Laying the Foundations of a Good Work City:

Mapping Nottingham's Employment

March 2019

Chris Lawton
Rich Pickford
Jack Rendall
Daniel Wheatley

#GoodWorkNotts

Nottingham Civic Exchange

NOTTINGHAM TRENT UNIVERSITY

Contents

Executive Summary 5

1.Introduction 10

Nottingham's economy 11

Researching and measuring "Good Work" 14

2. Is there enough work in Nottingham? 22

3. Does work pay in Nottingham? 32

4. Is the structure of the local economy right for "Good Work?" 36

5. Does our work make us productive and happy? 50

6. Conclusions 56

7. Recommendations 58

Appendix 62

References 64

About this report 69

Executive Summary

The aim of the *Good Work Nottingham* programme is to better understand and tackle economic insecurity. Nottingham Civic Exchange maximises research, policy and practical impact by bringing together Nottingham Trent University's expertise with partners seeking to address the needs of local communities.

A place-based approach requires a thorough understanding of the local context. This report – *Laying the Foundations of a Good Work City* – will provide a clear, contemporary and regionalised understanding of the picture of work and employment. It will inform further work, and positively shape the debate on employment.

In 2018, we worked with the Royal Society for the encouragement of Arts, Manufactures and Commerce (RSA) to publish *Addressing Economic Insecurity*; based on the focus and findings of this report, we are now exploring the significance and challenges of employment in financially insecure households.

We have begun to theorise the broad social and economic context of economic insecurity, and how this plays out within a place. With reference to the RSA's definition of economic insecurity as "harmful volatility in people's circumstances… and their capacity to prepare for, respond to and recover from shocks or adverse events" (2018, p. 10), employment – and its related income – clearly lies at the core of our understanding.

We are keen to understand work through research, civic engagement with local communities on issues of work and wages, and in collaboration with employers to implement practical initiatives. Ultimately, our intention is to position Nottingham as a "Good Work City".

We focus on Nottingham because our analysis demonstrates that this is where a large share of the East Midlands' work happens. Regionally, it is where the greatest amount of wealth per head is generated. However, it is also where there are significant concentrations of low-quality jobs, and where residents may struggle to access "good work".

We focus on four key questions, and highlight what can be done to tackle the challenges that are raised. This report is built on analysis of the latest available official data, to investigate what work looks like for those who live and work here. We are also looking at the working population in aggregate, and have not investigated differences based on age, gender, ethnicity or disability. These important areas of inter-sectional analysis will be pursued in later research as a key component of *Good Work Nottingham*.

Because of this, we would recommend readers also refer to our research from the *Ordinary Working Families* programme, which incorporates subjective perceptions of income and insecurity and investigates the demographic, psychological and sociological factors that affect them.

Firstly, we explored **if there is enough work** for the people who live and work in and around Nottingham. We found that:

- Although employment in both the UK and the East Midlands region has recovered from the recession that started in 2008 – and is now at or close to record high levels – this does not apply to Nottingham. In 2017, Nottingham was the only one of the eight English large and medium-sized 'Core Cities' which had an employment rate below the pre-recession level. Nottingham had the lowest employment rate out of the eight cities in 2017. The number of working age residents in employment fell significantly between 2015 and 2017, although more recent quarterly data suggests that this may have improved during 2018.
- The unemployment rate in Nottingham has not increased to a corresponding extent. However, economic inactivity – those people who are neither unemployed nor employed – has increased to the highest level in a decade, including during the recession. An increase in students who are not in employment has contributed significantly to this, but so has an increase in people who describe themselves as being long-term sick. This could indicate increasing "hidden unemployment".

We then went on to investigate whether **work pays** in Nottingham, which also enabled us to test whether or not the recent employment trends for Nottingham City are credible, as they come from the Labour Force Survey (LFS), whilst wage estimates come from an entirely separate source. It would be reasonable to assume that a weakening labour market would result in reduced wage growth:

- Trends in earnings for residents of Nottingham correspond with the trend in employment, with growth slowing from 2015 in the City, whilst the rate of growth increased in Nottinghamshire County and the UK overall. The gap between the earnings of Nottingham residents and the national average has therefore widened.
- The earnings of people working in Nottingham but potentially living elsewhere were higher than for residents of the City, but were still below the UK average. They have also grown more slowly than earnings for people working in the County, or across the UK. This suggests that, although people working in Nottingham are paid significantly more than residents are, the relative weakening of Nottingham's labour market in recent years has also affected

workplace earnings within the City.

Is the structure of our local economy right for good work?

- Although the number of residents in employment in Nottingham has fallen since 2015, the number of jobs in Nottingham workplaces has grown – suggesting that workplaces are increasingly drawing in labour from outside Nottingham.
- The structure of employment by industry reveals a very significant over-representation of employment in "Business Administration and Support Services", which accounts for almost a quarter of Nottingham's employment. This includes recruitment and temporary agency work, but also "back office" service activities, which may be vulnerable to demand-side shocks.
- Nottingham's job quality and wider economic insecurity challenges are due more to demand-side factors (principally the structure of employment by sector and occupation), rather than supply-side issues. Nottingham has achieved some of the highest increases in the skills of its workforce out of the eight Core Cities, which should be celebrated.

