

# Increasing Economic Output (Gross Value Added) and Raising Productivity in Staffordshire and Stoke-on-Trent

Strategy Team

Economic Growth

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# ECONOMIC GROWTH - Understanding GVA and Productivity

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

### Document Details

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Title	Increasing Economic Output (Gross Value Added) and Raising Productivity in Staffordshire and Stoke-on-Trent
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Description	<p>This strategic assessment provides an understanding of the current position on Gross Value Added (GVA) and productivity and how it has changed. There is also consideration of the issues with the measurement of GVA and productivity and associated factors such as changes in wage levels; jobs growth; cost of living; and the effects on wellbeing and quality of life. Finally, future economic challenges will be explored and how Staffordshire can turn these into opportunities for economic growth and increased productivity.</p> <p>This report should be of relevance to members, commissioners and strategic managers across the Local Enterprise Partnership (LEP) area, especially those with responsibility for economic growth and development.</p>
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# ECONOMIC GROWTH - Understanding GVA and Productivity

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

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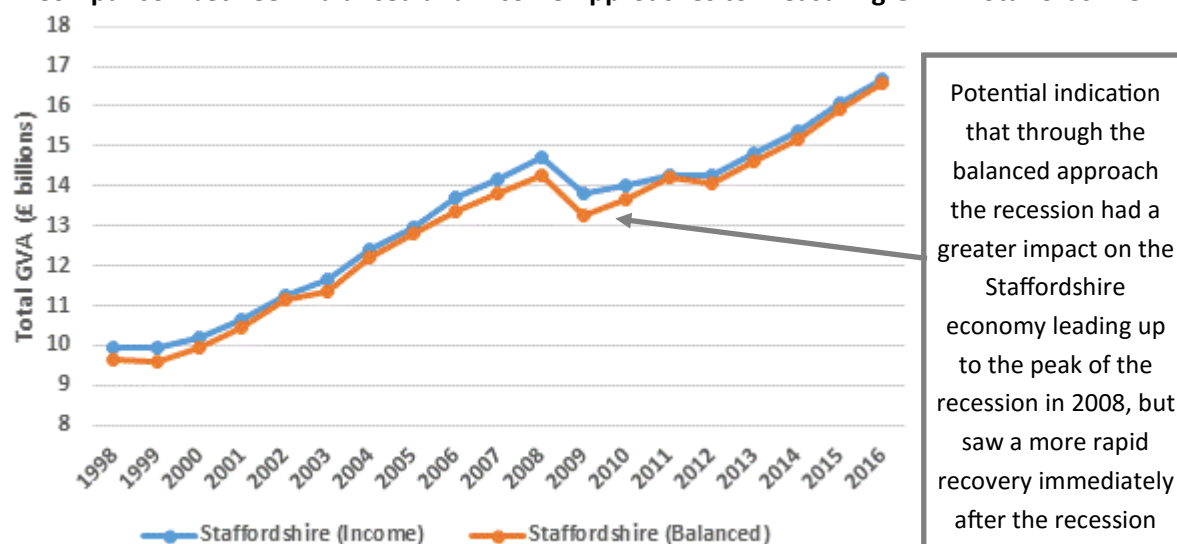
## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

### Executive Summary

Gross Value Added, or GVA, is a measure of output in terms of the increase in the value of the economy through the production of goods and services. GVA is used by the Office for National Statistics (ONS) to measure national economic performance, and can be used locally to partly assess the overall economic wellbeing of an area. The ONS has developed a new experimental balanced measure of regional gross value added (GVA), designed to provide a single best estimate of regional GVA.

Overall the new measure shows that the Staffordshire economy was hit harder during the economic downturn than previously believed. During the downturn GVA in Staffordshire therefore decreased by more than previously reported, whilst it also took far longer for the economy to recover. Stoke-on-Trent saw a similar change when comparing the balanced and income approaches.

**Figure 1: Comparison between Balanced and Income Approaches to Measuring GVA in Staffordshire**



Source: Regional GVA Balanced Approach, ONS

However, the value of the economy in Staffordshire increased by 4.3% or £681 million between 2015 and 2016 (latest data), showing a growth in the economy from £15.9 billion to £16.6 billion. This was a higher rate of growth than seen regionally (3.9%) and nationally (3.7%), with similar comparative performance seen between 2014 and 2015. Therefore whilst the new balanced GVA measure shows that the Staffordshire economy was affected more greatly and for longer than previously reported, recent years have seen a significant upturn in the economy.

Stoke-on-Trent's economy stood at £5.2 billion in 2016 based on the 'balanced' approach showing a slight difference of £39 million from the 'income' approach measure. The economy in Stoke-on-Trent increased by 5.1% between 2015 and 2016 showing a growth of £251 million. The Stoke-on-Trent economy also saw an average annual increase of 3.7% between 2008 and 2016 which was higher than the national (2.6%) and regional average (3%).

Productivity has become a national priority due to recent sluggish wage growth. Relative measures of productivity include GVA per hour worked (the preferred measure) and GVA per job filled. The long-term

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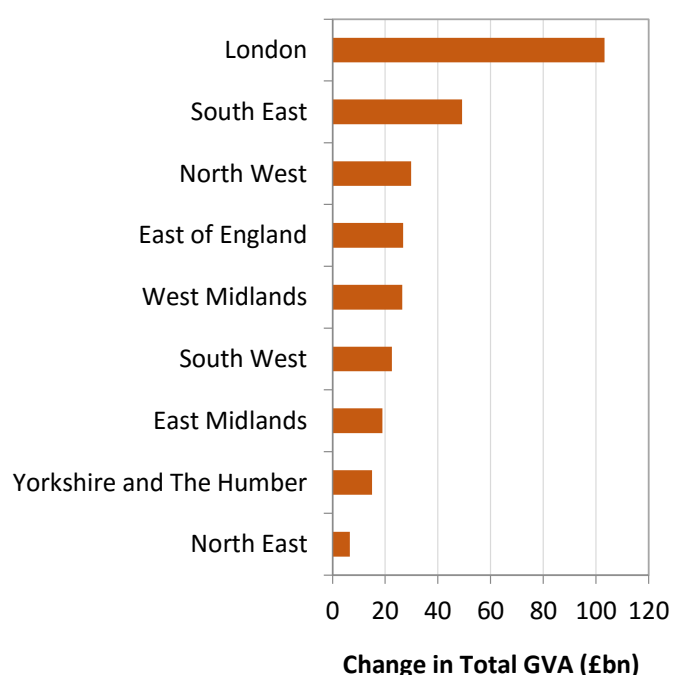
## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

trend shows that the gap between Staffordshire and the national average widened leading up to the recession and continued to widen during and immediately following the economic downturn. This will be at least partly due to the need to provide jobs for the significant number of residents who lost their jobs during the downturn which were often, and needed to be, in relatively less productive industries. However, again the figures for 2015 and 2016 show that the gap between Staffordshire and the national average has closed, indicating that productivity in Staffordshire has recently improved.

In Stoke-on-Trent there has been lower growth in GVA per hour worked since the recession compared to the national average and the gap to the national average has widen slightly since 2012 and therefore needs to be monitored.

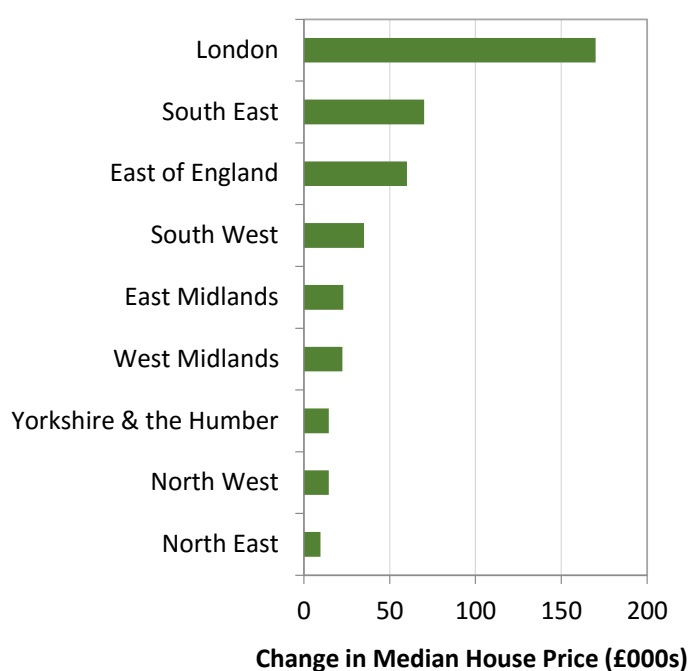
Whilst productivity is important and higher levels of productivity have the potential to support economic growth and increased earnings for residents, there remain a number of issues with GVA data that need to be considered. Not least there is an inflationary aspect to GVA due to the way that it's calculated, with GVA growth often going hand-in-hand with cost increases. In recent years this has particularly been seen within London and the South East where there have been far greater increases in GVA growth compared with other parts of the country but also significant increases in living costs and particularly housing costs. This has led to these parts of the country having significant housing affordability issues which has recently become one of the major political talking points. Earnings of employees within these areas have not experienced the same level of growth as the increases in house prices and this has resulted in a situation where London in particular has become completely unaffordable for a large proportion of people.

**Figure 2: Change in Total GVA, 2008-2016**



Source: Regional GVA Balanced Approach, ONS

**Figure 3: Change in Median House Prices, 2008-2016**



Source: Housing Affordability, ONS

## **ECONOMIC GROWTH - Understanding GVA and Productivity**

### **The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent**

So whilst we would wish to support greater levels of economic growth and productivity within Staffordshire and Stoke-on-Trent, this should therefore not be at all costs. Higher levels of productivity would provide the opportunity to support increased wages for local residents, but this would only be of benefit if Staffordshire and Stoke-on-Trent remains affordable. To this end our Strategic Economic Plan outlines how we intend to support economic growth within the county, ensuring that future growth is supported by appropriate high-quality infrastructure, housing and places.

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

### Introduction

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At the heart of the new Staffordshire County Council Strategic Plan 2018-2022 is the need to grow the local economy to ensure that everyone living in Staffordshire has the opportunity to prosper, be healthy and happy. One of the three main outcomes of the plan is to ensure that the people of Staffordshire will be able to access more good jobs and feel the benefits of economic growth. In order to achieve this partners in Staffordshire and Stoke-on-Trent will deliver a range of priorities including creating the right conditions for businesses to start-up and grow; the right housing to meet local needs; and improved education and skills provision to help create a strong local labour market and raise productivity.

These aims and priorities are closely related to the Government's new 'Industrial Strategy: Building a Britain fit for the future'<sup>1</sup> which outlines its approach to creating high quality, well paid jobs across the country and covers the 'five foundations' of ideas, people, infrastructure, business environment and places.

To help measure our success in growing the economy and raising productivity we require a strong evidence base built upon the most robust and accurate data available. An important part of this is understanding how the Gross Value Added (GVA) of the local economy is changing over time and what are the main factors causing any change. Therefore, we need to have a strong handle on the complex nature of GVA data and be aware of any changes to how GVA is measured nationally by the Office for National Statistics (ONS).

In December 2017 the ONS announced that they were developing a new, experimental balanced measure of GVA. The new 'Balanced Approach' measure of GVA is designed to provide a single best estimate of GVA, combining the best parts of the existing 'Income Approach' and 'Production Approach' measures and ultimately replace these in the near future.

### Strategic Research Aim

This strategic assessment aims to provide a detailed understanding of the new 'Balanced' measure of GVA and how this differs to the previous measurement of GVA. In the main the analysis will concentrate on the new 'Balanced' measure data although there will be some comparison to the 'Income Approach' measure previously reported on (further information provided on page 4). There will be trend analysis and where possible Staffordshire, Stoke-on-Trent and District breakdowns alongside comparison with CIPFA neighbours, regional and national comparators.

The reasoning behind the decision by ONS to develop a new measure of GVA will also be explored. There will also be consideration of the issues with the measurement of GVA and productivity and associated factors such as changes in wage levels; jobs growth; cost of living; and the effects on wellbeing and quality of life. Finally, future economic challenges will be explored and how Staffordshire can turn these into opportunities for economic growth and increased productivity.

This report should be of relevance to members, commissioners and strategic managers across the LEP area, especially those with responsibility for economic growth and development.

<sup>1</sup> 'Industrial Strategy: Building a Britain fit for the future', HM Government, 2017



## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

### Measuring Gross Value Added (GVA)

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#### What is Gross Value Added (GVA)?

Gross Value Added, or GVA, is a measure of output in terms of the increase in the value of the economy through the production of goods and services. GVA is the preferred method used by the Office for National Statistics (ONS) to measure national economic performance, and can be used locally to assess the overall economic wellbeing of an area.

#### The New 'Balanced' Regional GVA measure

The ONS has developed a new experimental balanced measure of regional gross value added (GVA). This is designed to provide a single best estimate of regional GVA, combining the best parts of the existing income and production measures. It is believed that the UK is the first country to produce a balanced measure of regional GVA. The approach also uses Value Added Tax (VAT) returns in the compilation of provisional balanced regional GVA estimates for 2016; the first time ONS has used VAT returns.

It is intended that this new approach will provide greater accuracy at a sub-national level and more detailed breakdowns of GVA including nominal and real estimates of balanced GVA for 80 industries at the NUTS1 level, and 71 industries at the NUTS2 level<sup>2</sup>. There will also be improved frequency of data release with real estimates of balanced regional GVA published one year earlier than previously. There is also intended to be a greater granularity to the new data with the existing set of income components published at all geographic levels from NUTS1 down to local authority district, consistent with the balanced GVA estimates.

#### Existing measures of Regional GVA

Historically the ONS has produced estimates of regional gross value added (GVA) using the income approach (as National Statistics) and the production approach (as Experimental Statistics).

- **Income approach** (in nominal price terms including the effects of inflation) – whereby the components of income (compensation of employees, mixed income, rental income, gross trading profit and surplus, non-market capital consumption, holding gains, taxes less subsidies on production) are summed to give a measure of GVA on a workplace basis.
- **Production approach** (in current “real” price terms) – whereby GVA is calculated as total output of goods and services less the value of goods and services used up in the production process (intermediate consumption). The principal aim of this measure is to provide the means to calculate estimates with the effect of price inflation removed, known as “real” GVA.

(Note: In economics, a real value of a good or other entity has been adjusted for inflation, enabling comparison of quantities as if prices had not changed. Changes in real terms therefore exclude the effect of inflation. In contrast with a real value, a nominal value has not been adjusted for inflation, and so changes in nominal value reflect at least in part the effect of inflation.)

<sup>2</sup> To find out more about the NUTS classification (Nomenclature of territorial units for statistics) please use the following link <http://ec.europa.eu/eurostat/web/nuts/background>



# ECONOMIC GROWTH - Understanding GVA and Productivity

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

The production approach to compile GVA is conceptually equivalent to the income approach, but allows deflation of current prices to produce constant price measures, since the production components relate to goods and services that can be broken down into price and volume indices.

### **Reasoning for new 'balanced' measure**

Unfortunately, there is only one true value of GVA for any given area and no statistical estimate based on sample surveys will ever be able to guarantee complete accuracy. Therefore the income and production approaches provide two different answers to the question "what is GVA?" with no definitive way of determining which one is most accurate.

Given this confusion and uncertainty over the true value of GVA, ONS has adopted a balancing process for the existing two approaches to measuring regional GVA. This involves identifying the strengths and weaknesses of each measure and give them appropriate weight in informing a single definitive "balanced" estimate of regional GVA.

### **Benefits of the 'balanced' measure**

One of the benefits of the balanced measure of GVA is that it should be more reliable and more stable than either of its component estimates, as it gives more weight to the component that is judged to be of better quality, for each industry and for each region. It is therefore less prone to variation coming from anomalous survey data affecting any single component of output or income. This greater reliability means that we can have more confidence in estimates that are disaggregated to more detailed industries (according to the Standard Industrial Classification (SIC) 2007), and to smaller geographic areas.

### **Weaknesses with GVA data**

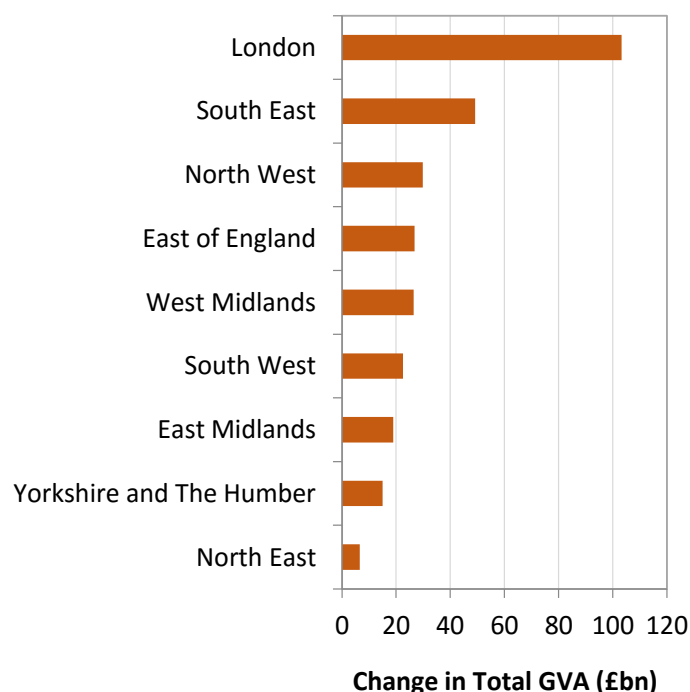
Whilst the 'balanced approach' to measuring GVA is an improvement, there remain a number of issues with the way in which GVA is calculated at sub-regional level which should be noted. All GVA data at lower levels of geography is comprised of a number of components which include what companies are paying employees and the costs of production including rent. There is therefore an inflationary aspect of GVA which should be considered, whilst many areas that have experienced significant growth in GVA have equally experienced significant increases in associated costs. This is what has happened within London and a number of other areas for many years, with increased incomes going hand-in-hand with significant cost-of-living increases, and is a key reason why areas largely within the South East continue to drive GVA growth.

As the following charts highlight, whilst London and the South East have experienced significant increases in GVA since 2008, these areas have also experienced by far the largest increases in house prices over the same period.

