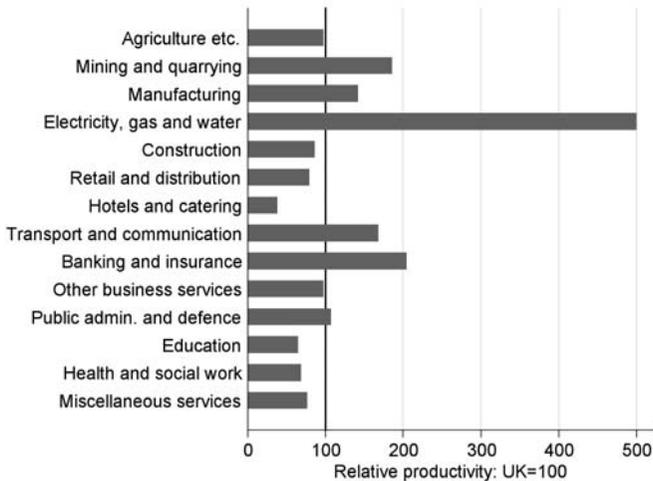


Labour productivity differs much more between sectors than between countries and regions. This is to be expected and is partly a reflection of the nature of the goods and services produced by different sectors. For instance the Utilities sector stands out in having productivity five times the national average. In contrast, at the other end of the scale, Hotels and catering has productivity which is only 38% of the national average in 2002. Other retail distribution also has very low labour productivity. Clearly, both Hotels and catering, and Other retail distribution have large shares of part-time employment, and this may serve to accentuate their low labour productivity since it is measured here as output per person in employment.

Over time, the gap between the most productive and least productive sectors also appears to be widening.



Distribution of relative productivity by sector, 2002



International comparisons suggest these issues warrant further attention as there is a productivity gap between the UK and its counterparts abroad, which is as large as 40% as measured by value added per worker between the UK and the US. Previous work has suggested that Retail and distribution, Banking and insurance and part of Manufacturing in the 14-sector classification used for this research contributed significantly to the international productivity gap. As shown in this project, Retail and distribution has low relative productivity in the UK, but Banking and insurance has productivity equal to twice the national average. Hence even in apparently high productivity sectors in the UK, there may still be scope for considerable

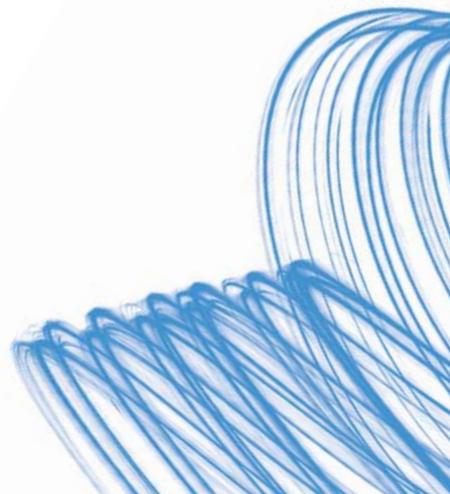
improvements in productivity compared to our competitors.