Does our work make us happy and productive?

These factors matter for the wellbeing and happiness of individuals living in Nottingham, but also for the "bottom line" in terms of the productivity of workplaces in the city.

- Although Nottingham has a relatively large economy in terms of Gross Value Added per head, (GVA is the value of goods and services produced in a given area or by number of people/hours within an area) it has the lowest level of labour productivity (measured by GVA per hour worked) of any English Core City. It is also one of the lowest levels of labour productivity in England.
- Trends in subjective wellbeing measures – including life-satisfaction, happiness and anxiety – have closely followed some of labour market trends. Whilst wellbeing and happiness levels have increased in the UK and in Nottinghamshire over the past decade, they have fallen in Nottingham. Whilst anxiety has fallen in the UK, it has increased in both Nottingham and Nottinghamshire – with the proportion of people who feel "very" anxious also increasing in both cases.

Celebrating improvements in the supply side

Since 2007, we have seen an increasing proportion of Nottingham residents gain degree level qualifications and a notable fall in those lacking entry-level qualifications. These improvements have addressed the previous under-supply of highly skilled workers and significantly reduced the over-supply of low skilled workers.

Dealing with the demand-side

These supply-side improvements mean that Nottingham's productivity and wage weaknesses and potential vulnerability of employment to cyclical shocks are most likely to be driven by the kind of jobs people do and the context in which they do them. These structural weaknesses are very likely to not only impact people's experience of "good work" – and their happiness and wellbeing – but also the efficiency with which the city generates wealth.

The data shows that this is not just about the need for greater access to "good work" for individuals, but the pressing need for structural change in order for the city's economy to grow sustainably.

Data and understanding the local picture

This report highlights what the latest publicly available data can tell us about cities like Nottingham. The national and regional trends often fail to show the nuanced local picture. Our place-based approach has highlighted the need to provide more capacity to measure key issues at a local level.

Any future work should identify and test metrics that are more responsive to place-based issues. We argue that additional weight also needs to be given to insights gained from these methods, which reflect the lived experience of citizens.

Taking a multi-strand approach to promote good work across Nottingham

Helping Nottingham to become recognised as a city, which champions "Good Work", can't be accomplished by one organisation or approach alone. We have been advocating for a coalition model with a four-pronged approach, covering:

- Research to understand the local context
- Engagement with employers and other stakeholders to build support for change and share good practice
- Mobilisation to work with local communities to campaign for fair work and wages
- Practical initiatives to begin to understand what can be achieved in employment settings.

There is already much to celebrate for workers in Nottingham, not least in the very significant improvements in the skills held by residents – at both the top end and lower end of the skills hierarchy. We are a growing economy, the powerhouse of the East Midlands, and a powerful voice - but there is much more we can do to help instigate positive change at the firm and regional level. We ask that you join us, to consider how Nottingham can become a "Good Work City".

Introduction

The quality of work has been a high-profile topic for politicians and media commentators ever since it became clear that the UK's recovery from the 2008 recession included record numbers of people in employment (and accompanying recruitment challenges for employers), alongside flat and often sub-inflation wage growth, weak productivity and increasing rates of in-work poverty. Concerns have been highlighted around:

- the human cost of the "gig economy"
- the low pay often associated with socially valuable care work, and other essential services
- the high proportion of children growing up in poverty, in households where at least one adult is in employment
- widening regional disparities
- the disproportionate impacts of these issues on younger adults (including under-employed graduates).

All this makes it relatively easy to identify factors that typify "bad work". However, a clear understanding of the structures that have driven these developments and, of at least equal importance, an aspirational but realistic understanding of what constitutes "good work" have proven more difficult to conceptualise.

Focused on both Nottingham and the wider county, this report will investigate the key factors influencing the availability and quality of employment. This approach is in keeping with the Nottingham Civic Exchange's objective to be a place-based think tank, generating research and policy recommendations of national and international significance that are fundamentally drawn from our understanding of our city (and are thus tangible and directly relatable to the lived experience of individuals and communities).

By taking a place-based approach, we hope to highlight the need to look local before making broad policy recommendations. Nottingham Civic Exchange always set out to speak with people rather than for them. We cannot seek to improve the situation locally without first understanding it.

This report feeds into Nottingham Civic Exchange's programme, entitled *Good Work Nottingham,* which explores job quality and aims to help shape Nottingham as a city that can be recognised by its fulfilling and meaningful work opportunities. This programme builds on reports focusing on economic insecurity and ordinary working families, and will continue to be influenced by our research with and about ordinary households locally.

In producing this report, the Nottingham Civic Exchange have been supported by academic colleagues from Nottingham Trent University's Department of Economics and Centre for People, Work, and Organisational Practice, and Dan Wheatley from the University of Birmingham.

This report will outline the background conditions of Nottingham's economy, providing a review of the situation and helping the reader to understand the local context. We will then explore the concept of "good work", and how it has formed. The main element of this report reviewing up to date data will outline what work and employment looks like locally, sharing how this affects people's employment, work patterns and remuneration.

We hope *Laying the Foundations of a Good Work City* will inform the reader's understanding of the local labour market, and provide material for fruitful discussions on how to ensure Nottingham can become a "Good Work City".