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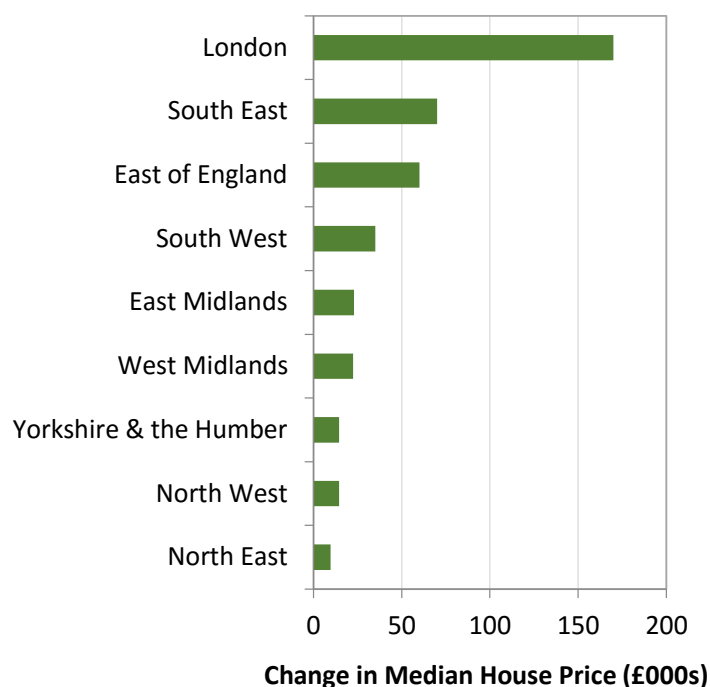
## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

Figure 4: Change in Total GVA, 2008-2016



Source: Regional GVA Balanced Approach, ONS

Figure 5: Change in Median House Prices, 2008-2016



Source: Housing Affordability, ONS

So whilst London and the South East have seen far greater increases in GVA growth compared with other parts of the country in recent years, this has gone hand-in-hand with significant increases in living costs and not least housing. This has led to these parts of the country having significant housing affordability issues which has recently become one of the major political talking points. Earnings of employees within these areas have not experienced the same level of growth as the increases in house prices and this has resulted in a situation where London in particular has become completely unaffordable for a large proportion of people.

The nature of business also means that there are specific weaknesses in the way in which GVA is calculated, with many head offices accounting for GVA in an area despite the actual product being created elsewhere. A recent report produced by Birmingham City University on behalf of the West Midlands Economic Forum stated that GVA figures are likely to underestimate manufacturing performance outside of London given:-

*“The latest HMRC data suggest that in 2014 goods exports from London totalled some £28.8bn in spite of the fact that the ONS’s Annual Business Survey (ABS) suggests that the total turnover of London’s manufacturing sector that year was under £21bn.”*

Therefore official data suggests that London exported more manufactured goods in 2014 than the area actually produced. For areas such as Stoke-on-Trent and Staffordshire where manufacturing plays such a vital role within the local economy, this underestimation may clearly be significant. In the absence of better measures of productivity, it is therefore important to consider a wider range of measures of the performance of the local economy.

# ECONOMIC GROWTH - Understanding GVA and Productivity

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

### **Experimental Statistics**

‘Balanced’ GVA data are currently classed as Experimental Statistics. These are defined in the Code of Practice for Official Statistics as new official statistics undergoing evaluation. They are published to involve users and stakeholders in their development and to build in quality at an early stage.

### **Further Information**

For further information on the development of the ‘Balanced’ Approach to regional GVA please visit:

[https://consultations.ons.gov.uk/national-accounts/consultation-on-balanced-estimates-of-regional-gva/supporting\\_documents/Development%20of%20a%20balanced%20measure%20of%20regional%20gross%20value%20added.pdf](https://consultations.ons.gov.uk/national-accounts/consultation-on-balanced-estimates-of-regional-gva/supporting_documents/Development%20of%20a%20balanced%20measure%20of%20regional%20gross%20value%20added.pdf)

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

### Key Findings

It is recommended to use a suite of different indicators, including the productivity measures presented in this report, when assessing the economic performance of an area.

#### **Economic Output - Gross Value Added (GVA) in Staffordshire and Stoke-on-Trent**

The **value of the economy in Staffordshire**, as measured by the 'balanced' approach ONS measure of GVA, **increased by 4.3% or £681 million between 2015 and 2016 (latest data), showing a growth in the economy from £15.9 billion to £16.6 billion** and was a higher rate of growth than seen regionally (3.9%) and nationally (3.7%). This was similar to the comparative performance seen between 2014 and 2015.

However, over the longer-term, the **average annual growth rate in Staffordshire between 2008 and 2016 was only 2% which was lower than the average for the West Midlands (3%) and the UK (2.6%)**. Growth since 2008 has also lagged behind the pre-2008 trend and Staffordshire has seen one of the lowest average annual growth rates since 2008 compared to its CIPFA neighbours.

The size of Staffordshire's economy has been reduced through the new 'balanced' approach but it has shown greater growth than the previous 'income' approach.

The **industries which contributed the most to the Staffordshire economy in 2016** were 'Distribution; transport; accommodation and food' (£4 billion or 24.4%); 'Public administration; education; health' (£2.7 billion or 16.2%); and 'Manufacturing' (£2.5 billion or 15.1%).

In Staffordshire between 2008 and 2016 the **strongest industrial growth in terms of total GVA** was seen in 'Distribution; transport; accommodation and food' which grew by £872 million or 27.4% and 'Manufacturing' which grew by £548 million or 28%. The **strongest average annual growth in GVA between 2008 and 2016** in Staffordshire was seen in 'Recreation, other services and household activities' with an average annual growth rate of 8% which saw the industry grow by £434 or 81.1%. In Staffordshire there were only two **industries which saw a decline between 2008 and 2016**, these were 'Financial and insurance activities' which declined by £190 million or 34% and 'Information and communication' which declined by £29 million or 5.2%.

**Stoke-on-Trent's economy stood at £5.2 billion in 2016** based on the 'balanced' approach showing a slight difference of £39 million from the 'income' approach measure. The economy in Stoke-on-Trent **increased by 5.1% between 2015 and 2016 showing a growth of £251 million**. The Stoke-on-Trent economy also saw an **average annual increase of 3.7% between 2008 and 2016 which was higher than the national (2.6%) and regional average (3%)**.

The **Stoke-on-Trent industrial composition of GVA in 2016** was dominated by 'Public administration; education; health' (£1.3 billion or 25.8%); 'Distribution; transport; accommodation and food' (£1.1 billion or 21.6%); and 'Manufacturing' (£0.9 billion or 17.7%).

In Stoke-on-Trent **the strongest growth in GVA between 2008 and 2016** was seen in 'Public administration; education; health' which grew by £414 million or 44.4% and 'Distribution; transport; accommodation and food' which rose by £377 million or 50.2%. The **strongest average annual growth in**

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**GVA between 2008 and 2016** was seen in 'Information and communication' with an average growth rate of 10.5% which saw the industry grow by £127 million or 116.5%.

### Productivity in Staffordshire and Stoke-on-Trent

Poor productivity is the key economic issue of our age both nationally and locally. Labour productivity is defined as the quantity of goods and services produced per unit of labour input, for example, per hour worked or per filled job. Productivity matters because increasing productivity is critical to increasing economic growth in the long-run. This follows from the fact that economic output can only be increased by either increasing the amount of inputs or by raising productivity. Furthermore, changes in labour productivity are also related to changes in real wages. Increasing productivity is, therefore, an important aim for any economy.

There are two main measures of productivity, the first is a ratio of output (measured as gross value added (GVA)) divided by the hours worked to create it and the second measure divides GVA by the number of filled jobs used to create it.

### GVA per hour worked in Staffordshire and Stoke-on-Trent

**GVA per hour worked in Staffordshire stood at £26.83 in 2016** compared to the UK average of £32.58, which means that on average **each hour worked in Staffordshire was nearly a fifth (17.6%) less productive than the national average**. Staffordshire also performs relatively poorly for GVA per hour worked when compared to its CIPFA neighbours.

The long-term trend shows that the gap between Staffordshire and the national average widened leading up to the recession and continued to widen during the economic downturn which followed, partly due to increases in jobs often being in less productive industries. However, the **figures for 2015 and 2016 show that the gap between Staffordshire and the national average has closed and possibly indicates that productivity in Staffordshire may be starting to improve**.

Although there are potential emerging signs of improvement, the relative poor productivity performance in Staffordshire for many years has resulted in output per hour worked being 14% lower in 2016 (Stoke-on-Trent 17% lower) than if productivity had grown in line with the pre-recession trend seen between 2004-2008.

**Stoke-on-Trent GVA per hour worked stood at £25.27 in 2016**, equivalent to 77.6% of the UK average. Stoke-on-Trent has seen lower growth in GVA per hour worked since the recession compared to the national average. In particular, the gap to the national average has widen slightly since 2012 and therefore needs to be monitored.

### GVA per job filled in Staffordshire and Stoke-on-Trent

**GVA per job filled in Staffordshire stood at £43,439 in 2016** compared to the UK average of £52,626, as with GVA per hour worked this means that on average each job filled in Staffordshire was nearly **a fifth (17.5%) less productive than the national average**, with the gap having widened leading up to the recession and during the economic downturn which followed.

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

Again as with GVA per hour worked, there are signs more recently that relative productivity in Staffordshire may be improving, however output per job filled in 2016 was still 15% lower than if productivity had grown in line with pre-2008 trend seen between 2002 and 2008.

**Stoke-on-Trent GVA per hour worked stood at £42,631 in 2016**, equivalent to 81% of the UK average, although Stoke-on-Trent has seen good comparative growth since 2008, partly due to increases in jobs in higher value industries.

### The Importance Of Increasing GVA and Raising Productivity - Associated Factors

It is recognised that GVA and productivity are extremely complex in their nature and are associated with a wide range of factors, such as growth in jobs; changes in economic structure; wage levels; skills levels; inflation; cost of living and household income and spending. These are considered in greater detail within the body of the report. Some interesting findings include:

- Recent **strengthening of the labour** market in Staffordshire has seen job numbers broadly recover to pre-recession levels, with an 8% increase (over 25,000 jobs) in Staffordshire between 2010 and 2015 which is higher growth than seen regionally or nationally and has helped keep unemployment low. However, much of this jobs growth has been in low-value, low-skill sectors. It is recognised that there is a **need to increase jobs in higher value sectors in order to increase GVA and raise productivity**, such as through sector action plans, while also **responding to any potential negative effect on jobs from Brexit**.
- Although the local labour market has delivered jobs for local residents and kept unemployment levels low, there is a clear need to accompany this with the **sustained higher productivity that is the essential requirement for higher wages**. Improving productivity while holding on to high employment and maintaining relatively low living costs will be vital to improving living standards and the quality of life of all our residents.
- While increasing the number of jobs in high value sectors in Staffordshire is crucial to addressing the productivity challenge, we also need to **improve the skills of our resident working age population and attract and retain skilled workers**. To support these aims there needs to be the **right quantity and mix of housing** to support both existing workers and those attracted to the area through job creation in Staffordshire and Stoke-on-Trent.
- As well as having a potential impact on jobs in Staffordshire, **Brexit has the potential to also impact local economic growth due to issues such as trade barriers**. However, the nature and extent of the impact will be dependent upon the final terms of the Brexit agreement. However many, but not all, economists are currently predicting that Brexit will have a negative impact on economic growth.

### Strategic Focus on Growth in GVA and Raising Productivity...while keeping employment high

There is also discussion regarding the importance of the five foundations of productivity (ideas; people; infrastructure; business environment; and places) identified in the Government's new Industrial Strategy and how Staffordshire will need to respond in order to grow the local economy and raise productivity moving forward.



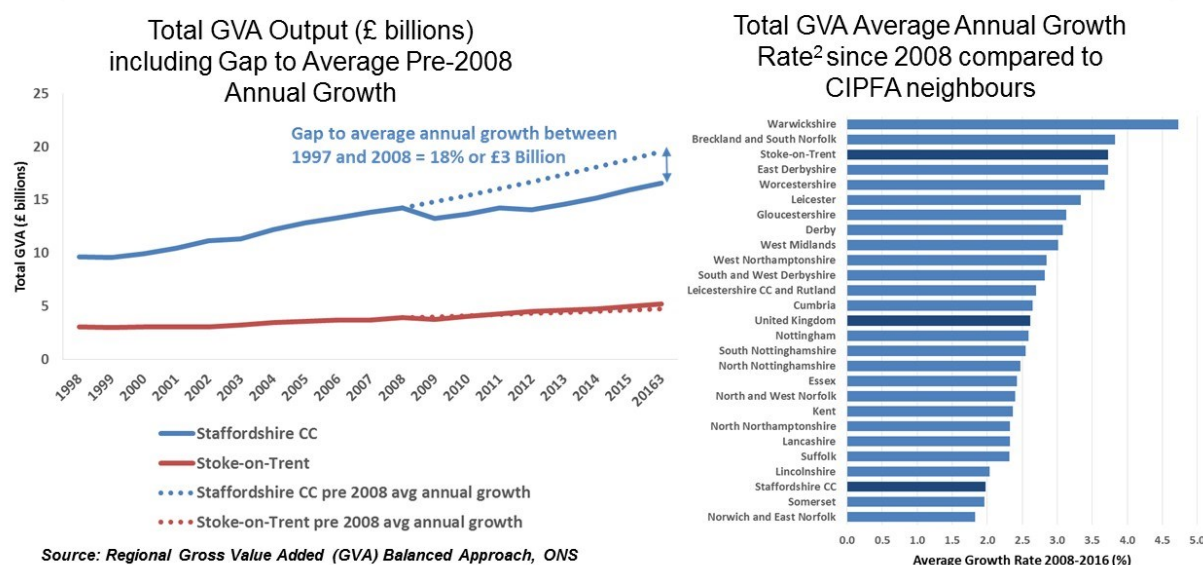
# ECONOMIC GROWTH - Understanding GVA and Productivity

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

### Headline Facts & Figures

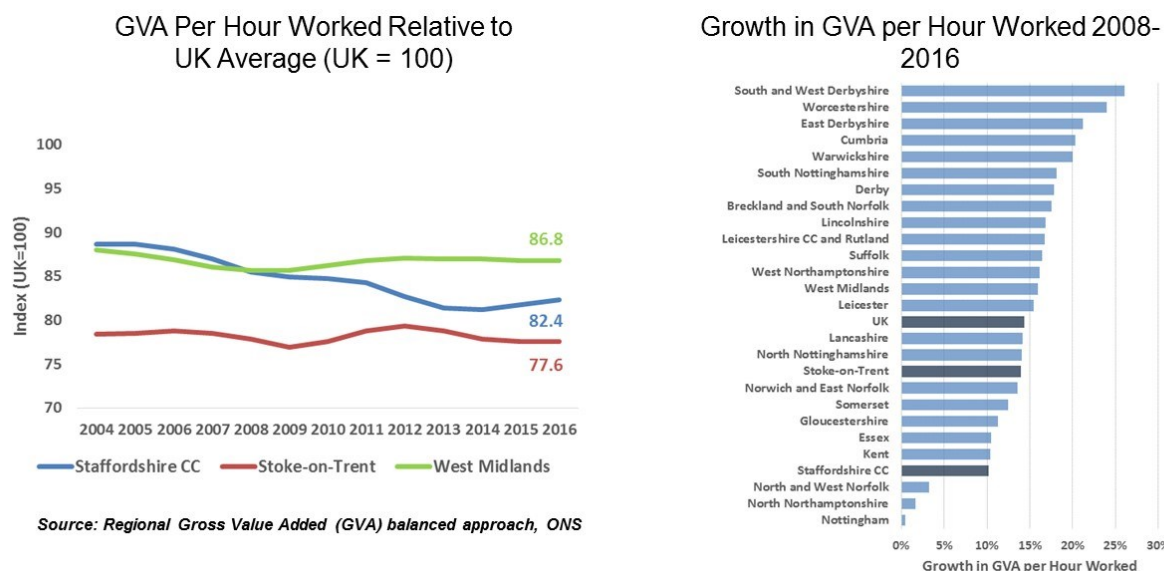
#### Total GVA ➡

Total Gross Value Added (GVA) in Staffordshire has increased by nearly £2.3bn between 2008 and 2016 (£14.3bn to £16.6bn), however growth since 2008 has lagged behind the pre-2008 trend and Staffordshire has seen one of the lowest average annual growth rates since 2008 compared to its CIPFA neighbours. Stoke-on-Trent saw an increase of £1.3bn since 2008 (£3.9bn to £5.2bn) with an higher average annual growth rate than that seen nationally.



#### GVA per Hour Worked ➡

The Productivity Puzzle - GVA per hour worked in Staffordshire is poor when compared to the UK average, with the gap having widened since the recession. However, figures for 2015 and 2016 show that the gap between Staffordshire and the national average has closed and possibly indicates that productivity in Staffordshire may be starting to improve. Stoke-on-Trent GVA per hour worked is poor compared to the national average and the gap to the national average has widened over recent years.





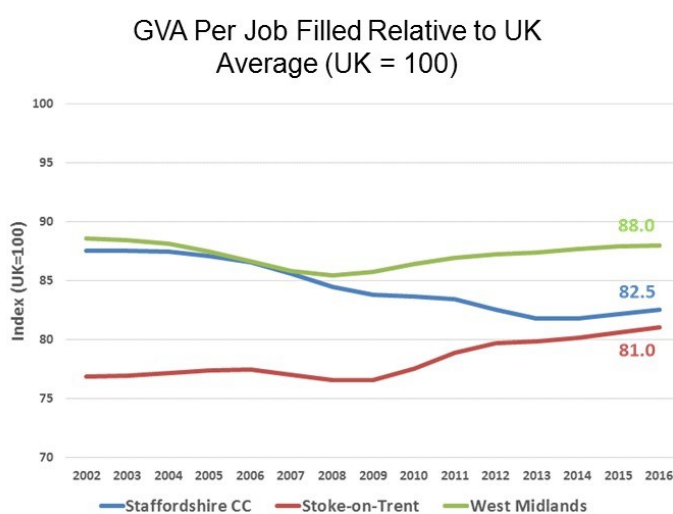
# ECONOMIC GROWTH - Understanding GVA and Productivity

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

### GVA per Job Filled ➡

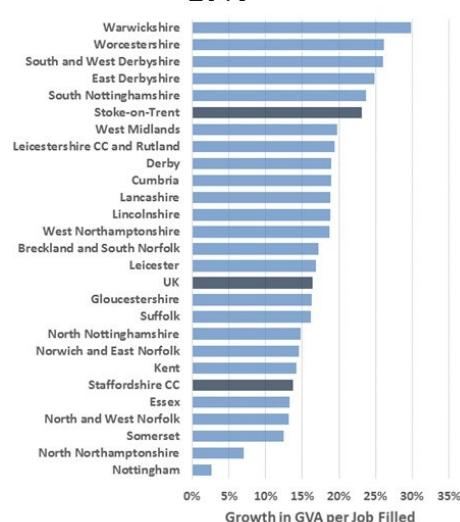
The Productivity Puzzle - GVA per job filled in Staffordshire is poor when compared to the UK average, with the gap having widened since the recession.