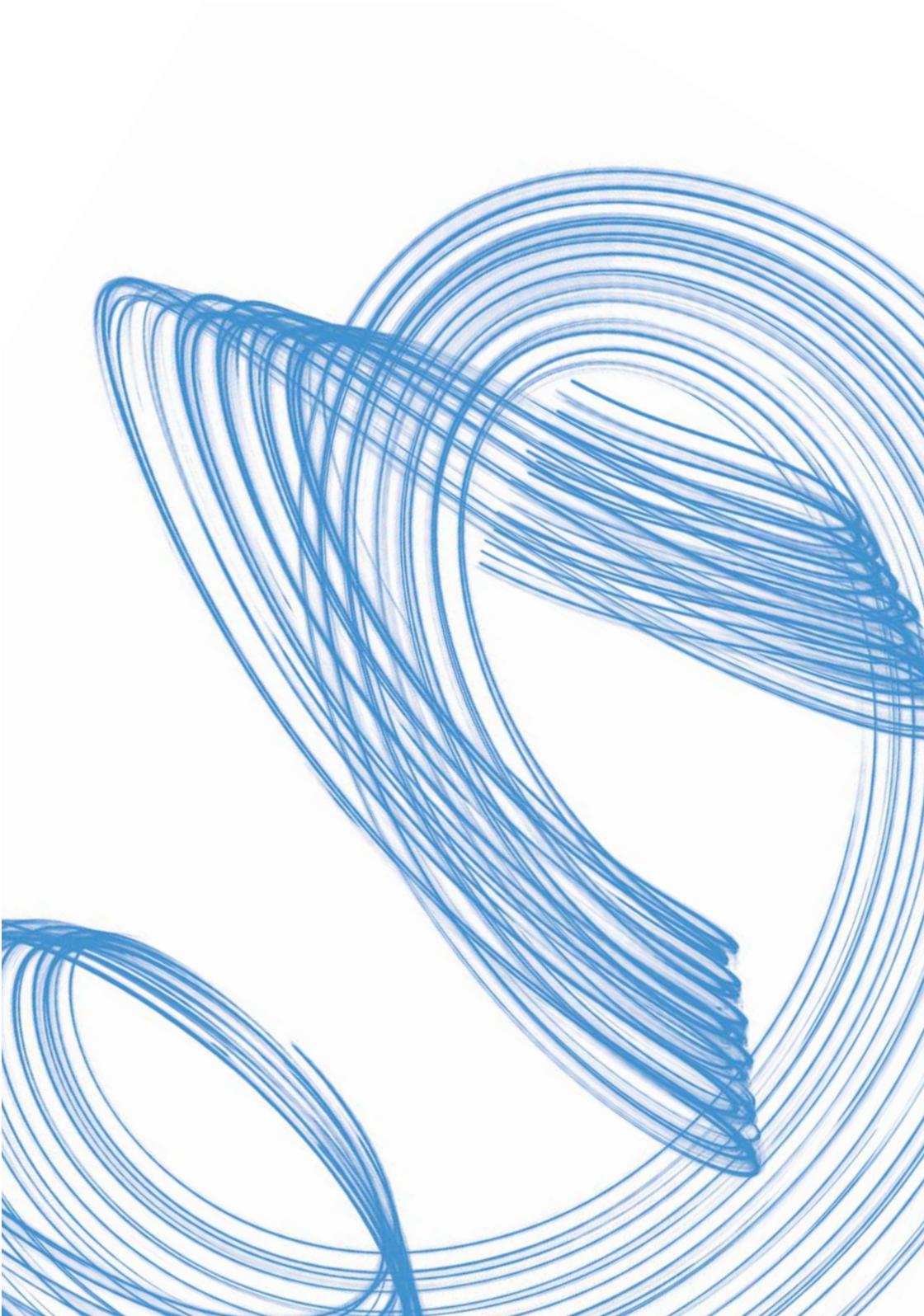
The analysis then decomposes the productivity differentials. The results of this shift-share analysis reveal that sector mix and specialisation in high productivity sectors account for very little of the spatial productivity differentials observed. That is, the East, South East and London do not have higher productivity because they have disproportionate shares of employment in the sectors which have high productivity, or because they are specialised in sectors in which they perform better than the national average. Rather, they tend to have higher than average productivity across the majority of