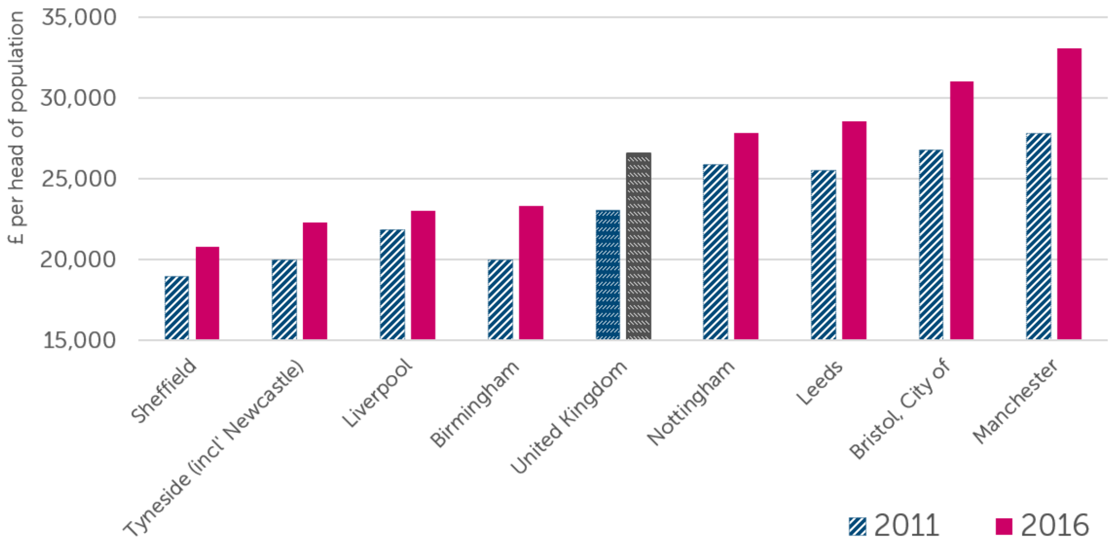
Nottingham's Economy

> *Nottingham has the highest Gross Value Added per head in the East Midlands, but the lowest household income in the UK*

Nottingham has a large economy and labour market in the East Midlands. However, the city also faces specific challenges that affect the quantity and quality of available work.

As of 2016, workplaces in the city produced the highest level of economic output (Gross Value Added, or GVA) per head in the East Midlands, at £ 27,852: this, compared to a regional average of £21,502, and £26,584 in the UK overall (Office for National Statistics [ONS], 2017). Comparing the Local Authority areas of each (English) Core City, Nottingham has the second smallest population (Newcastle-on-Tyne has a smaller population, but the wider conurbation is slightly larger): in spite this, Nottingham still reported the fourth highest GVA per head of the English Core Cities.

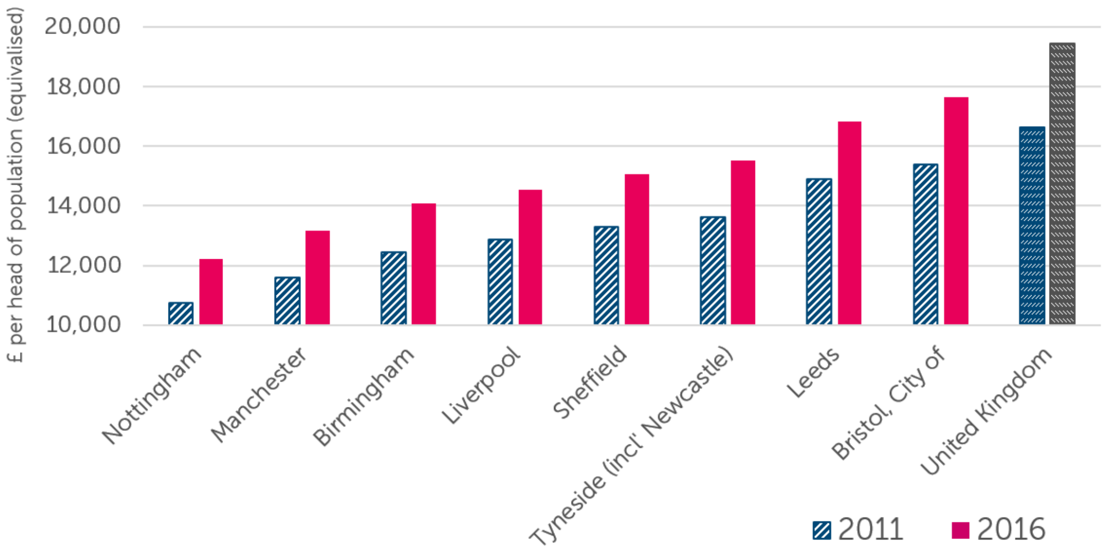
Chart 1: Gross Value Added (GVA) per head, 2011—2016, current basic prices



Source: ONS Crown Copyright, 2017. Regional Gross Value Added (income approach) reference tables. Chart 2: Gross Value Added (income approach) per head of population at current basic prices (Accessed 25 February 2019).