Stoke-on-Trent GVA per job filled is also significantly below the national average, but has seen good comparative growth since 2008, partly due to increases in jobs in higher value industries.



Source: Regional Gross Value Added (GVA) balanced approach, ONS

### Growth in GVA per Job Filled 2008-2016



# ECONOMIC GROWTH - Understanding GVA and Productivity

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

### The Current Position And How GVA Has Changed

#### Economic Output - Absolute Total GVA

Total GVA (£Millions) shows the overall size or output of the economy and is measured at current basic prices, which include the effect of inflation, excluding taxes (less subsidies) on products (for example, VAT). For reference, GVA plus taxes (less subsidies) on products is equivalent to Gross Domestic Product (GDP).

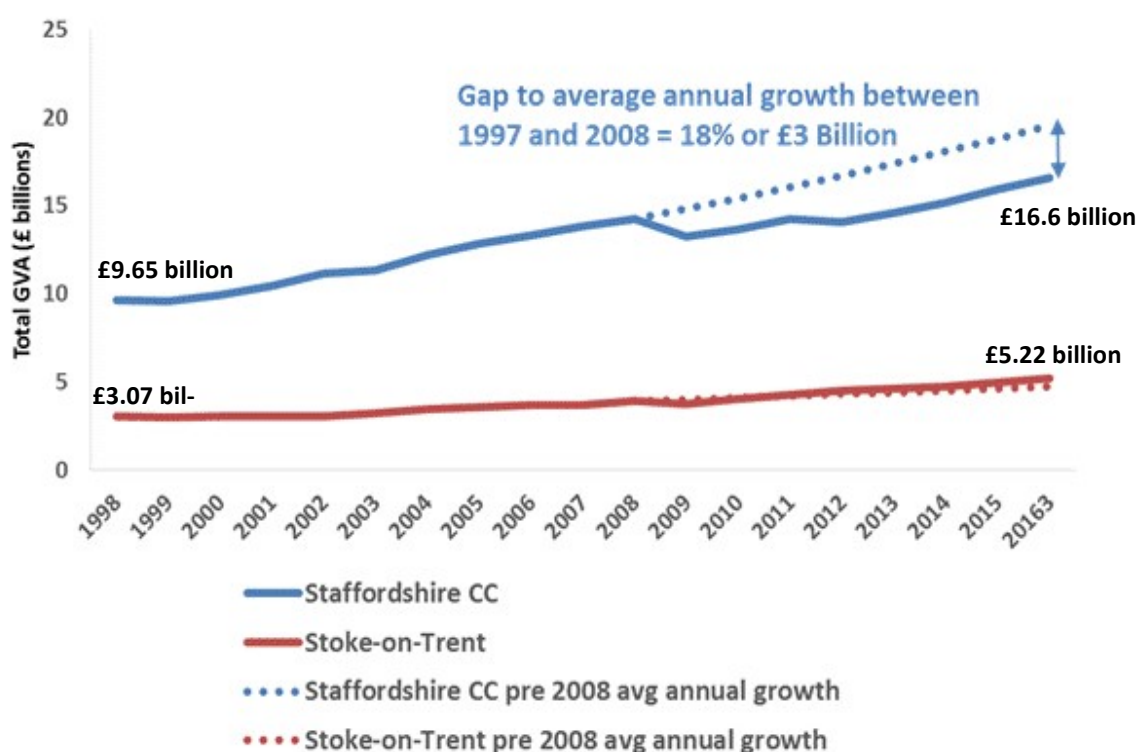
The GVA estimates presented here are calculated on a workplace basis (allocated to the location where the economic activity takes place) using the 'balanced' approach. This involves balancing the income and production approaches to measuring GVA by adding-up the income and output generated by individuals or corporations in the production of goods and services in Staffordshire and Stoke-on-Trent. Residents who commute out of Staffordshire and Stoke-on-Trent will have the wealth they generate counted in the location of their work-place.

#### Key Findings

##### Size of the economy

- Based on the 'balanced' approach measure of GVA the size of the **Staffordshire economy stood at £16.6 billion in 2016**, which made it the 3rd largest economy in the West Midlands (behind Birmingham and Warwickshire) and equivalent to 13.1% of the regional total;
- The 'balanced' measure shows that **Stoke-on-Trent's economy stood at £5.2 billion in 2016** showing a slight difference of £39 million from the 'income' approach measure;

**Figure 6: Total GVA Output (£ billions) including Gap to Average Pre-2008 Annual Growth**

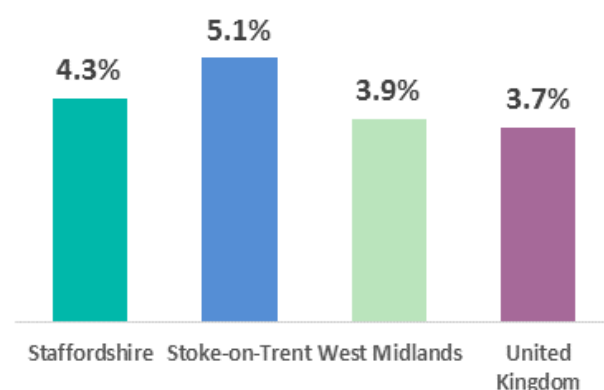


## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

### Change in the size of the economy

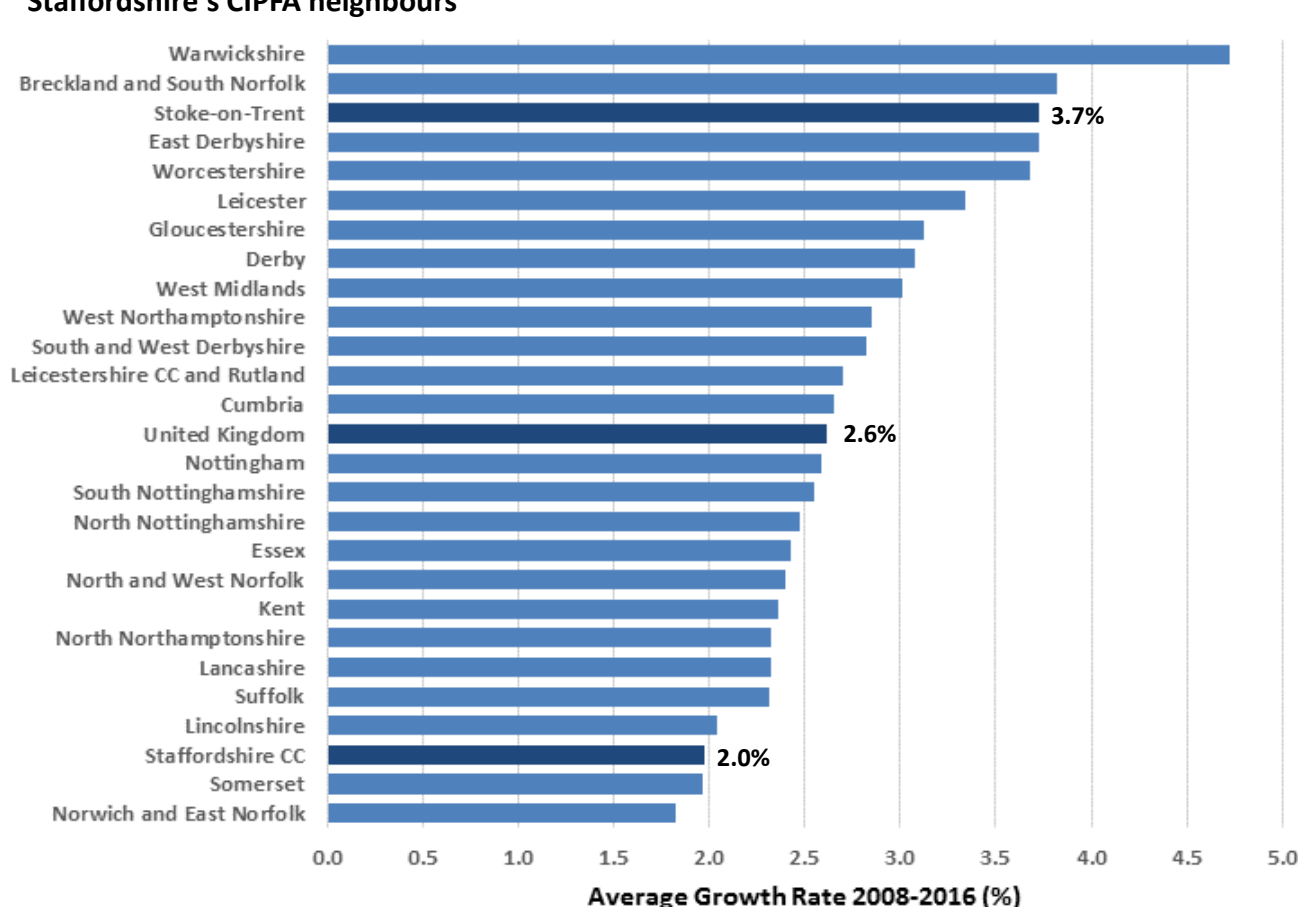
- **Total GVA in Staffordshire increased by 4.3% or £681 million between 2015 and 2016**, showing a growth in the economy from £15.9 billion to £16.6 billion and was a higher rate of growth than seen regionally (3.9%) and nationally (3.7%). This was similar to the comparative performance seen between 2014 and 2015;
- However, over the longer-term, the average annual growth rate in Staffordshire between 2008 and 2016 was only 2% which was lower than the average for the West Midlands (3%) and the UK (2.6%);
- Growth since 2008 has also lagged behind the pre-2008 trend and Staffordshire has seen one of the lowest average annual growth rates since 2008 compared to its CIPFA neighbours.

Figure 7: % Change in Total GVA 2015-2016



Source: Regional GVA Balanced Approach, ONS

Figure 8: Total GVA Average Annual Growth Rate between 2008 and 2016 compared to Staffordshire's CIPFA neighbours



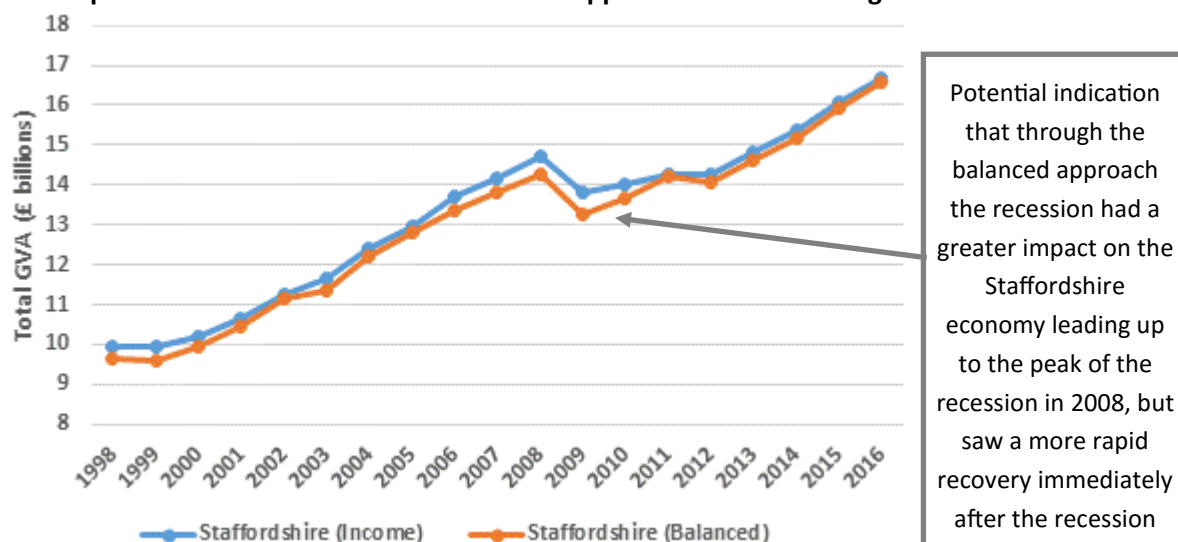
Source: Regional GVA Balanced Approach, ONS

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

### Comparison between 'Balanced' and 'Income' Approaches to measuring GVA

- When compared with the 'income' approach measure the size of the Staffordshire economy saw a decline of £105 million equivalent to a  $-0.6\%$  reduction in 2016 which indicates that changes by the ONS to the weighting of the components that make up GVA and the resultant redistribution of national GVA has had a negative effect on the estimated size of Staffordshire's economy. Stoke-on-Trent has seen a decline of £39 million or  $-0.7\%$  between the two measures in 2016;
- The effect of this redistribution is even more noticeable when we look at the 1998 baseline, this shows that Staffordshire saw a £292 million decline in the estimated size of its economy which was a  $-2.9\%$  reduction and the second biggest percentage reduction when compared with its CIPFA neighbours after Lincolnshire ( $-5.2\%$ ). Stoke-on-Trent saw a decline of £82 million equivalent to a  $-2.6\%$  reduction;
- However, despite the new 'balanced' measure suggesting a lower baseline for Staffordshire in 1998 this new approach has shown a greater increase in the overall size of the economy between 1998 and 2016 compared to the previous 'Income' approach. Whereby the 'balanced' approach has shown that the Staffordshire economy grew by £187 million more between 1998 and 2016 than the previous 'income' approach suggested. This is the second highest growth improvement between the two measures when compared with its CIPFA neighbours, with only Gloucestershire seeing a greater improvement. Stoke-on-Trent also saw an improvement in its growth of £43 million over the same period;
- Over more recent years the 'balanced' approach shows that Staffordshire has done particularly well when compared with the 'income' approach, with the 'balanced' approach showing that Staffordshire's economy grew by £364 million more between 2008 and 2016 than the previous 'income' approach suggested. This was the highest growth improvement between the two measures when compared with its CIPFA neighbours. Stoke-on-Trent saw an improvement in its growth of £79 million between 2008 and 2016.

**Figure 9: Comparison between Balanced and Income Approaches to Measuring GVA in Staffordshire**



Source: Regional GVA Balanced Approach, ONS

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

### GVA by sector – detailed breakdown of GVA for industries that make up the local economy

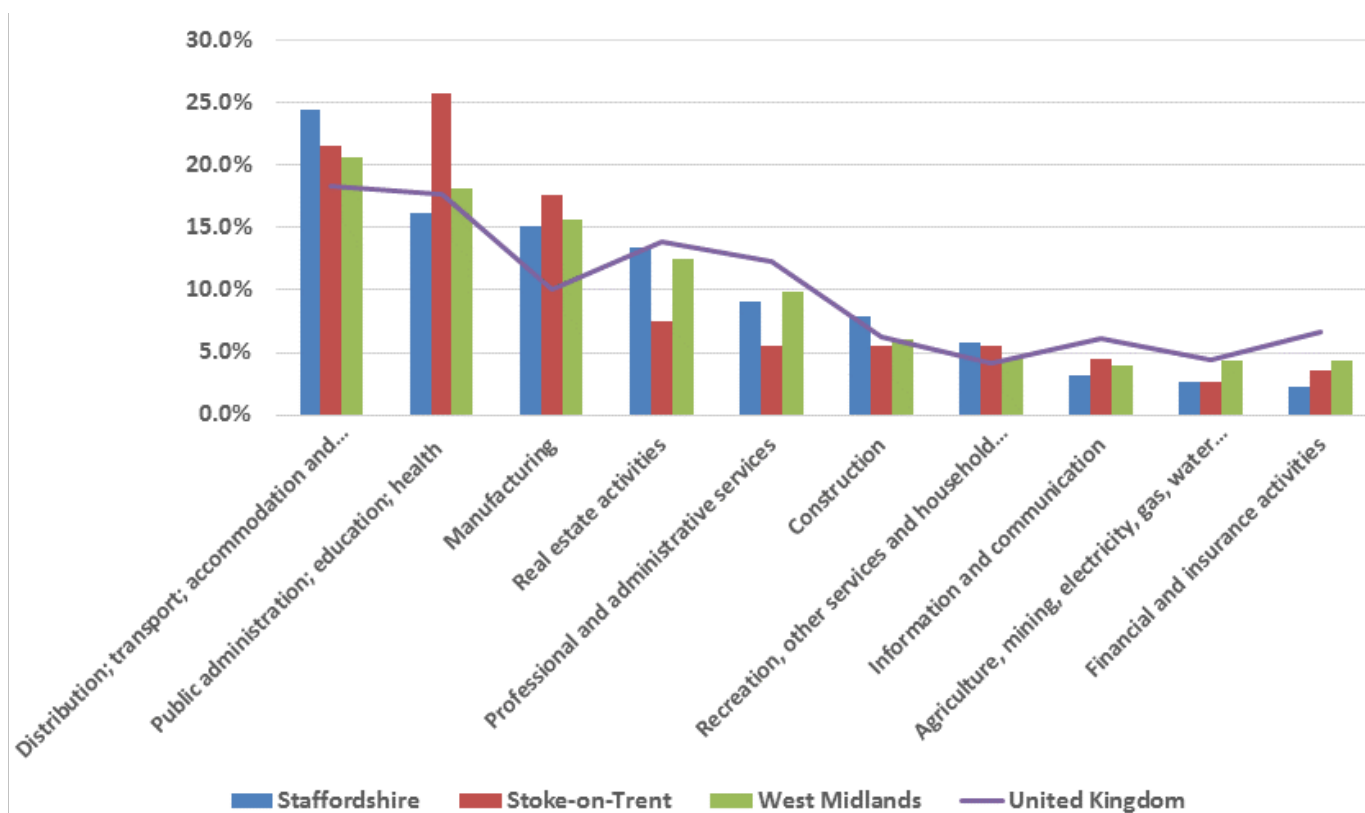
As well as showing the overall size of the economy total GVA can be broken down into individual industry sectors. Figure 10 shows the industrial composition of total GVA for Staffordshire in 2016.

### Key Findings

#### Industrial Composition of GVA in 2016

- 'Distribution; transport; accommodation and food' was the industry to contribute the largest proportion of GVA in Staffordshire in 2016, contributing just over £4 billion or 24.4% of the total, which is a higher proportion than the average for the UK (18.4%);
- 'Public administration; education; health' was the second largest industry in terms of its contribution to GVA, contributing just under £2.7 billion or 16.2% of total GVA in Staffordshire;
- 'Manufacturing' was shown to contribute £2.5 billion to the local economy in Staffordshire or 15.1% of total GVA, which is a higher proportion than the UK average of 10.1%;
- In Stoke-on-Trent the industrial composition of GVA in 2016 was dominated by 'Public administration; education; health' (£1.3 billion or 25.8%); 'Distribution; transport; accommodation and food' (£1.1 billion or 21.6%); and 'Manufacturing' (£0.9 billion or 17.7%).