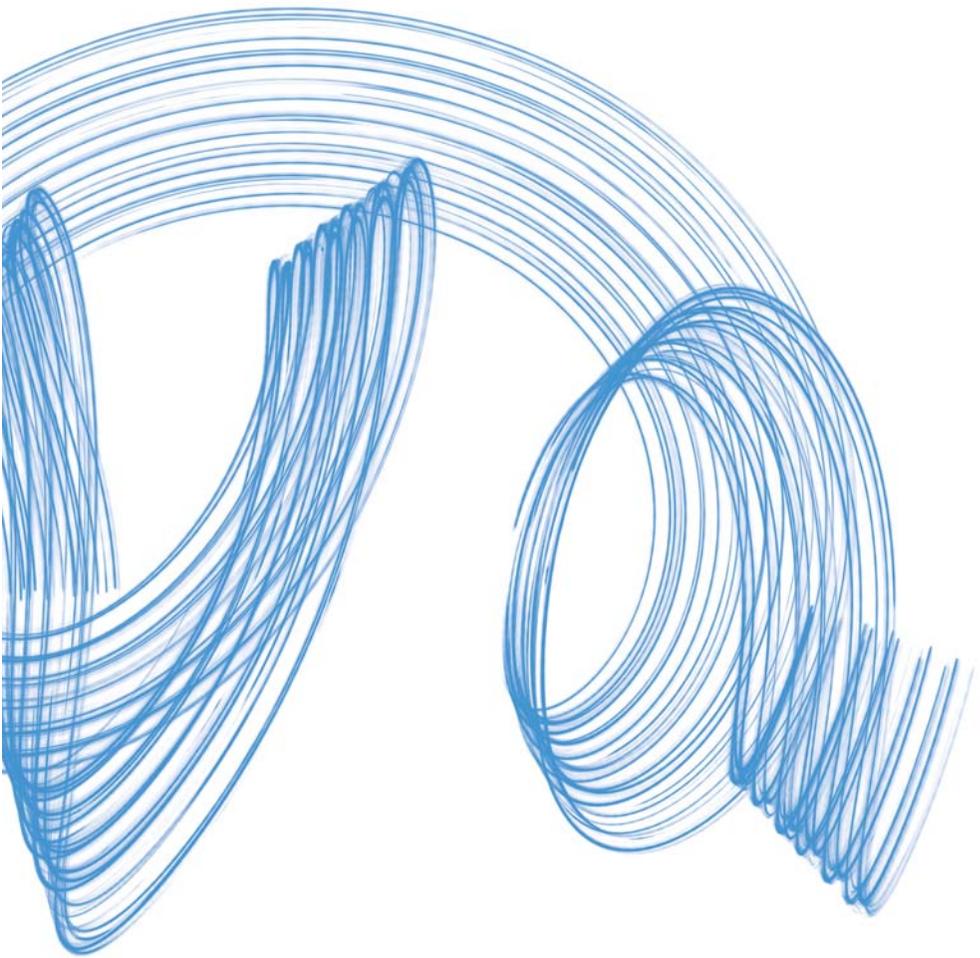
sectors. It is not the sectoral specialisation that has most effect but rather the differential performance of the same sector in different countries and regions. Hence, spatial and sectoral factors in combination are important. Indeed, it appears that sectors in high performing areas are able to optimise the regional factors to achieve better productivity. The higher performing countries and regions can thus provide an upper benchmark that sectors in other poorer performing areas can aspire to.

One important caveat is that the findings may partly reflect the measurement of sectoral output at the regional level. The data utilised are necessarily model-based forecasts since consistent sectoral and regional output and employment data are not available from official government statistics over the time period and at the levels of disaggregation required. Thus, the output and employment - and hence productivity - patterns across regions and sectors may be partly a consequence of the modelling process itself, rather than reflecting actual differences. There are also important regional price and cost-of-living factors which cannot be fully taken into account given the available data.

Subject to this possible limitation regarding the data, the central conclusion is that the inter-regional variance in output per person in employment can be attributed to productivity differences that are fairly consistent across sectors. This finding suggests that an investigation of the factors that contribute to inter-regional productivity should focus on differences at the regional level - for instance infrastructure and other spatial factors, such as physical and human capital - including skills and the occupational distribution of employment within sectors. It also supports the use of regional and sectoral policy aimed at uniform productivity increases in poorly performing countries and regions. It is thus important that future initiatives such as Sector Skills Agreements retain a country and regional focus to their sector Skills Needs Assessments and their forthcoming sectoral strategies to improve skills and productivity.







This leaflet is a summary of a research project carried out by the Warwick Institute for Employment Research on behalf of the Sector Skills Development Agency.

Full copies of the report can be downloaded from the Research section at www.sdda.org.uk