Nottingham's economy grew by 15% from 2011, to a total of £9 billion in 2016. In spite of this healthy growth, the city was still estimated to have the lowest household income in the UK. In 2016, Gross Disposable Household Income (GDHI) was just £12,232 per head, compared to £19,432 in the UK (ONS, 2018). The first two charts below highlight the apparent contradiction across the geographies that correspond to each of the eight English Core Cities.

Chart 2: Gross Disposable Household Income (GDHI) per head, 2011—2016, current basic prices



Source: ONS Crown Copyright, 2018. 'Regional Gross Disposable Household Income (GDHI) reference tables.' Table 2: Gross disposable household income (GDHI) per head of population at current basic prices (Accessed 25 February 2019).

The Core Cities

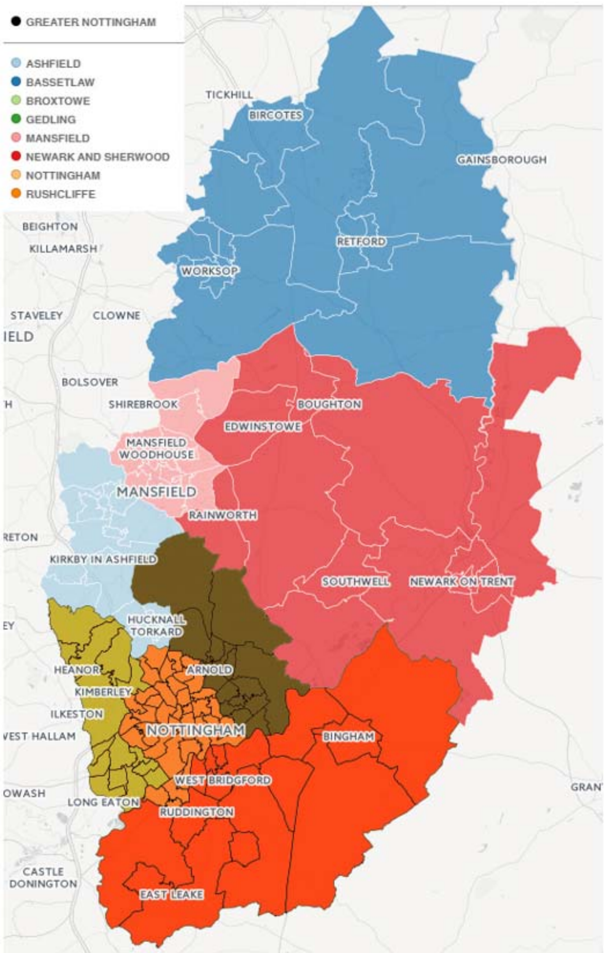
A self-selecting group of ten large and medium-sized cities in the UK (excluding London), eight of which are in England. These cities are Birmingham, Bristol, Cardiff, Glasgow, Leeds, Liverpool, Manchester, Newcastle, Sheffield and Nottingham.

Nottingham has the second smallest population of this cohort. Statistics are often analysed using the "Primary Urban Areas" (PUAs) – combinations of local authority boundaries that are thought to represent the physical extent of each Core City more clearly than Local Authority boundaries. The Unitary Authority of Nottingham City has a resident population of 330,000, for example, but its PUA has a population of more than 600,000.

In this report, we have primarily used the equivalent Local Authority boundary for each Core City, although this significantly under-represents the expanse of city regions such as Manchester and Birmingham. This is done for consistency and clarity. In most cases, these areas are matched by internationally comparable 'NUTS3' boundaries, although there are some exceptions (Newcastle, for example, is represented by the larger Tyneside NUTS3 area).

The contrast between relatively high levels of wealth production (from workplaces based within Nottingham) and notably low levels of income (to residents living in the city) can be understood in terms of economic geography and quality of work. As we shall explore in this report, this is also seen in:

- Nottingham's lower than average wages, and the notable difference between the wages of Nottingham residents versus those who commute into the city from elsewhere
- a significant fall in the rates and numbers of people employed between 2015 and 2017, which was not reflected in the other English Core Cities, or across the wider county of Nottinghamshire
- how the structure of employment by sector and occupation affects the quality of jobs in Nottingham compared to elsewhere. This report will principally focus on the quality of work, with data that can be used to identify the extent (or outcomes of) "good work" at a local level. However, references to the economic geography of Nottingham and its surrounding areas will be made throughout the report, enabling us to explore how people's experience of work changes between adjacent administrative areas, and how commuting flows contribute to the dichotomy in Nottingham's performance based on the perspectives of workplaces and / or households.



Our report will refer to several statistical geographies. Primarily though, references to the city of Nottingham will reflect the Unitary Authority's own boundaries – those for which Nottingham City Council are responsible (as per the NUTS3 area for Nottingham, detailed in Charts 1 and 2). We will compare this to the surrounding area of Nottinghamshire County and, where relevant, the Local Authority Districts within the county that border Nottingham City – namely Rushcliffe, Gedling and Broxtowe. This represents the wider conurbation commonly known as "Greater Nottingham", as identified in the map.