**Figure 10: Industrial composition of GVA in Staffordshire with comparison to Stoke-on-Trent, West Midlands and United Kingdom, 2016**



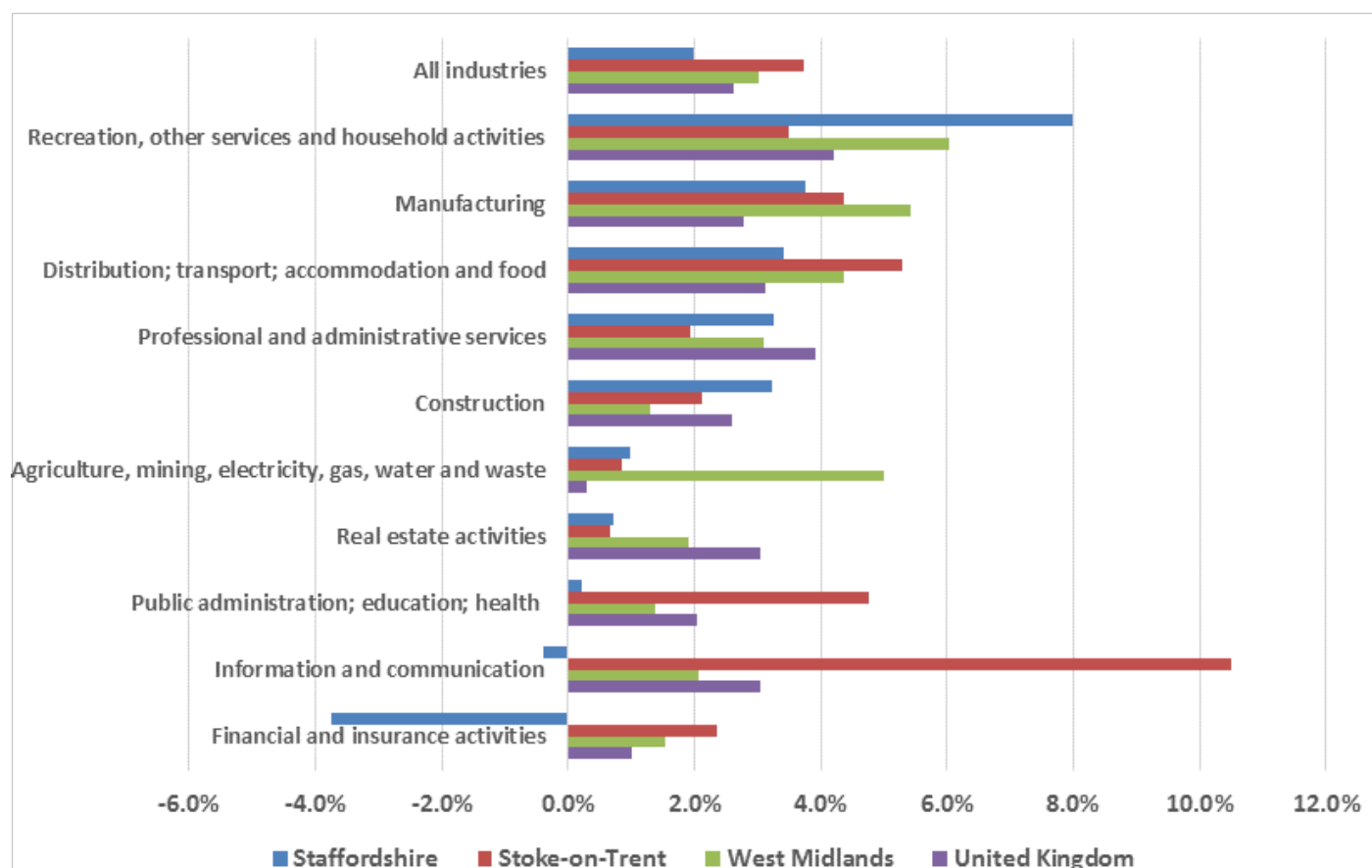
Source: Regional GVA Balanced Approach, ONS

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

### Long-term trend in the Industrial Composition of GVA

- In Staffordshire between 2008 and 2016 the strongest industrial growth in terms of total GVA was seen in 'Distribution; transport; accommodation and food' which grew by an estimated £872 million or 27.4% and 'Manufacturing' which grew by £548 million or 28%;
- The strongest average annual growth in GVA between 2008 and 2016 in Staffordshire was seen in 'Recreation, other services and household activities' with an average annual growth rate of 8% which saw the industry grow by £434 or 81.1%;
- The industry to see the largest decline between 2008 and 2016 in Staffordshire was 'Financial and insurance activities' which declined by £190 million or 34%;
- The only other industry in Staffordshire to see a slight decline in GVA was 'Information and communication' which declined by £29 million or 5.2%;
- In Stoke-on-Trent the strongest growth between 2008 and 2016 was seen in 'Public administration; education; health' which grew by £414 million or 44.4% and 'Distribution; transport; accommodation and food' which rose by £377 million or 50.2%. The strongest average annual growth in GVA between 2008 and 2016 was seen in 'Information and communication' with an average growth rate of 10.5% which saw the industry grow by £127 million or 116.5%.

**Figure11: Average annual growth rate in GVA by industry between 2008 and 2016**



Source: Regional GVA Balanced Approach, ONS

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

### Latest trend in the Industrial Composition of GVA

- The latest figures for Staffordshire show that between 2015 and 2016 the greatest growth in GVA has been seen in 'Distribution; transport; accommodation and food' which grew by £294 million or 7.8% and 'Manufacturing' which grew by £175 million or 7.5%;
- 'Information and communication' saw the biggest proportion growth between 2015 and 2016 in Staffordshire within a rise of 8% (£39 million);
- 'Financial and insurance activities' continued to decline with a reduction of £37 million or 9.1% and the only other sector to see a slight decline was 'Agriculture, mining, electricity, gas, water and waste' which reduced by £11 million or 2.4%;
- In Stoke-on-Trent the largest increase in GVA between 2015 and 2016 was in 'Public administration; education; health' which grew by £104 million or 8.4% and 'Distribution; transport; accommodation and food' which increased by £88 million or 8.5%. The largest proportion growth was in 'Information and communication' which grew by 11.3%. The largest decline was in 'Financial and insurance activities' which decreased by £30 million or 30.8% and 'construction' which declined by £14 million or 4.6%.

### GVA per Head in Staffordshire and Stoke-on-Trent

Analysis of GVA per head is provided in Appendix 3, however there are a number of factors which need be taken into account when interpreting GVA per head, not least the effects of commuting patterns and the demographic make-up of an area. More reliable measures of output are by GVA per hour worked and GVA per job filled, which take these factors into account and are covered in the following section.



## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

### Understanding Local Productivity

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#### What is labour productivity?

Labour productivity is defined as the quantity of goods and services produced per unit of labour input, for example, per hour worked or per filled job. It is one of the most widely used measures of economic performance of a nation or an area.

Productivity matters because increasing productivity is critical to increasing economic growth in the long-run. This follows from the fact that economic output can only be increased by either increasing the amount of inputs or by raising productivity. Furthermore, changes in labour productivity are also related to changes in real wages. Increasing productivity is, therefore, an important aim for both national and local economies.

This section considers the two main measures of labour productivity. The first is a ratio of output (measured as gross value added (GVA)) divided by the hours worked to create it. The second measure divides GVA by the number of filled jobs used to create it. In both cases, GVA is an estimate of the total amount of goods and services produced less the value of intermediate inputs.

These measures only count the input of those who are directly employed in the production process, rather than the whole population as with the measure of GVA per head. Additionally, they provide a workplace-based labour input denominator to match the workplace-based GVA numerator, thus fully accounting for the impacts of commuting. The differences in the results between sub-regional labour productivity and GVA per head can be very large. This is particularly the case for sub-regions that have large commuting flows, such as Inner London. In such cases, use of GVA per head can give an unrealistic picture of the sub-regions relative economic performance.

The data analysis for the two measures is based on nominal GVA which does not by definition take account of any regional or local price differences or different factor prices faced by businesses. It should also be noted that labour productivity can be affected by the relative intensity of use of other inputs such as capital or technology. Labour input can be measured as the number of jobs, workers or hours worked. The preferred measure of labour productivity is GVA per hour worked as it takes into account different working patterns, unlike GVA per filled job which does not take into consideration regional labour market structures or different working patterns, such as the mix of part-time and full-time workers, and job shares.

#### Issues with the measurement of productivity

It is important to be aware that there are many issues with the measurement of productivity which need to be taken into account when interpreting the data, these include:

- Challenge of mismeasurement e.g. is the wave of digital innovation in our services being captured in the data;
- Allocating GVA is notoriously difficult due to cross border working; and
- New ways of working – not 9-5 anymore so difficult to measure accurately.

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

### Productivity Measures

**GVA per Hour Worked** – the ratio of GVA output divided by the hours worked to create it

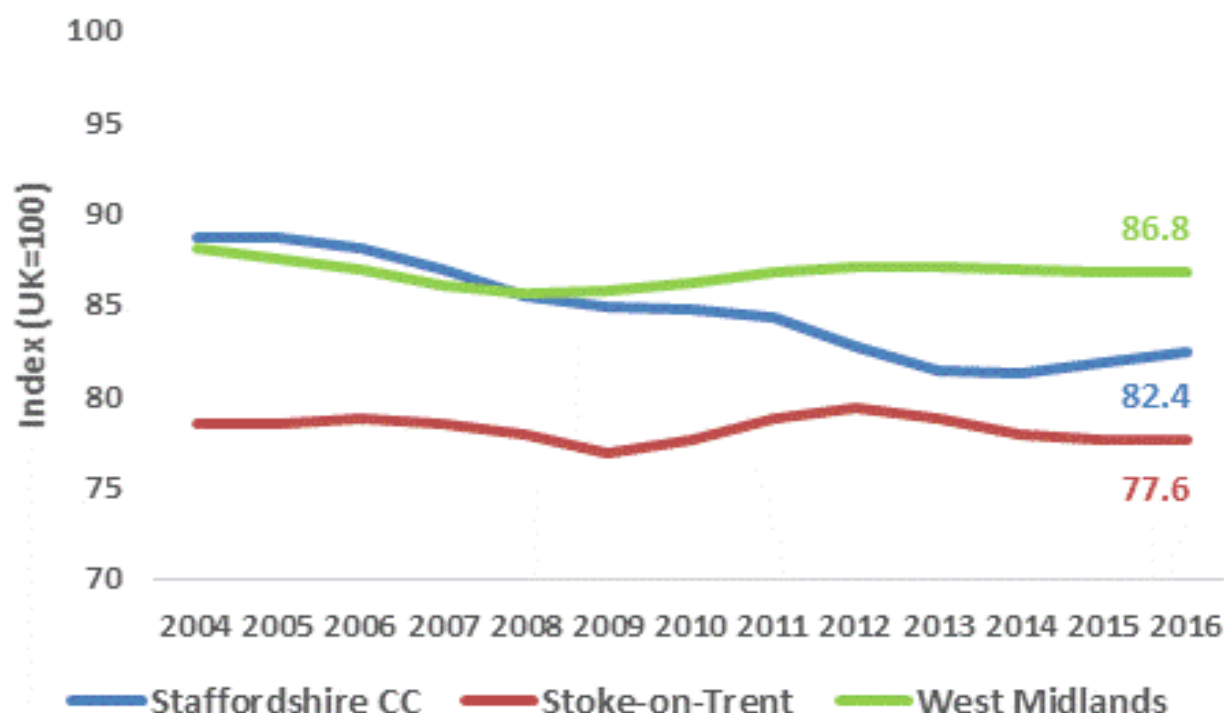
#### Latest position

- In 2016, GVA per hour worked in Staffordshire stood at £26.83 compared to the UK average of £32.58, showing a gap of £5.75;
- This means that on average each hour worked in Staffordshire was nearly a fifth (17.6%) less productive than the national average;
- Stoke-on-Trent GVA per hour worked stood at £25.27 in 2016, equivalent to 77.6% of the UK average.

#### Trend analysis

- The long-term trend shows that the gap between Staffordshire and the national average widened leading up to the recession and continued to widen during the economic downturn which followed, however the figures for 2015 and 2016 show that the gap has closed and possibly indicates that productivity in Staffordshire may be starting to improve;
- Stoke-on-Trent has seen lower growth in GVA per hour worked since the recession compared to the national average and the gap to the national average has widen slightly since 2012 and therefore needs to be monitored.

Figure 12: GVA per Hour Worked relative to UK average (UK=100)



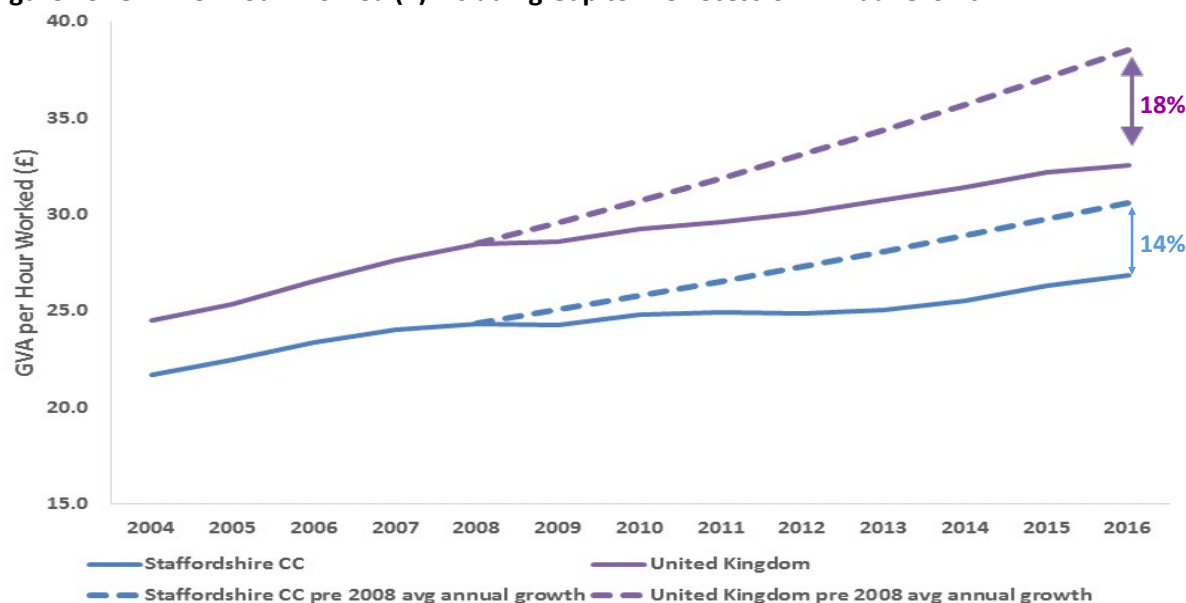
Source: Regional and Sub-regional Productivity Balanced Approach, ONS

# ECONOMIC GROWTH - Understanding GVA and Productivity

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

- Although there are potential emerging signs of improvement, the relative poor productivity performance in Staffordshire for many years has resulted in output per hour worked being 14% lower in 2016 (Stoke-on-Trent 17% lower) than if productivity had grown in line with the pre-recession trend seen between 2004-2008.

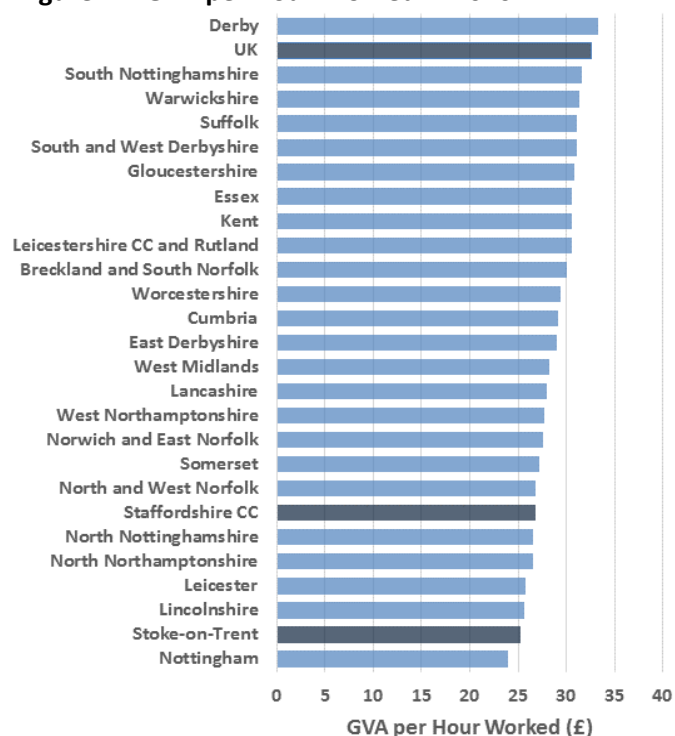
**Figure 13: GVA Per Hour Worked (£) including Gap to Pre-recession Annual Growth**



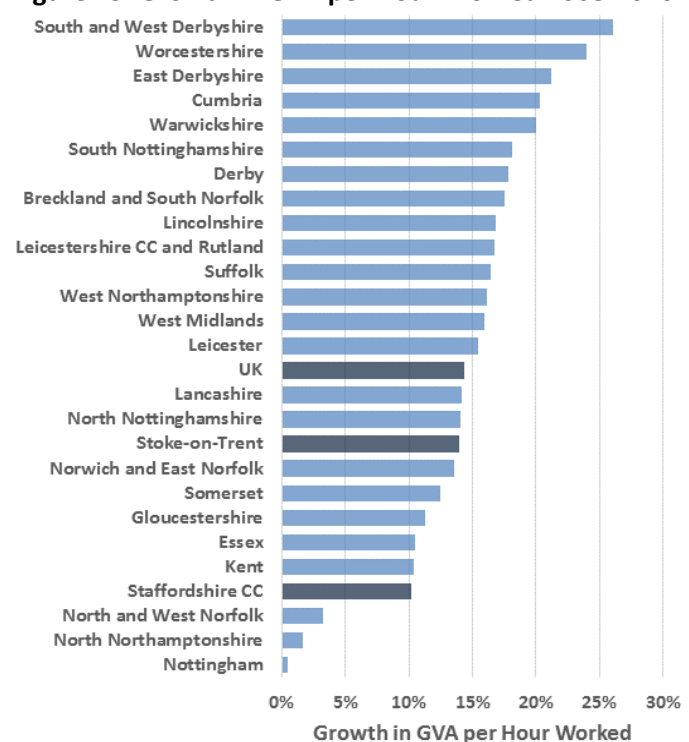
Source: Regional and Sub-regional Productivity Balanced Approach, ONS

- Staffordshire also performs relatively poorly for GVA per hour worked when compared to its CIPFA neighbours

**Figure 14: GVA per Hour Worked in 2016**



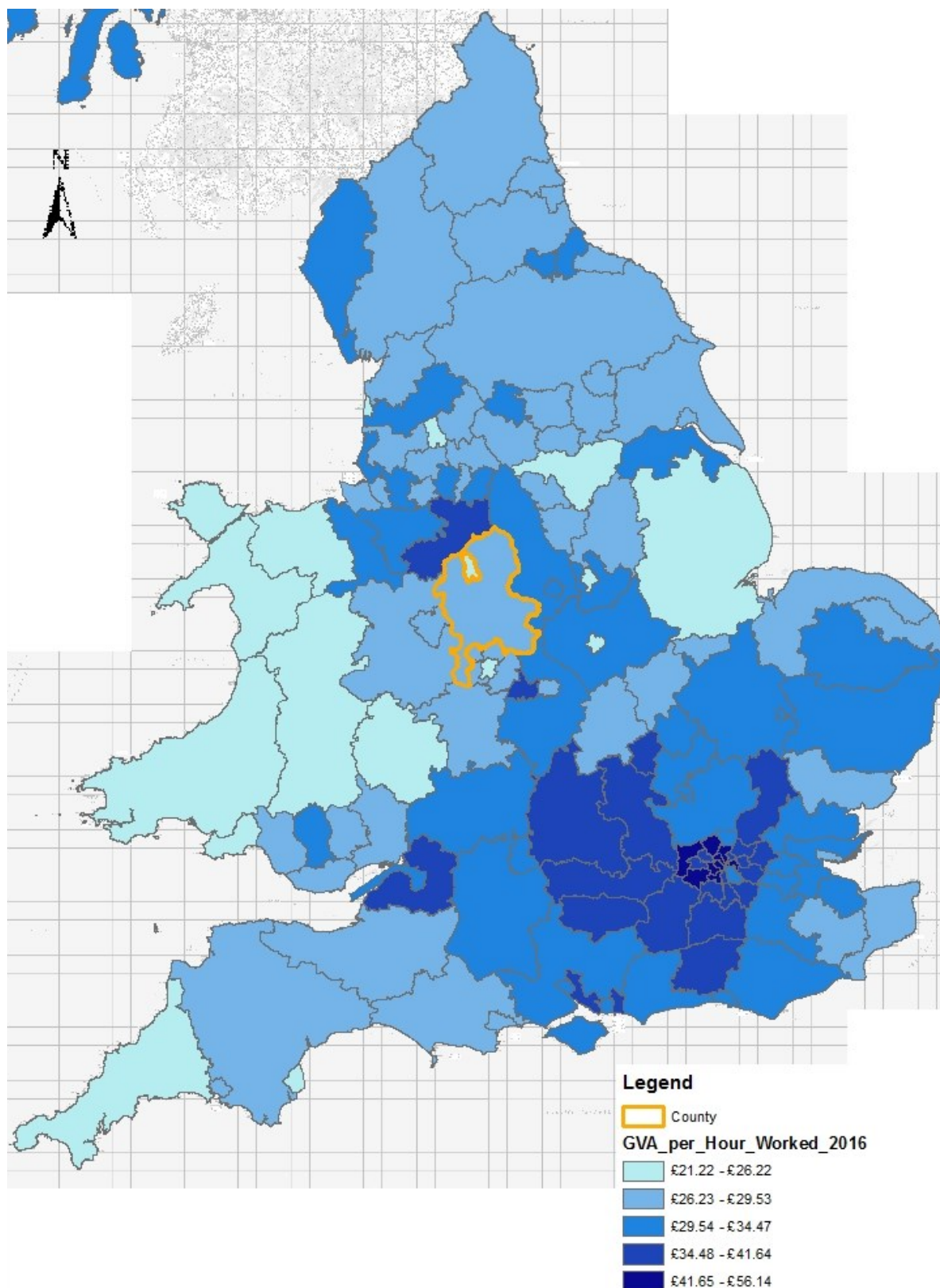
**Figure 15: Growth in GVA per Hour Worked 2008-2016**



Source: Regional and Sub-regional Productivity Balanced Approach, ONS

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

Figure 16: GVA per Hour Worked in 2016



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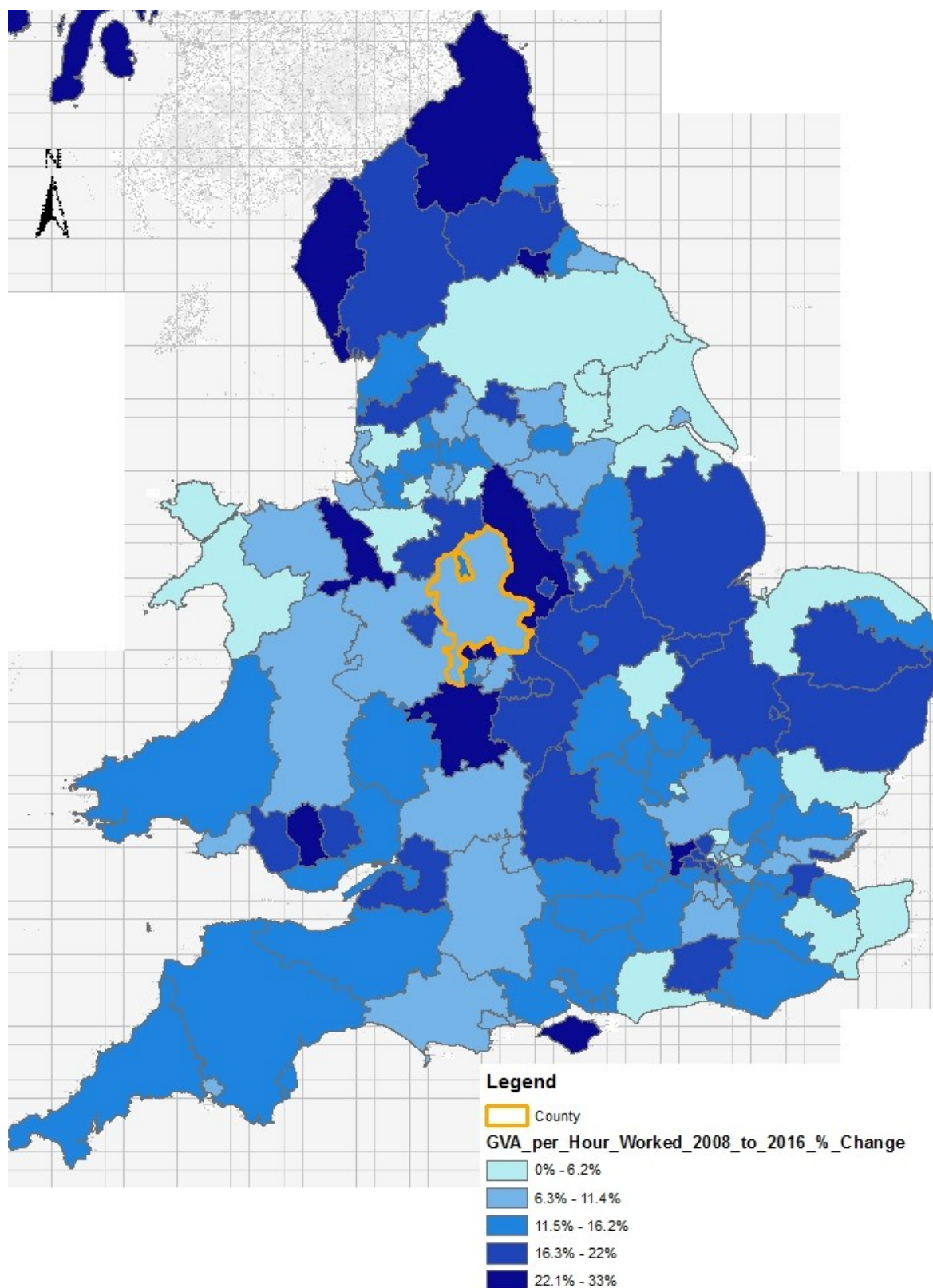
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## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

Figure 17: GVA per Hour Worked % Change between 2008 and 2016



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## **The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent**

### **Income Approach comparison**

- When considering the comparison between the Balanced and Income approaches to GVA per hour worked, the new Balanced approach shows that Staffordshire had lower output per hour worked between 2004 and 2012 but since 2013 has been recognised as having a higher level of output per hour worked;
- This recent comparative improvement through the change in measurement of GVA by ONS has contributed to a reduced gap between Staffordshire and the national average for GVA per hour worked since 2014;
- Stoke-on-Trent has also benefited from the new Balanced approach with higher GVA per hour worked in 2014 and 2015 resulting in the gap to the national average reducing in 2015 when compared to the previous Income Approach.

# ECONOMIC GROWTH - Understanding GVA and Productivity

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

**GVA per Job Filled** – GVA output divided by the number of jobs used to create it

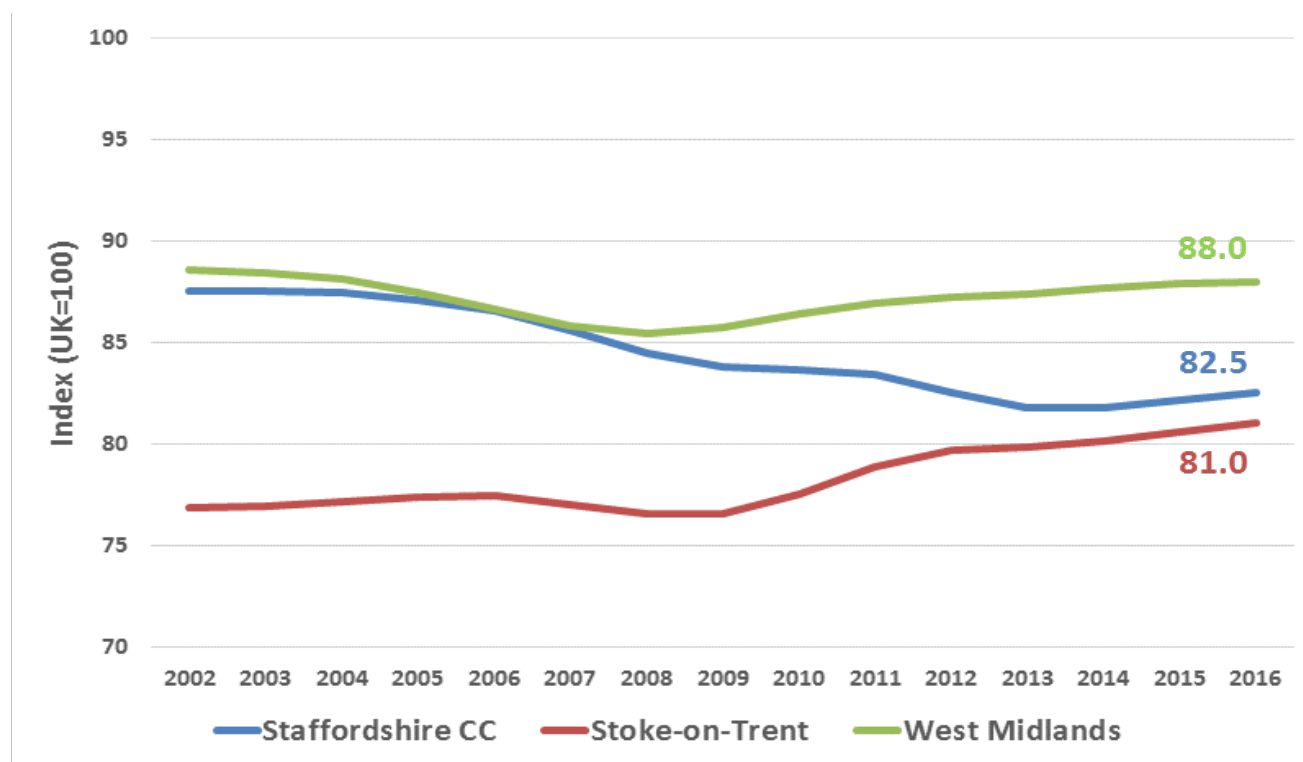
### Latest position

- In 2016, GVA per job filled in Staffordshire stood at £43,439 compared to the UK average of £52,626, showing a gap of £9,187;
- This means that on average each job filled in Staffordshire was nearly a fifth (17.5%) less productive than the national average;
- Stoke-on-Trent GVA per hour worked stood at £42,631 in 2016, equivalent to 81% of the UK average.

### Trend analysis

- The long-term trend shows that the gap between Staffordshire and the national average widened leading up to the recession and continued to widen during the economic downturn which followed, however the figures for 2015 and 2016 show that there are signs of improvement with the gap closing slightly;

**Figure 18: GVA per Job Filled relative to UK average (UK=100)**



Source: *Regional and Sub-regional Productivity Balanced Approach, ONS*

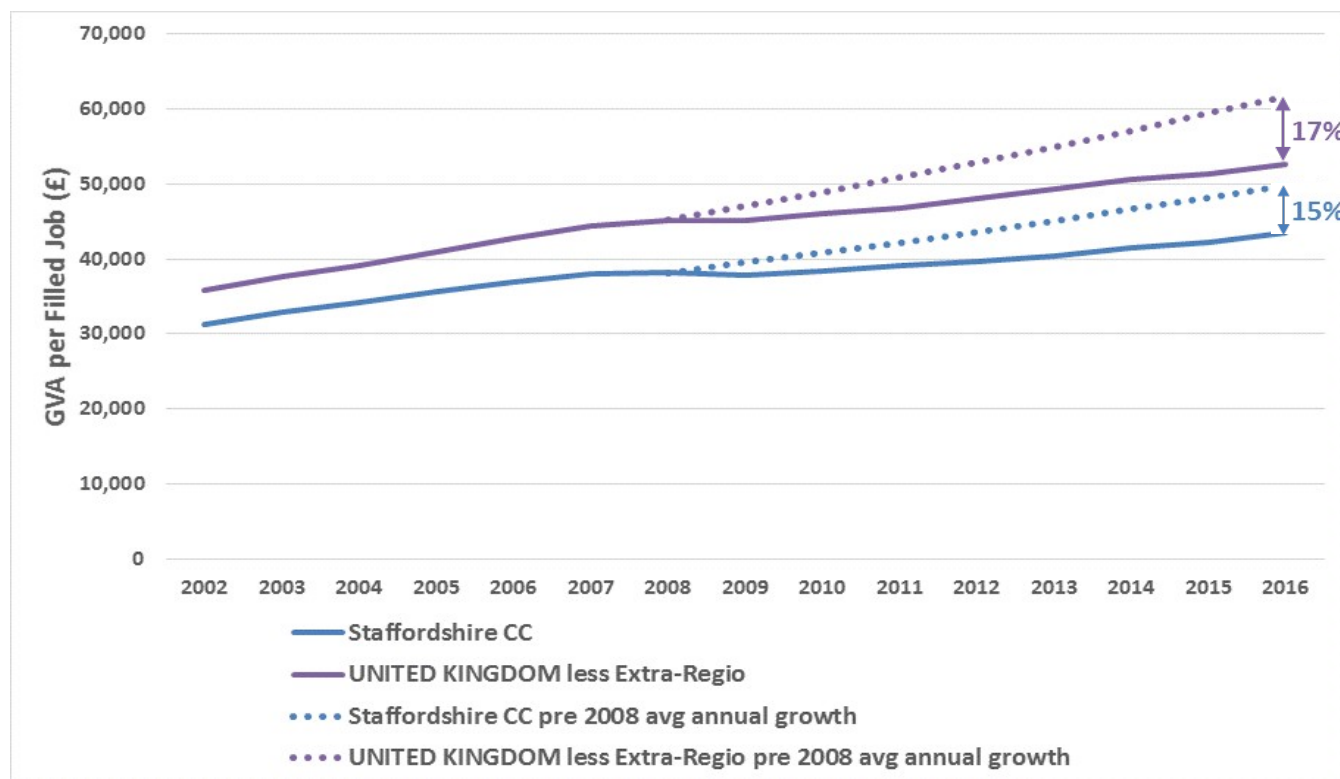
- Although there are potential signs of improvement, the relative poor productivity performance in Staffordshire since the recession has resulted in output per filled job being 15% lower in 2016 (Stoke-on-Trent 10% lower) than if productivity had grown in line with the pre-recession trend seen between 2002-2008.



# ECONOMIC GROWTH - Understanding GVA and Productivity

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

Figure 19: GVA Per Job Filled (£) including Gap to Pre-recession Annual Growth



Source: Regional and Sub-regional Productivity Balanced Approach, ONS

- Staffordshire also performs relatively poorly for GVA per job filled when compared to its CIPFA neighbours, although Stoke-on-Trent has seen good comparative growth since 2008.