Researching and Measuring Good Work

> *Work can have a significant impact on health and wellbeing, and the type of work done also impacts on an individual's identity*

The quality and type of work one does is not only important for health and wellbeing (Jahoda, 1982; Bambra, 2011; Strong, 1998), but as a source of meaning and identity (Yeoman, 2013; Sayer, 2009). Those that are disadvantaged within or excluded from good quality work in the labour market face unique barriers, which can inhibit their access to the potential wellbeing benefits of work. Furthermore, these barriers can expose people to damaging factors like stress, burnout, underemployment and unemployment and worklessness.

Exclusion from work can significantly and detrimentally impact the individual (what economists have called "scarring effects"),(Selenko 2017) and the workforce in general (known as "hysteresis" – where an earlier period of increased unemployment contributes to a higher level of unemployment at a later point, as individuals who were previously unemployed are more vulnerable to future unemployment). (O'Shaughnessy 2011) This section provides a brief overview of the key literature across the field of job quality, touching on some of the main influencing factors: it also identifies gaps in that current literature, which Nottingham Civic Exchange hopes to fill through ongoing research and discussions with individuals, organisations and communities.

"Job quality" is a term used to describe the characteristics of a job, which generate benefits for the employee – notably their physical and mental wellbeing (Findlay et al, 0217; Green, 2006). Wellbeing is linked to good quality work through several different elements, and distinct from the more conventional concern with health and safety at work. Increasingly, it is considered a valuable baseline from which job quality can be built (Coats, 2008). Associate Professor Maria Karanika-Murray and her NTU research group are exploring the relationship between the workplace, job roles and wellbeing as part of the *Good Work Nottingham* programme.

Some research indicates that poor quality work is actually worse for health – both physical and mental – than unemployment (Chandola, 2018; Murphy 1999; Kasl 1998). This evidence also suggests that the number of people in employment is not necessarily the most important factor when assessing questions of economic growth and individual / societal wellbeing. Social psychologists at NTU studying communities highlight a wealth of other factors that play a role. (Stevenson 2014; McNamara 2013). This is a key point, and one we will return to when examining the current government's rhetorical emphasis on the UK's record high employment rates.

In the academic literature, a range of taxonomies and approaches to measuring job quality have been developed – commenters include Karasek and Theorell (1990), Bartling (2012), Holman (2013), Overrell et al (2010), Rosso et al (2010), Vidal (2013), Connell and Burgess (2016), and recently Warhurst et al (2017) and Wright et al (2018). As per this research, the factors affecting the relative quality of jobs include:

- pay (including relative income levels)
- skill
- the employee's level of autonomy
- the role's variety
- the intensity of the work
- the length of the working day / week
- job security
- the opportunities for training and development
- the availability of flexible working arrangements.

In exploring quality of work, existing academic research often refers to "job quality" (Holman, 2012; Horowitz, 2016), but also employs terminology like "meaningful work" (Bustillo et al. 2011; Steger et al. 2012), "decent work" (U.N., 2015), and "good work" (Ezzy, 1997; Taylor et al., 2018); terms that have different meanings, but are often used interchangeably. Each of these terms covers the factors that affect the quality of work, as experienced by employees. Sometimes, however, these terms are used on a standalone basis: "meaningful work" has for example been used from a more normative standpoint to develop measurement tools and frameworks (Steger el al., 2012), but still incorporates key aspects and influencers of job quality like satisfaction, motivation, and anxiety.

"Good work" is a major focus of the *Taylor Review of Employment Practices in the Modern Economy* (Taylor et al., 2017) – an independent report carried out from late 2016 to mid-2017, on behalf of the UK government. The *Taylor Review* focussed on the three main challenges facing the UK labour market, namely:

- tackling the potential for exploitation
- clarifying the law, so that everyone can know their rights
- the alignment of labour market incentives with the broader industrial strategy / national objectives.

The study explored a number of themes relevant to job quality in the modern labour market, including atypical forms of work contract such as involuntary and self-employment; the "gig economy"; and the impact of "disruptive" business models and technologies.

For a growing portion of the labour force, participation in paid work is insecure – characterised by periods of temporary or reduced hours, and as gaps in employment. These patterns are the result of a labour market that is increasingly flexibilised and employer-oriented (Gregory and Milner, 2009:123). It involves the use of forms of "precarious" work, including agency and zero hour contracts, reduced hours, and "gig" self-employment. Research has shown that engagement in these forms of work can result in multiple job holding (Atherton et al, 2016), and underemployment (Green and Livanos, 2015:1226). Around 3% of employees (904,000) reported working on zero-hour contracts between April and June in 2016 (representing a marked increase from around 0.5% in 2008), while a further 324,000 UK workers declared "temporary" agency jobs: so while the atypical forms of work are still relatively uncommon, they do form an increasing minority of the UK economy.

Meanwhile, the "gig economy" – although providing potential opportunities to some workers who are more employable, for example the highly skilled, or those desiring significant flexibility (Green, 2011) – has generated concerns around reliability and working conditions (Friedman, 2014; Harvey et al, 2017). It has been linked to the recorded growth in precarious part-time self-employment, especially among those leaving unemployment (Wales and Amankwah, 2016:28). For all these workers, the paid work is significantly different from the typical experience of those engaged in permanent employment. Furthermore, paid work remains highly gendered, due to the continued impact of the household division of labour (Wheatley and Wu, 2014). Women are more likely to work flexibly, which could leave them at a disadvantage in their careers (Fagan et al, 2012), and potentially more susceptible to lower quality employment.