Figure 20: GVA per Job Filled in 2016

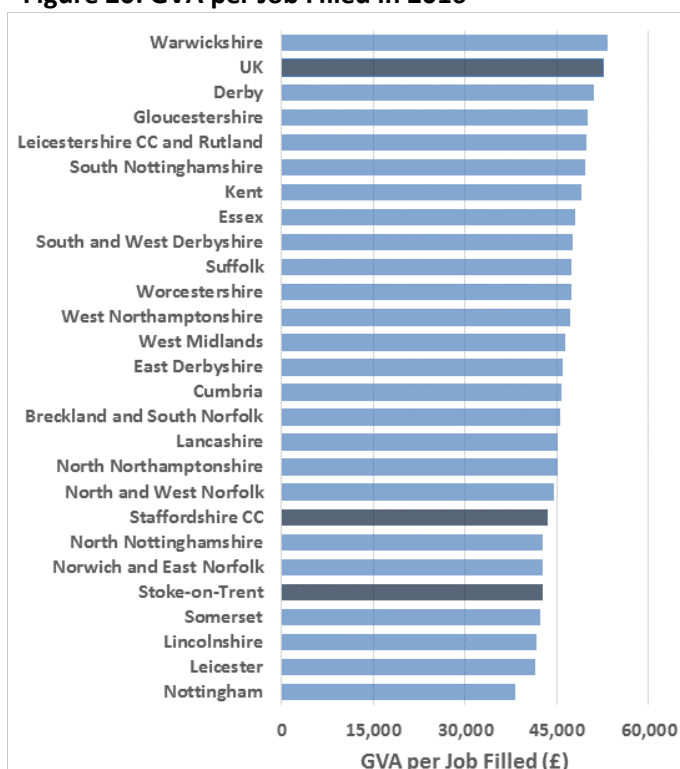
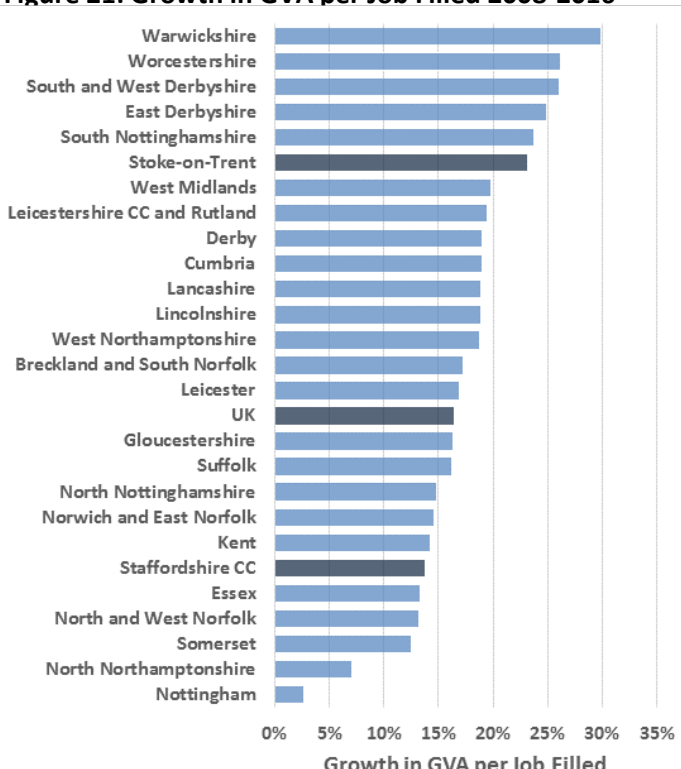


Figure 21: Growth in GVA per Job Filled 2008-2016



Source: Regional and Sub-regional Productivity Balanced Approach, ONS

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

### The Importance Of Increasing GVA and Raising Productivity

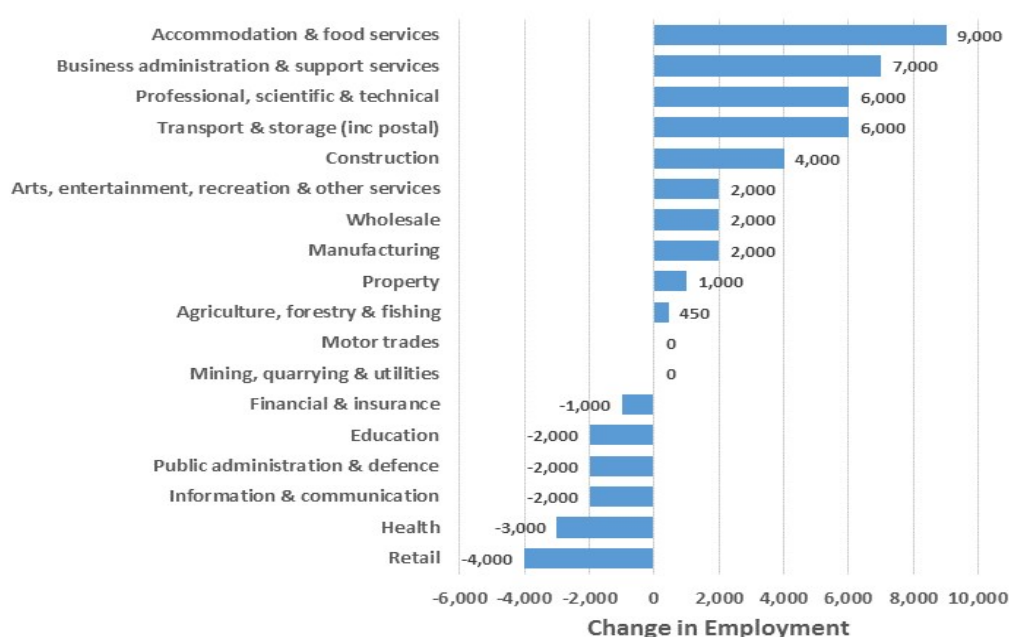
#### Associated factors

GVA and productivity are extremely complex in their nature and are associated with a wide range of factors, such as growth in jobs; changes in economic structure; wage levels; skills levels; inflation; cost of living and household income and spending, this section considers some of these factors in more detail.

- **Growth in Jobs**

Recent strengthening of the labour market in Staffordshire has seen job numbers broadly recover to pre-recession levels, with an 8% increase of over 25,000 jobs in Staffordshire between 2010 and 2015 which is higher growth than seen regionally or nationally and has helped keep unemployment low. However, much of this jobs growth has been in low-value, low-skill sectors as is shown in figure 22.

**Figure 22: Change in employment in Staffordshire, 2010-2015**



**Source: Business Register & Employment Survey, ONS**

As well as there being a need to increase jobs in higher value sectors in order to increase GVA and raise productivity, such as through sector action plans, latest employment data suggests that Staffordshire has seen a slight decline (-1,000 jobs) in the overall number of jobs between 2015 and 2016. This is mainly due to declines in 'Construction' and 'Business administration and support services', which is similar to the changes seen regionally

In Stoke-on-Trent there was a 3% growth in jobs between 2010 and 2015, equivalent to an additional 3,000 jobs, with the main increases being in 'wholesale', 'construction' and 'transport and storage', while the biggest declines were seen in 'business admin and support services' and 'retail'. The latest employment data shows that Stoke-on-Trent has continued to see an increase in jobs between 2015 and 2016, with an increase of 2,000 mainly due to growth in the 'health' sector.

# ECONOMIC GROWTH - Understanding GVA and Productivity

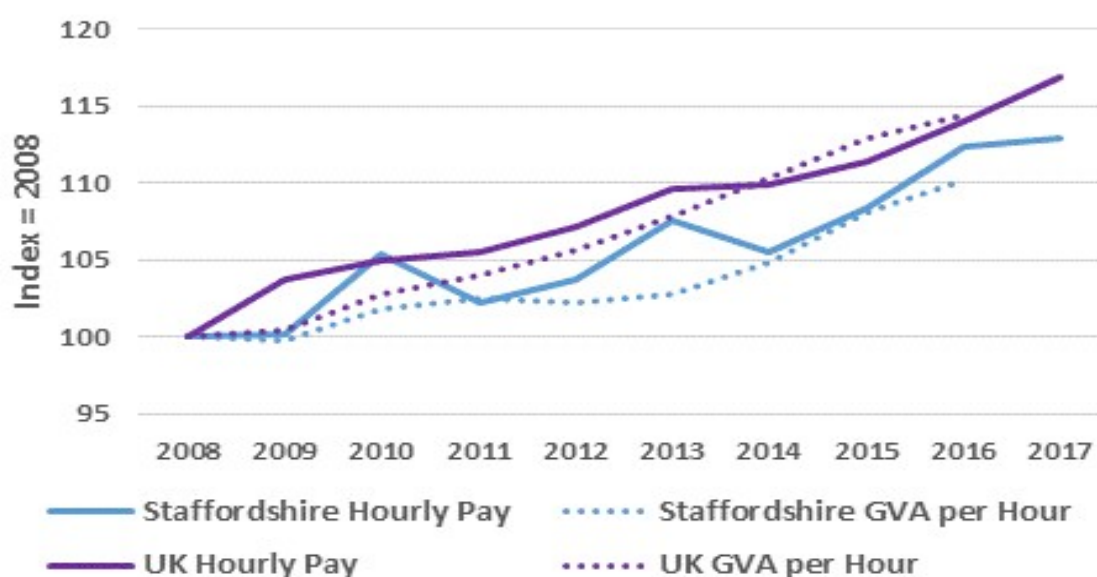
## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

- **Wage levels**

Although the local labour market has delivered jobs for local residents and kept unemployment levels low, there is a clear need to accompany this with the sustained higher productivity which will be important in generating higher wages for residents in the future.

Average annual earnings in Staffordshire have improved significantly over recent years, with a 10% growth between 2008 and 2017 making them now (£27,789) similar to the national average (£28,758). Figure 23 shows how wages are closely correlated to productivity.

**Figure 23: Hourly earnings and GVA per hour (index: 2008=100)**

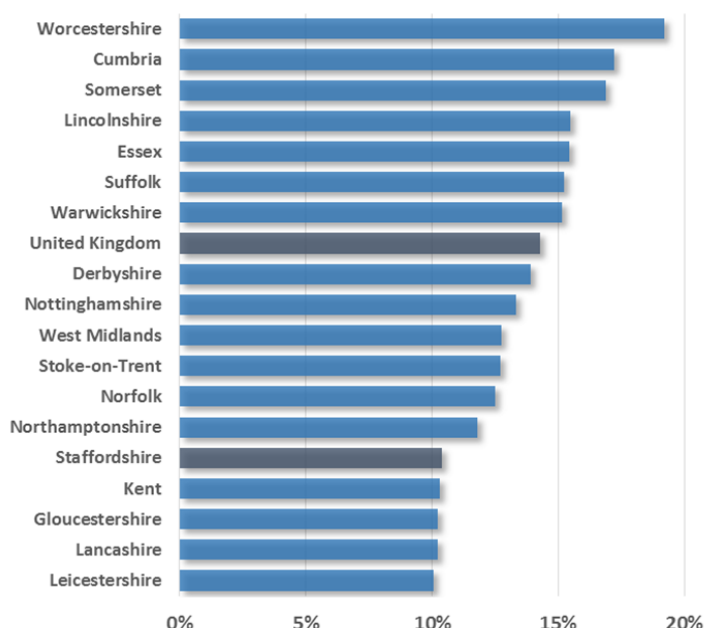


Source: ASHE / Regional and Sub-regional Productivity Balanced Approach, ONS

However, growth in wages since 2008 has been slower in Staffordshire when compared with the national average and the majority of its CIPFA neighbours, possibly due to growth in jobs in low value sectors immediately after the economic downturn.

It should also be noted that some areas, such as Stoke-on-Trent, started at a lower base than Staffordshire and therefore whilst these areas have experienced relatively higher increase in average earnings, absolute earnings of residents remain below those within Staffordshire.

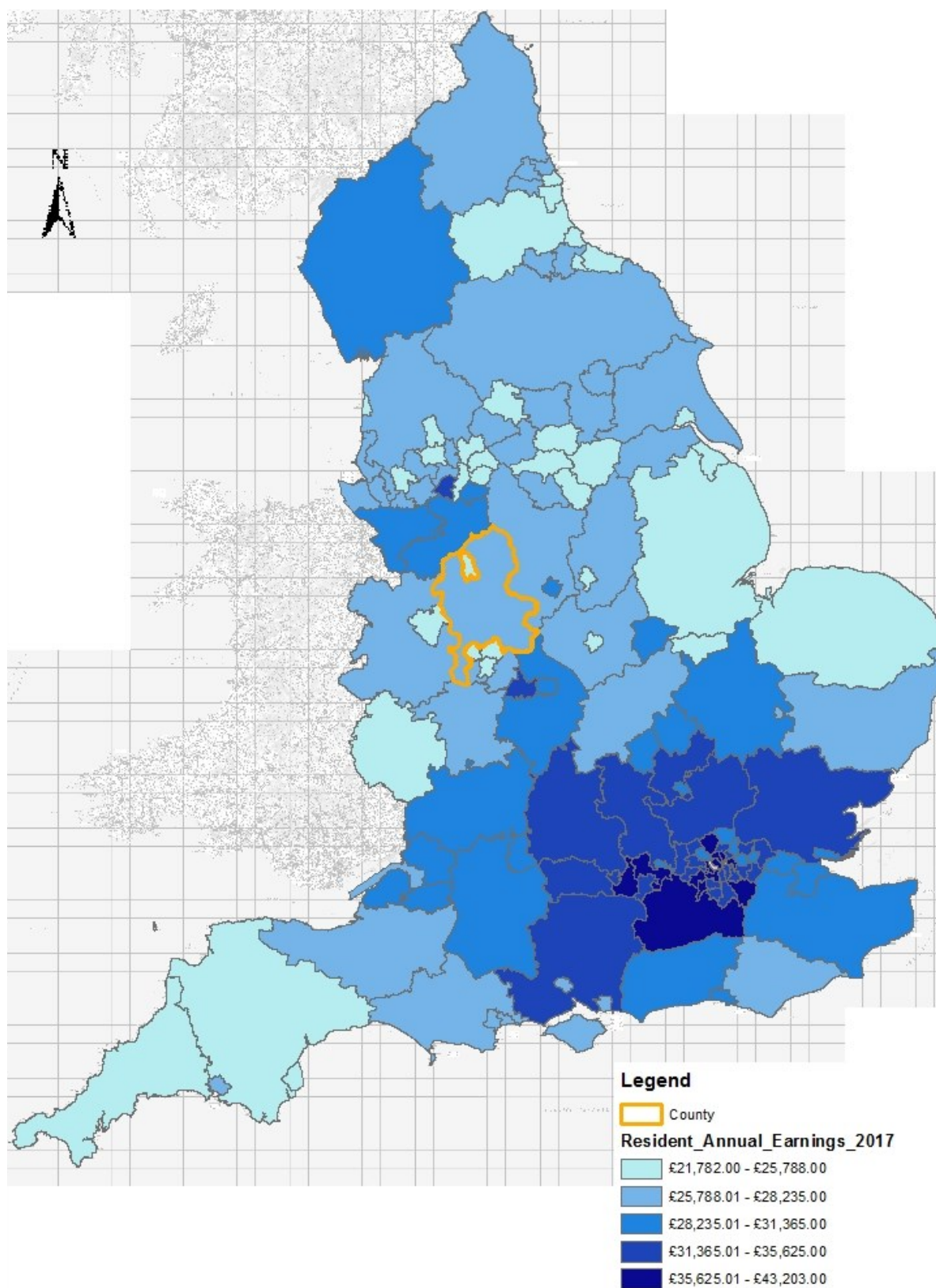
**Figure 24: % Change in Average Annual Resident Earnings 2008-2017**



Source: ASHE, ONS

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

Figure 25: Resident Annual Earnings in 2017



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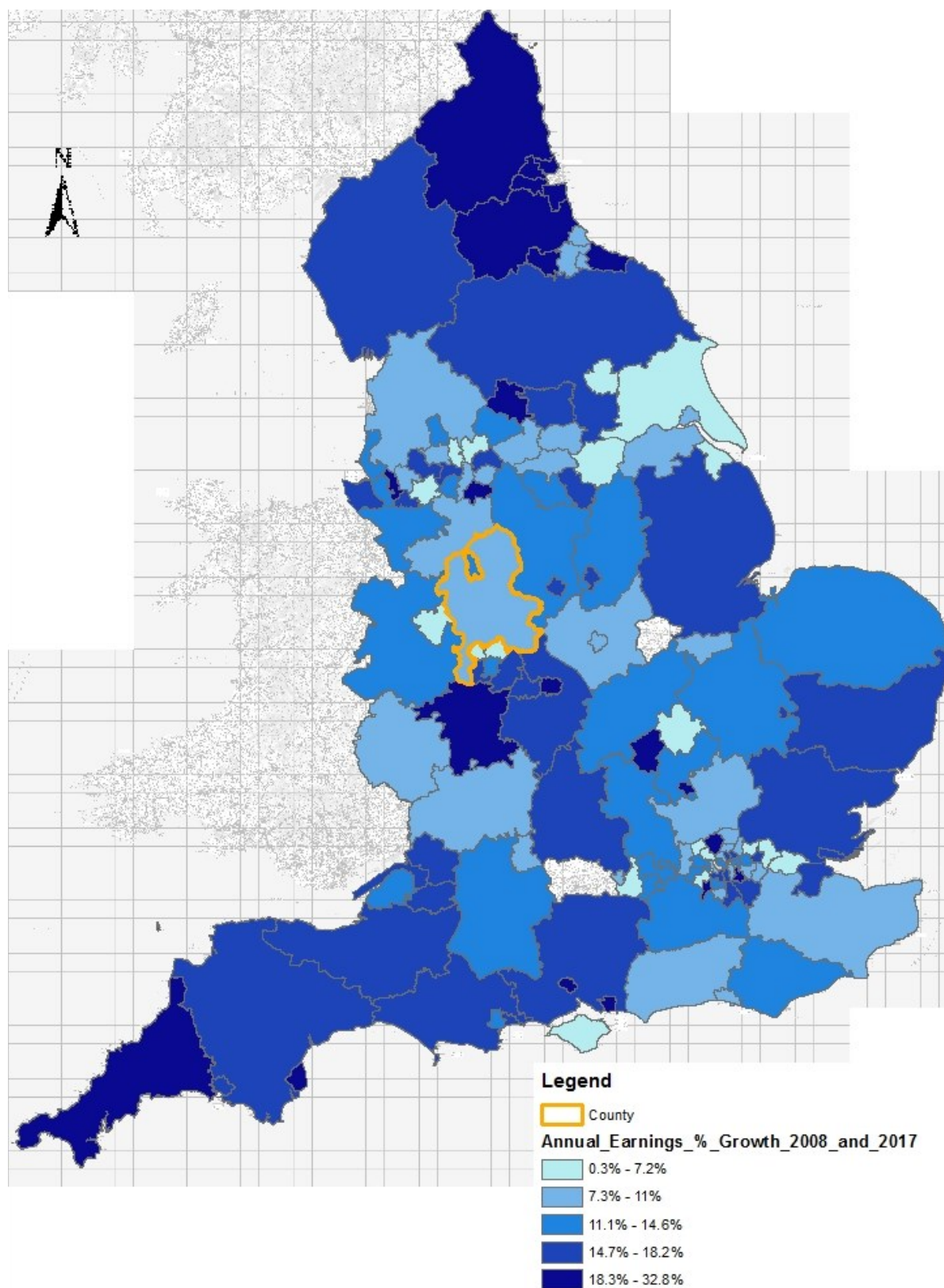
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## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

Figure 26: Resident Annual Earnings % Change between 2008 and 2017



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## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

- **Skills, housing and demographic change**

While increasing the number of jobs in high value sectors in Staffordshire is crucial to addressing the productivity challenge, we also need to improve the skills of our resident working age population and attract and retain skilled workers. To support these aims there needs to be the right quantity and mix of housing to support both existing workers and those attracted to the area through job creation in Staffordshire and Stoke-on-Trent.

If these aims can be achieved then the higher skilled local workforce would likely raise productivity and living standards in the area, while at the same time improve the competitive advantage of Staffordshire and Stoke-on-Trent in attracting further inward investment in high value sectors.

This more productive workforce would help support the ageing population, given that there is an increasing number of residents of pensionable age, the vast proportion of who do not directly contribute to GVA. In Staffordshire there was one person of pensionable age to every three of working age in 2014 and this is projected to increase to nearly one to every two in 2039.

- **The impact of BREXIT**

As well as having a potential impact on jobs in Staffordshire, Brexit may also have an impact on local economic growth due to issues such as trade agreements. The extent of the impact will be dependent upon the final terms of the Brexit agreement, although the majority of economists are predicting a negative impact on growth to varying degrees.

The spatial variation in potential shocks across areas is somewhat higher in a number of areas and particularly those with strong concentrations in sectors that are predicted to be badly hit by a possible 'hard Brexit'. Areas in the South of England, and urban areas, have been predicted to experience a negative impact of a hard Brexit, likely due to the prevalence of knowledge intensive services and particularly business and financial services within these areas. Although equally the manufacturing heartlands includes the West Midlands also have the potential to experience a negative impact due to the strong concentration of production industries and importance of exporting.