In the policy sphere – and in a similar vein to both the *Taylor Review* on "good work", and the Fair Work Convention in Scotland – the Work Foundation launched the *Commission on Good Work* in 2018. This review examined how "good work" could help to rebuild the UK economy after the recession, and post-Brexit. The report sets out how individuals and organisations can optimise the benefits of providing job quality, and the potential discussions that are necessary for debate on the topic. It was followed by *Measuring Good Work: The final report of the Measuring Job Quality Working Group*, which recommended possible indicators of "good work". (Irvine et al, 2018).

Major institutions like the International Labour Organisation (ILO) and the European Union (EU) have shown increasing interest in the impact of job quality on a number of key economic areas. These include increasing the productivity of the workforce (Altmann, 1998); reducing inequality (Green, 2013); and incorporating new technologies in the workforce (Taylor et al., 2018); as well as the ILO's wider suite of indicators of "decent work" (ILO, 2013).

Research undertaken on behalf of the CIPD (Wright et al, 2018) to investigate and recommend measures of job quality found that there was no single dataset "dedicated to measuring job quality", either in the UK or internationally (p. 4). Indicators from different existing survey sources could be drawn upon to create an index that reflects the multi-dimensional aspect of work, but this index would still have gaps that would need to be filled with new primary research, whilst many of the existing sources identified in the study have limited detail below a national level.

The table below indicates the common themes prioritised by the RSA/Carnegie, ILO and CIPD indices, which include pay and rewards (and employee's subjective satisfaction with this); contractual terms of employment; safe working conditions; an employee worker voice; physical and psycho-social wellbeing and work-life balance. The ILO indices also recognises the importance of economic context and other structural factors, which may result in income inequality or lower labour productivity. However, as the table illustrates, a relatively small proportion of these indicators are supported in the UK by data that is either available or robust at a local or regional (i.e. sub-national) level.

Table 1: A Selection of Indicators of Employment Quality
Listed in ***bold italics*** where indicators are supported at a sub-national level

RSA/Carnegie Measuring Good Work	ILO Decent Work	CIPD Job Quality
Terms of Employment Job security, minimum guaranteed hours and ***under-employment*** (proxy measure available sub-nationally through comparison of employment by occupation and highest qualification) Pay and benefits ***Pay (actual)*** (available sub-nationally in the UK via the Annual Survey of Hours and Earnings, ASHE) and satisfaction with pay Health and psychosocial wellbeing Physical injury and mental health (limited health at work/	(sub-set of indicators for illustration) Employment opportunities ***Employment, unemployment and labour force participation*** (all available at a sub-national level in the UK from the Labour Force Survey/Annual Population Survey) ***Young People not in employment, education or training*** (published sub-nationally by the Department for Education) ***Underemployment and labour under-utilisation*** (proxy measures available	Pay and rewards ***Wage level*** (available sub-nationally in UK), type of payment (fixed or performance related), non-wage benefits, satisfaction with pay Intrinsic Characteristics of Work ***Skills*** (available sub-nationally in UK in terms of highest qualification proxy measure), autonomy, control and variety plus subjective views of satisfaction Terms of employment Contractual stability, ***opportunities for training*** (available sub-nationally in UK in terms of receipt of job-related training),

in employment data available sub-nationally in UK, but local area public health and life expectancy data is available) Job design and nature of work Use of skills, control, opportunities for progres-sion, sense of purpose Social support and cohesion Peer support and line manager support Voice and representation *Trade union membership* (available at regional level in the UK in terms of proportion of workers who are members of a Trade Union), Employee information and employee involvement Work-life balance *Over-employment and overtime* (proxy measures available sub-nationally in UK, including overtime pay and hours worked from the ASHE)	sub-nationally from the Labour Force Survey) Decent working time *Weekly and annual hours worked* (available sub-nationally from the ASHE), paid overtime Stability and security at work Precarious and subsistence employment rates Equal opportunities Safe work environment *Occupational segregation and gender wage gap* (available sub-nationally from the LFS and ASHE) Workers' and employers' representation Trade union density rate and collective bargaining coverage rate Economic and social context for decent work *Labour productivity, GVA per capita and wage/earnings inequality* (available sub-nationally for regional GVA and labour productivity estimates and earnings percentile distribution from the ASHE)	development and progression, and subjective perceptions of job security Health and Safety Physical and other risks Work-Life Balance Working time arrangements and flexibility, **working intensity** (available sub-nationally in the UK in terms of hours worked) Representation and voice Employee consultation, ***trade union representation*** (available at regional level in the UK in terms of proportion of workers who are members of a Trade Union) and employee involvement in decision-making.

Sources: Irvine et al (2018). 'Measuring Good Work: The Final Report of the Measuring Job Quality Working Group'. London: The Carnegie Trust UK and the Royal Society (RSA).
International Labour Organisation (2013). 'Decent work indicators: guidelines for producers and users of statistical and legal framework indicators: ILO manual'. Second Version. Geneva: ILO.