- **Household income, the cost of living and spending**

The prosperity and wealth of the resident population is also an important factor in determining the future growth of the economy, as household income is obviously directly correlated with residents quality of life.

A useful measure of wealth is gross disposable household income (GDHI), which is the amount of money that all of the individuals in the household sector have available for spending or saving after they have paid direct and indirect taxes and received any direct benefits. Although it should be noted that this does not include consideration of living costs such as housing costs and therefore the true disposable income of residents will be far lower than the figures suggest.

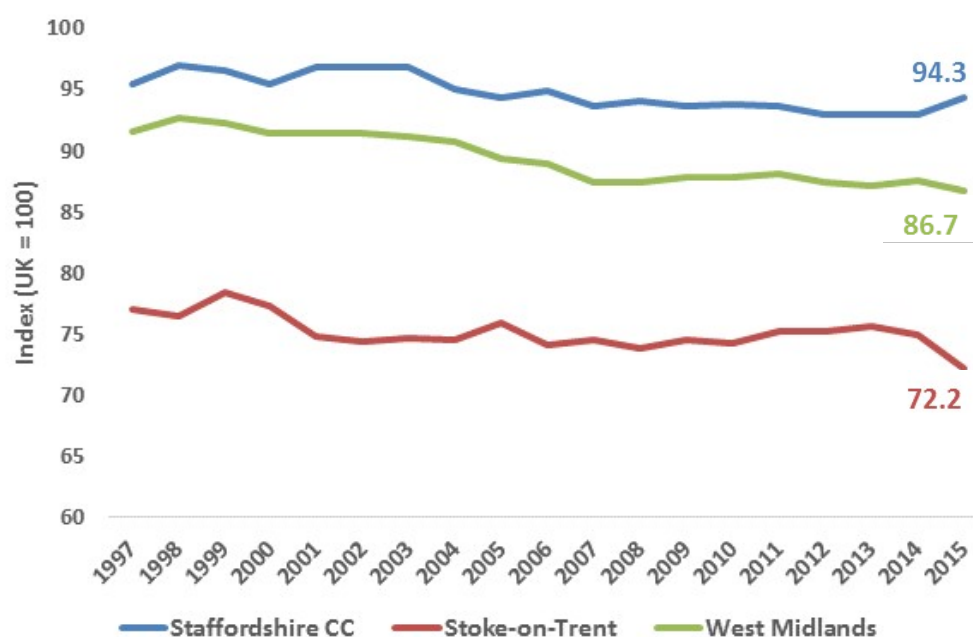
In 2015, residents in Staffordshire had on average £18,017 of gross disposable household income to spend or save, which was 94.3% of the UK average of £19,106. In Stoke-on-Trent each person had £13,804 to spend or save which was 72.2% of the national average.

# ECONOMIC GROWTH - Understanding GVA and Productivity

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

The long-term trend shows that the gap between Staffordshire and the national average has widened since prior to the recession, although the latest provisional figure for 2015 shows that there has been a relative improvement with a growth of 4.3% compared to 2.9% seen nationally and the gap closing to a similar level to that seen in 2005. Stoke-on-Trent provisionally saw a –0.9% decrease in GDHI per head in 2015 with the gap to the national average the widest since records began in 1997.

**Figure 27: GDHI per Head Relative to UK Average (UK = 100)**

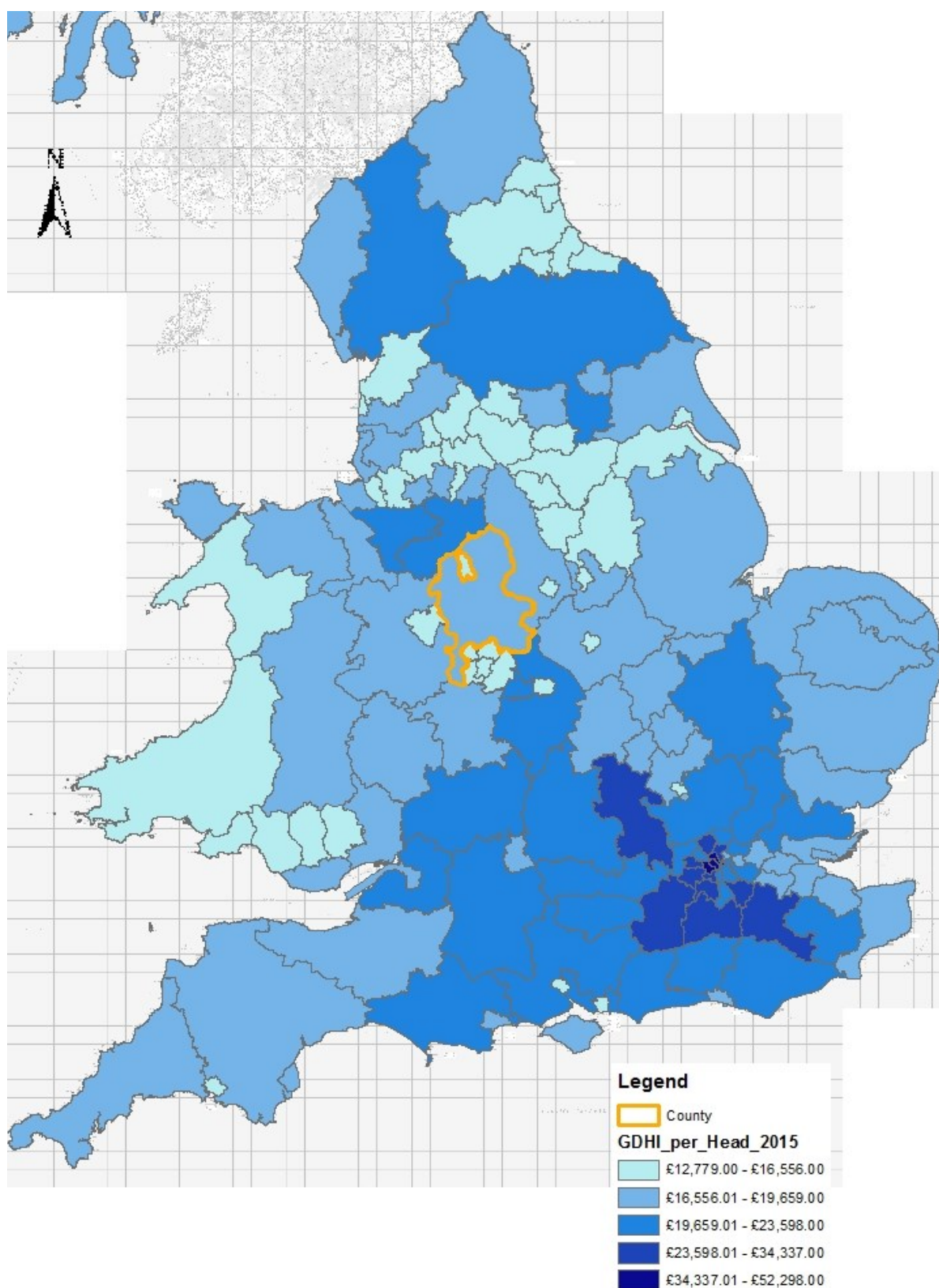


Source: Regional gross disposable household income (GDHI), ONS



## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

Figure 28: Gross Disposable Household Income (GDHI) in 2015



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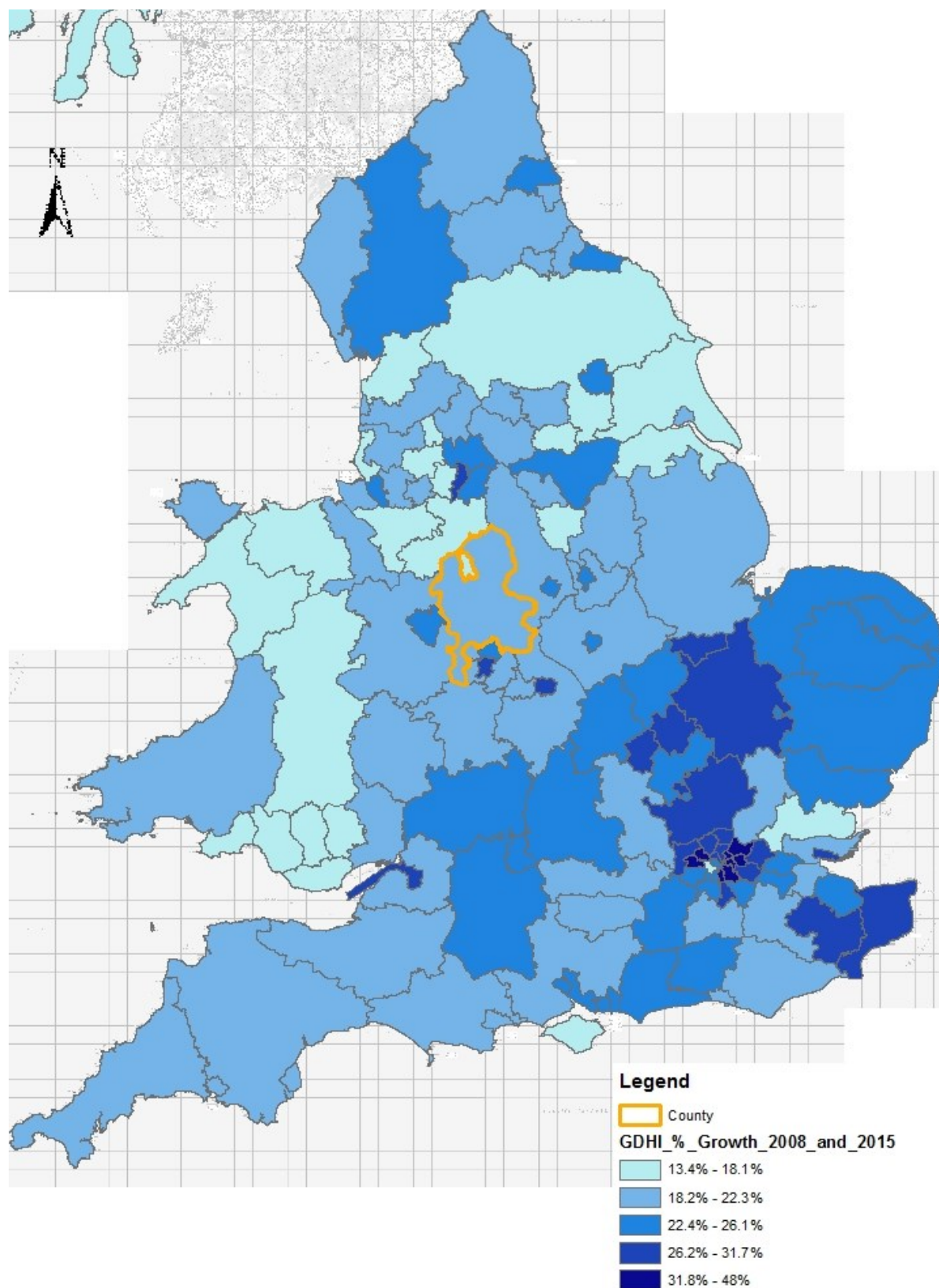
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## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

Figure 29: GDHI % Change between 2008 and 2015



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## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

**Strategic Focus on Growth in GVA and Raising Productivity...while keeping employment high**

### **The importance of five foundations of productivity – the essential attributes of every successful economy**

As previously touched upon, the Government's new Industrial Strategy identifies five foundations of productivity and supporting visions:

- **Ideas** - the world's most innovative economy
- **People** - good jobs and greater earning power for all
- **Infrastructure** - a major upgrade to the UK's infrastructure
- **Business environment** - the best place to start and grow a business
- **Places** - prosperous communities across the UK

These five foundations are almost identical to the economic growth priorities identified through the process of developing Staffordshire County Council's Strategic Plan 2018-2022. This shows strong alignment between local priorities and those of Government, and should mean that Staffordshire is well placed to access future funding and programmes that will flow through the Industrial Strategy.

In Staffordshire there are a number of key strategic development areas under each of these five foundations which will clearly be important to growing the local economy and raising productivity moving forward, these include:

#### **Ideas**

Staffordshire will need to attract its fair share of raised Government investment in research and development in order to grow the capacity to turn ideas and innovation into commercial activity which generates economic growth and raised productivity. Of particular interest is the increasing focus on Artificial Intelligence (AI) innovation to improve work rate within businesses and also taking advantage of rapid digital development to improve efficiency and reduce costs.

Government is investing in strategic innovation challenges through the new Industrial Strategy Challenge Fund, with the next programmes being:-

- Transforming construction
- Prospering from the energy revolution
- Transforming food production
- Immersive technologies such as virtual, augmented and mixed reality
- Artificial intelligence and data in next generation services
- Data to early diagnosis and precision medicine
- Staying active, productive and independent in old age

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Many, if not all, of these programmes are relevant to Staffordshire and whilst there is currently a lack of detail as to what these programmes will actually entail, we will need to engage as appropriate.

### **People**

In order to ensure that all local residents can benefit from increased access to good jobs and better wages there is a need to effectively invest in the development and improvement of local training and skills provision to meet business needs for talent, skills and labour. In particular there is an increasing focus on improved technical education; increased Science, Technology, Engineering and Mathematics (STEM) skills; new digital skills to keep pace with next generation technology; and construction skills, alongside lifelong learning and the ability for people to re-skill throughout their lives.

### **Infrastructure**

Infrastructure is essential to the lives and work of local residents, and having modern and accessible infrastructure throughout Staffordshire and to surrounding areas is essential to future economic growth and prosperity. We already have great strengths with our location and connectivity to other areas of the country, however future investment will need to strengthen our transport and housing (both affordable and aspirational to retain and attract highly educated and skilled workers) alongside the development of digital networks (5G and Fibre) to achieve long-term improvement in productivity.

### **Business Environment**

To further attract and support businesses to start-up and grow in Staffordshire there will need to be focused efforts in establishing a local Industrial Strategy and clear sector growth plans, particularly in high value sectors to improve access to better jobs e.g. Advanced Manufacturing. Staffordshire will also need to ensure that it benefits from the initial Government sector deal areas of life sciences, construction, artificial intelligence and the automotive sector. There is also the potential to improve the sharing of the best practice of our most productive businesses, access to finance and make better connections between high-performing businesses and their supply chains. Improvement in business turnover and productivity can in turn lead to higher wages and greater prosperity in the local area.

### **Places**

Staffordshire has a number of competitive advantages that will be key to its future economic growth with world leading businesses in strategically important sectors. However, there is the potential to realise greater growth and productivity which can translate into better pay, work opportunities and life chances for local residents. To achieve this the Government's introduction of Local Industrial Strategies which will build on local strengths and deliver on economic opportunities. There will need to be continued improvement in skills (including teacher development), more connected infrastructure, backing of innovation strengths, and ensure land is available for inward investment and housing growth all helping to create a more prosperous Staffordshire.



## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

### **Future Economic Challenges (Global Technological Revolution – Four Grand Challenges)**

The Industrial Strategy also sets out a number of grand challenges to put the United Kingdom at the forefront of the industries of the future:-

- **Artificial intelligence & data economy (Big Data)**
- **Future of mobility**
- **Clean growth**
- **Ageing society**

Whilst much of the Industrial Strategy aims to address current issues within our economy with a particularly strong focus on productivity, these grand challenges are Government's attempt to look to the future at areas which may offer the greatest opportunities for growth. All of these grand challenges have some relevance to Staffordshire and we will therefore need to ensure we are engaged in addressing these challenges moving forwards.

Clearly, economic growth and raising productivity are high on the agenda both locally and nationally as it is clear that if this can be achieved there are wide ranging benefits including increased wages; raised living standards; increased funds to support public services; less public service demand and greater independence; and improved quality of life for all.

# ECONOMIC GROWTH - Understanding GVA and Productivity

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

### Appendix 1: GVA Summary Local Authority Data

#### GVA data for Staffordshire's CIPFA nearest neighbours (including Stoke-on-Trent, West Midlands and United Kingdom comparators)

Area	Total GVA (£ billions) 2016	Area	GVA per Head (£) 2016	Area	GVA per Hour Worked (£) 2016	Area	GVA per Filled Job (£) 2016
UNITED KINGDOM	£1,747.6	Warwickshire	£30,302	Derby	£33.37	Warwickshire	£53,209
West Midlands	£126.6	Nottingham	£27,393	UNITED KINGDOM	£32.58	UNITED KINGDOM	£52,626
Kent	£39.0	Derby	£27,212	South Nottinghamshire	£31.56	Derby	£51,114
Essex	£38.3	UNITED KINGDOM	£26,339	Warwickshire	£31.38	Gloucestershire	£50,070
Lancashire	£30.8	Gloucestershire	£26,093	Suffolk	£31.16	Leicestershire CC and Rutland	£49,780
Warwickshire	£16.9	West Northamptonshire	£26,033	South and West Derbyshire	£31.11	South Nottinghamshire	£49,542
Suffolk	£16.8	Cumbria	£23,804	Gloucestershire	£30.80	Kent	£48,981
Staffordshire CC	£16.6	Leicestershire CC and Rutland	£22,902	Essex	£30.63	Essex	£48,082
Leicestershire CC and Rutland	£16.5	Suffolk	£22,593	Kent	£30.60	South and West Derbyshire	£47,649
Gloucestershire	£16.3	Leicester	£22,233	Leicestershire CC and Rutland	£30.54	Suffolk	£47,454
Lincolnshire	£13.2	Worcestershire	£22,095	Breckland and South Norfolk	£30.00	Worcestershire	£47,291
Worcestershire	£12.9	Norwich and East Norfolk	£21,958	Worcestershire	£29.40	West Northamptonshire	£47,158
Cumbria	£11.9	West Midlands	£21,823	Cumbria	£29.11	West Midlands	£46,298
Somerset	£11.0	Kent	£21,434	East Derbyshire	£29.03	East Derbyshire	£45,939
West Northamptonshire	£10.3	Essex	£21,234	West Midlands	£28.28	Cumbria	£45,656
South and West Derbyshire	£9.7	Lancashire	£20,754	Lancashire	£28.03	Breckland and South Norfolk	£45,595
Nottingham	£8.9	Stoke-on-Trent	£20,612	West Northamptonshire	£27.74	Lancashire	£45,206
North Nottinghamshire	£8.7	North Northamptonshire	£20,379	Norwich and East Norfolk	£27.53	North Northamptonshire	£45,166
Norwich and East Norfolk	£8.1	Somerset	£19,994	Somerset	£27.16	North and West Norfolk	£44,559
Leicester	£7.7	South and West Derbyshire	£19,305	North and West Norfolk	£26.86	Staffordshire CC	£43,439
Derby	£7.0	Staffordshire CC	£19,138	Staffordshire CC	£26.83	North Nottinghamshire	£42,719
North Northamptonshire	£6.9	Breckland and South Norfolk	£19,126	North Nottinghamshire	£26.62	Norwich and East Norfolk	£42,691
South Nottinghamshire	£5.9	North and West Norfolk	£18,725	North Northamptonshire	£26.52	Stoke-on-Trent	£42,631
Stoke-on-Trent	£5.2	North Nottinghamshire	£18,580	Leicester	£25.76	Somerset	£42,243
East Derbyshire	£5.2	East Derbyshire	£18,431	Lincolnshire	£25.70	Lincolnshire	£41,588
Breckland and South Norfolk	£5.2	Lincolnshire	£17,798	Stoke-on-Trent	£25.27	Leicester	£41,532
North and West Norfolk	£4.8	South Nottinghamshire	£17,227	Nottingham	£23.93	Nottingham	£38,193