Running alongside the "good work" agenda is the literature on "bad work" (McGovern et al., 2004; Miller, 2011; Kalleberg et al., 2000; Sengupta et al., 2009). This research focusses on similar topics to other pieces of job quality research, but with an increased focus and priority on understanding those negative elements of work, which have a detrimental impact on health and wellbeing. Essentially, it is two sides of the same coin – and lessons can accordingly be learned from each perspective.

Whilst it may seem arbitrary whether one focusses on the positive or negative side, this is not necessarily the case. For example, Miller (2011) discusses the impact of burnout on job satisfaction, retention and moral cohesion amongst nurses. Focussing on "bad work", Miller is able to qualify the emotional burden and extremes that burn-out (i.e. bad work) can produce. Research into the "bad" elements of work is useful, and helps to develop well-rounded perspectives on job quality. Within NTU, we have researchers studying work from an area perspective (Hutchings 2017), and based on specific sectors – looking regionally at the hand car wash industry as an example. (Clark 2018)

Collectively, this research is indicative of the constituents of job quality not only having important impacts on job satisfaction, but also in respect of wider wellbeing (Wheatley, 2017; Lawton and Wheatley, 2018). However, as Table 1 illustrates, existing literature is limited by the availability of quantitative data, which effectively measures job quality, especially at a local level or for disaggregation by gender, age or ethnicity. Outside of the CIPD's recent UK Working Lives Index, which surveyed roughly 6000 UK employees, there is an incomplete picture of the quality of work in advanced societies at present. There is also a dearth of qualitative research and data on exactly what "good work" means for individuals, communities and organisations. Exploring these different perspectives is a vital step in asserting a single, agreed definition of "good work" across society. Perspectives on good work are a result of both social and cultural discussion, as well as agency and identity (Ezzy, 1997). *Good Work Nottingham* aims to be part of that discussion, by engaging with and representing a broader cross-section of our community.

We must also recognise the structural change to the economy – with the growth of the "knowledge economy" and deindustrialisation across the UK. Today's knowledge and high skill sectors continue to rely on low value / low skill services. Although significant employment growth has been observed in knowledge intensive industry sectors, employment in service activities associated with low pay, low skill and often poor-quality work has been resilient and, in some cases, increasing. We must ensure that debates about work do not simplify the debate and argue that everyone should relocate into the knowledge economy. As Benedict Dellot from the RSA notes: "Rather than help people escape these roles for non-existent jobs up the career ladder, the energy of policymakers and educators would be better spent empowering people to develop within them. Low skill jobs won't be going anywhere, so we need to find a way of supporting people in these roles." (Dellot 2018)

Recognising the challenges in both conceptualising 'good work' and measuring it at a regional or local level, this report will attempt to provide an initial context for understanding employment and 'good work' in Nottingham and Nottinghamshire. This will particularly focus on the economic context for good work and the structure of employment, including those indicators identified in the ILO's 'Decent Work' indices with a view to providing guidance and lessons to others for future research across the country, alongside more localised recommendations on how Nottingham could aspire to become a 'good work city'.

Is there enough work in Nottingham?

The dominant narrative for the current state of the UK labour market is one of historically high rates of employment, signalling a "jobs rich" recovery. At the same time, there is an agreed concession that wage growth has stagnated, and that the living standard of some households has even worsened.

At a UK level employment has not only recovered from the 2008 recession (which impacted the labour market most significantly between 2009 and 2011), but has attained and sustained levels of employment that are higher than at any time since comparable annual data began in 1984.

> *Philip Hammond MP, the Chancellor of the Exchequer, has stated that there is now "higher employment and lower unemployment in every region and every nation of the United Kingdom"*

Members of the current government have consistently reinforced this picture. Chancellor of the Exchequer Philip Hammond opened his Autumn Budget statements in both 2017 and 2018 (Hammond 2017 and 2018) with references to the strength of the labour market; He highlighted a "jobs miracle" which the Office for Budgetary Responsibility (OBR) predicted would continue over their forecast period, to 2023. The current Secretary of State for Work and Pensions, Amber Rudd MP, has also strongly celebrated the UK's labour market, as evidence that "our on-going welfare reforms are working – continuing to incentivise work and making sure the system is fair to all those who need it and those who pay for it." (Rudd, 2017)