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Appendix 2: GVA Summary Local Enterprise Partnership (LEP) Data

Area	Total GVA (£ billions) 2016	Area	GVA per Head (£) 2016	Area	GVA per Hour Worked (£) 2016	Area	GVA per Filled Job (£) 2016
UNITED KINGDOM	£1,747.6	London	£46,482	London	£43.55	London	£74,602
Greater Birmingham and Solihull	£408.5	Thames Valley Berkshire	£41,685	Thames Valley Berkshire	£41.00	Thames Valley Berkshire	£68,022
Derby, Derbyshire, Nottingham and Nottinghamshire	£87.6	Oxfordshire	£33,337	Buckinghamshire Thames Valley	£37.27	Buckinghamshire Thames Valley	£61,114
Greater Cambridge and Greater Peterborough	£66.5	Enterprise M3	£32,204	Enterprise M3	£37.04	Enterprise M3	£58,381
North East	£63.7	Cheshire and Warrington	£31,848	Oxfordshire	£35.42	Oxfordshire	£56,218
Thames Valley Berkshire	£54.3	Hertfordshire	£30,199	Coast to Capital	£34.17	Cheshire and Warrington	£56,212
Hertfordshire	£54.3	Buckinghamshire Thames Valley	£30,106	Cheshire and Warrington	£33.91	Hertfordshire	£54,129
Coast to Capital	£50.8	West of England	£29,377	Solent	£33.48	Coast to Capital	£53,123
Greater Birmingham and Solihull	£46.8	Coventry and Warwickshire	£27,543	West of England	£33.26	South East Midlands	£53,058
Derby, Derbyshire, Nottingham and Nottinghamshire	£45.4	South East Midlands	£27,140	Hertfordshire	£32.80	UNITED KINGDOM	£52,626
Greater Cambridge and Greater Peterborough	£37.9	Greater Cambridge and Greater Peterborough	£26,386	UNITED KINGDOM	£32.58	West of England	£52,530
North East	£37.9	UNITED KINGDOM	£26,339	Greater Cambridge and Greater Peterborough	£31.57	Coventry and Warwickshire	£51,687
Thames Valley Berkshire	£37.4	Gloucestershire	£26,093	Swindon and Wiltshire	£31.54	Solent	£51,081
Hertfordshire	£35.5	Swindon and Wiltshire	£25,522	South East Midlands	£31.46	Greater Cambridge and Greater Peterborough	£50,108
New Anglia	£34.9	Coast to Capital	£25,190	Gloucestershire	£30.80	Gloucestershire	£50,070
Heart of the South West	£34.2	Solent	£24,163	Coventry and Warwickshire	£30.68	Swindon and Wiltshire	£48,315
Sheffield City Region	£34.0	Cumbria	£23,804	South East	£30.57	South East	£48,255
West of England	£33.2	Greater Birmingham and Solihull	£23,251	Liverpool City Region	£30.02	Liverpool City Region	£47,660
Liverpool City Region	£30.9	Greater Manchester	£22,886	Tees Valley	£29.69	Greater Birmingham and Solihull	£47,304
Lancashire	£30.8	Leicester and Leicestershire	£22,754	New Anglia	£29.41	Worcestershire	£47,291
Cheshire and Warrington	£29.3	Worcestershire	£22,095	Worcestershire	£29.40	Greater Manchester	£46,951
Solent	£25.7	Leeds City Region	£21,803	Greater Manchester	£29.25	Leicester and Leicestershire	£46,919
Coventry and Warwickshire	£25.1	New Anglia	£21,276	Cumbria	£29.11	Tees Valley	£46,398
York, North Yorkshire and East Riding	£24.3	York, North Yorkshire and East Riding	£21,146	Greater Birmingham and Solihull	£28.85	Cumbria	£45,655
Leicester and Leicestershire	£23.5	South East	£21,010	Humber	£28.85	New Anglia	£45,590
Oxfordshire	£22.8	Dorset	£20,897	Leicester and Leicestershire	£28.79	Humber	£45,304
Stoke-on-Trent and Staffordshire	£21.8	Derby, Derbyshire, Nottingham and Nottinghamshire	£20,846	Derby, Derbyshire, Nottingham and Nottinghamshire	£28.60	Lancashire	£45,207
Greater Lincolnshire	£20.2	Lancashire	£20,754	North East	£28.54	North East	£45,022
Black Country	£20.1	The Marches	£20,735	Dorset	£28.23	Derby, Derbyshire, Nottingham and Nottinghamshire	£44,979
Humber	£18.4	Liverpool City Region	£20,125	Leeds City Region	£28.07	Leeds City Region	£44,644
Swindon and Wiltshire	£18.0	Heart of the South West	£19,818	Lancashire	£28.03	Dorset	£44,079
Gloucestershire	£16.3	Humber	£19,807	York, North Yorkshire and East Riding	£27.54	Greater Lincolnshire	£43,570
Dorset	£16.1	Stoke-on-Trent and Staffordshire	£19,471	The Marches	£27.03	The Marches	£43,325
Buckinghamshire Thames Valley	£16.1	North East	£19,254	Greater Lincolnshire	£27.02	Stoke-on-Trent and Staffordshire	£43,243
The Marches	£14.0	Tees Valley	£19,111	Sheffield City Region	£26.97	Sheffield City Region	£42,510
Worcestershire	£12.9	Greater Lincolnshire	£18,830	Heart of the South West	£26.83	York, North Yorkshire and East Riding	£42,378
Tees Valley	£12.8	Sheffield City Region	£18,364	Stoke-on-Trent and Staffordshire	£26.44	Black Country	£42,202
Cumbria	£11.9	Black Country	£17,113	Black Country	£26.18	Heart of the South West	£40,859
Cornwall and Isles of Scilly	£9.5	Cornwall and Isles of Scilly	£17,069	Cornwall and Isles of Scilly	£23.74	Cornwall and Isles of Scilly	£36,414

GVA LEP data (including United Kingdom comparator)

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

### Appendix 3: GVA per head analysis

GVA per head relates the value added by workplace production activity in an area to the resident population of that area, and is recognised as a useful way of comparing areas of different sizes and is an important indicator for both domestic and European policy purposes. Total GVA estimates in millions of pounds sterling (£ million) are divided by the total resident population of an area (including the economically inactive) to give GVA per head in pounds sterling (£).

While GVA per head can be a useful way of comparing areas of different size, it can be subject to distortion due to the effects of commuting flows and variations in the age distribution of the population. Small areas, such as local authorities, can be subject to very large distortions and this should be borne in mind when interpreting the statistics as an indicator of relative economic prosperity. As an example, the City of London has a very small resident population but has a very high GVA generated by workers commuting into the area. At the other end of the scale, areas such as Blaenau Gwent are affected by large numbers of people commuting out of the area to work elsewhere. **GVA per head is not a measure of productivity.**

### Summary

**GVA per head in Staffordshire was provisionally £19,138 in 2016 which was 72.7% of the UK average (£26,339) or £7,201 lower**, despite high levels of employment, **the gap between GVA per head in Staffordshire and the national average has widened considerably since 1998**, where the gap stood at £3,008. In 2016 Staffordshire GVA per head was one of the lowest when compared with its CIPFA neighbours.

**Staffordshire provisionally saw a 3.7% increase in GVA per head between 2015 and 2016 which was higher than the 2.8% increase seen for the UK**, this is similar to the change seen between 2014 and 2015 and potentially indicates that Staffordshire is starting to close the gap with the UK average. This will need to be monitored over coming years to determine if this is the case.

**Stoke-on-Trent's GVA per head stood at £20,612 in 2016**, higher than Staffordshire but still lower than the national and regional average. Stoke-on-Trent saw **higher than average proportional growth** in GVA per head in both 2015 (4.8%) and 2016 (4.4%).

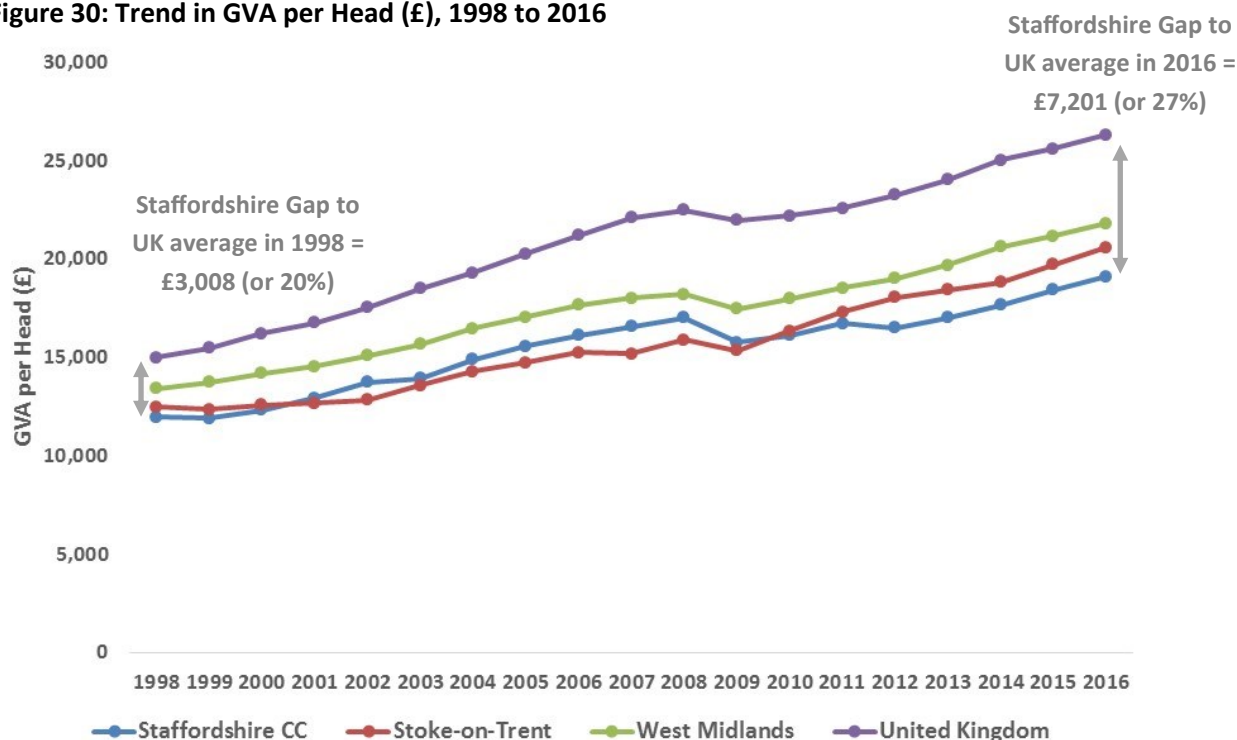
### Key Findings

- GVA per head in Staffordshire was provisionally £19,138 in 2016 which was £7,201 lower than the average for the UK (£26,339) and £2,685 lower than the regional average (£21,823);
- Despite high levels of employment, the gap between GVA per head in Staffordshire and the national average has widened considerably since 1998, where the gap stood at £3,008;

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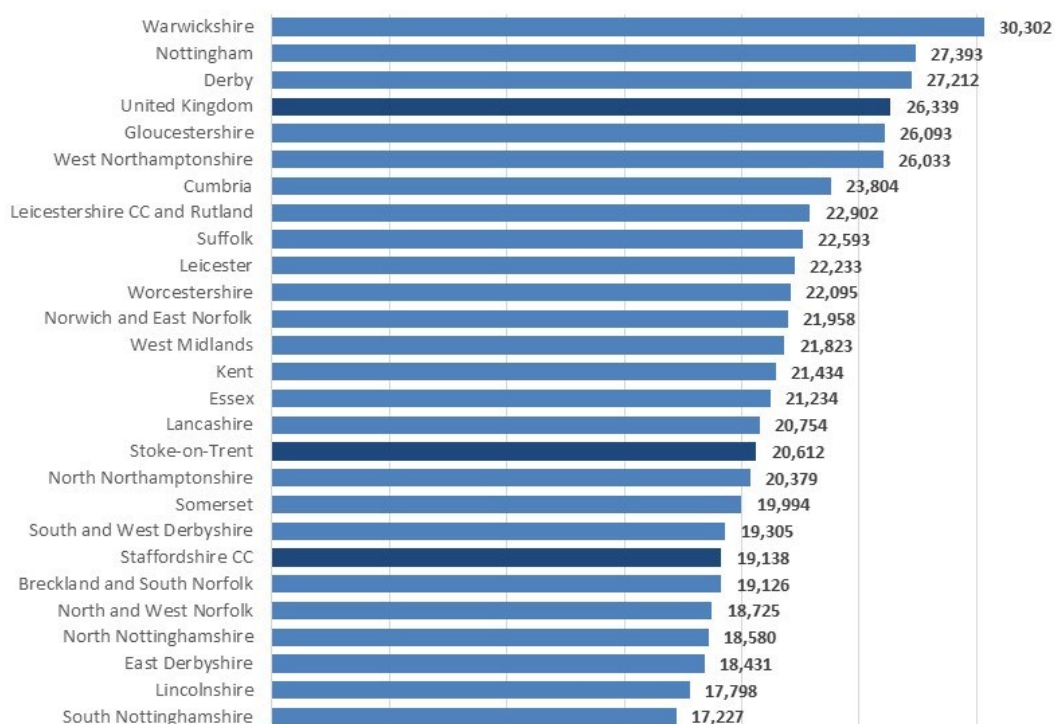
**Figure 30: Trend in GVA per Head (£), 1998 to 2016**



Source: Regional GVA Balanced Approach, ONS

- Stoke-on-Trent's GVA per head stood at £20,612 in 2016, higher than Staffordshire but still lower than the national and regional average.

**Figure 31: GVA per head in 2016 compared to Staffordshire's CIPFA neighbours (£)**



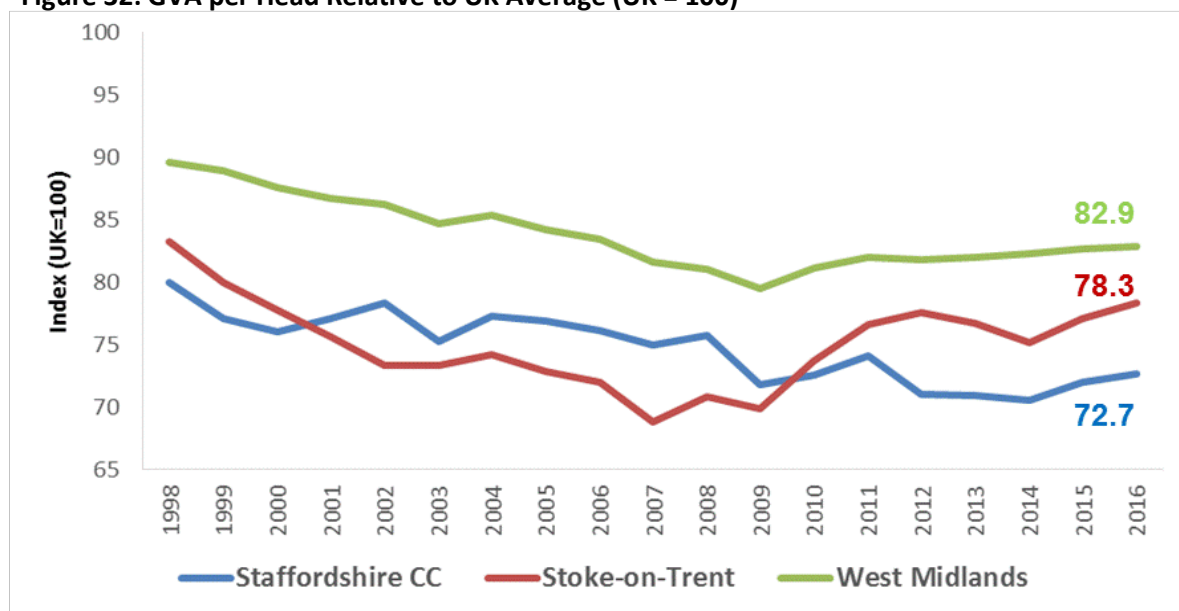
Source: Regional GVA Balanced Approach, ONS

# ECONOMIC GROWTH - Understanding GVA and Productivity

## The Importance of Increasing Economic Output (GVA) and Raising Productivity in Staffordshire and Stoke-on-Trent

- In 2016 Staffordshire GVA per head was one of the lowest when compared with its CIPFA neighbours.
- Staffordshire GVA per head now stands at only 72.7% of the UK average of £26,339.

**Figure 32: GVA per Head Relative to UK Average (UK = 100)**



*Source: Regional GVA Balanced Approach, ONS*

- Growth in GVA per head - Staffordshire provisionally saw a 3.7% increase in GVA per head between 2015 and 2016 which was higher than the 2.8% increase seen for the UK, this is similar to the change seen between 2014 and 2015 and potentially indicates that Staffordshire is starting to close the gap with the UK average. This will need to be monitored over coming years to determine if this is the case.
- Stoke-on-Trent also saw higher than average proportional growth in GVA per head in both 2015 (4.8%) and 2016 (4.4%).

However, as previously stated, there are a number of factors which need be taken into account when interpreting GVA per head, not least the effects of commuting patterns and the demographic make-up of an area.

A potential explanation for Staffordshire's relatively poor performance for GVA per head may be that it is a workplace based output measure. As previously touched upon, areas where there is a high level of commuting out of the area, such as Staffordshire, produce an understated level of GVA per head. This is because the wealth generated by residents who commute outside of Staffordshire is counted there, rather than their place of residence. This can also be affected by a higher than average proportion of residents above the working age. In Staffordshire, 21% of the population are aged 65+, compared to 18% for the UK<sup>3</sup>.

More reliable measures of output are by GVA per job filled and per hour worked, which take into account the above factors.

<sup>3</sup> 2016 Mid-year Population Estimates, Office for National Statistics