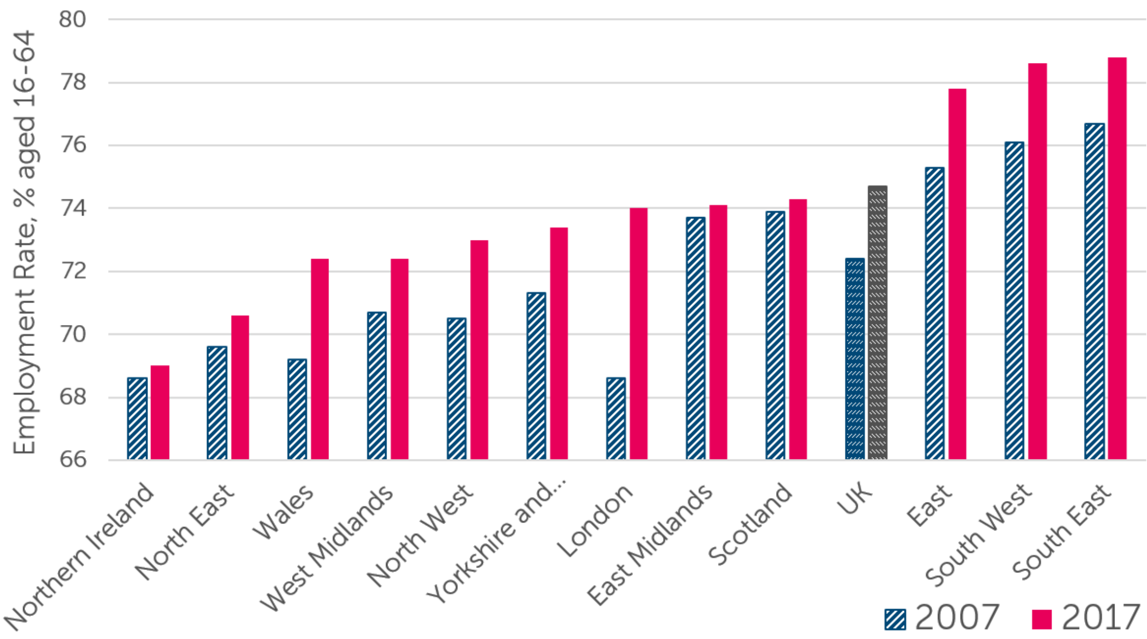
Employment

The employment rate reflects the number of people in some form of paid work as a percentage of all working-age people (usually 16-64) resident in a given area. Therefore, to understand changes in the rate of employment, it is important to look at changes in both the number of people in employment and the total resident population. A sustained increase in the employment rate is dependent on growth in the number of people employed out-stripping general population growth.

ONS data broadly confirms Hammond's assertion: a comparison between the 2017 (January—December) Labour Force Survey (LFS) data and the same period in 2007 shows that all UK regions and nations have indeed experienced an increase in their employment rates. However, the extent of that increase varies significantly from region to region.

The East Midlands, Northern Ireland and Scotland experienced very slight changes between 2007 and 2017 (with their employment rates increasing by just 0.4 percentage points in all three cases – equivalent to an additional 71,300 individuals in employment in the East Midlands, and close to the rate of general population growth). This contrasts with strong increases in London (rising by 5.4 percentage points, or 872,800 individuals), the South West and the East of England (both increasing by 2.5 percentage points, with an additional 138,400 and 220,600 individuals in employment respectively – significantly outstripping general population growth).

Chart 3: Employment rates by UK nation and region, 2007 and 2017



Source: ONS Crown Copyright, 2018. 'Annual Population Survey', January—December 2007 and January—December 2017 [from NOMIS, accessed 18 December 2018].

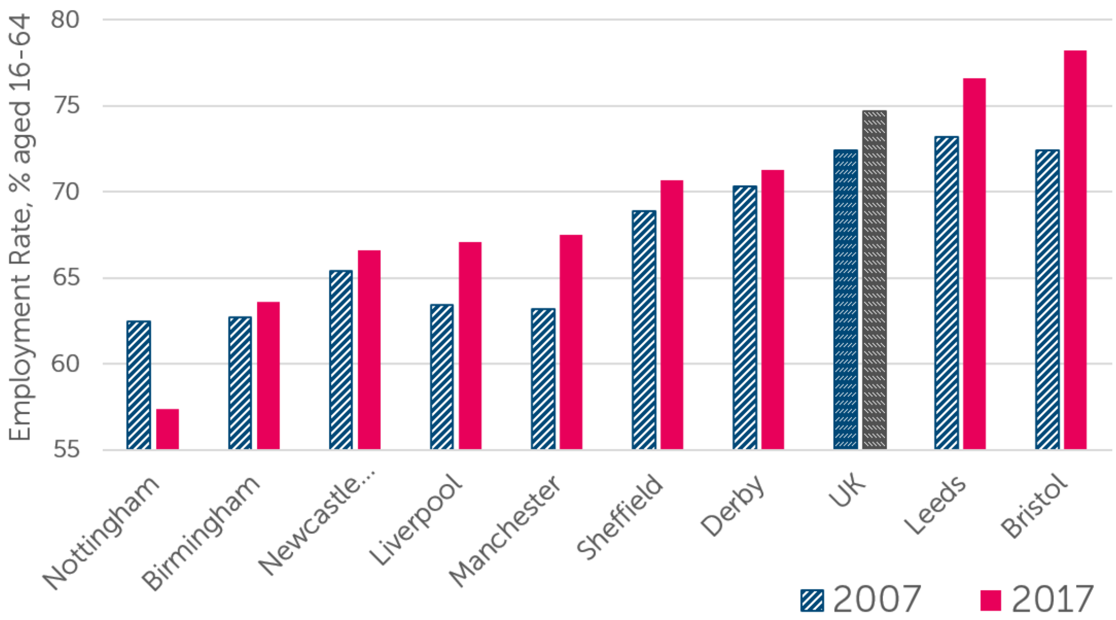
The East Midlands had the fifth highest employment rate in 2017: 74.1%, compared to 74.7% in the UK overall. Employment in the East Midlands has been comparatively stable over the decade, with only a relatively small decrease in 2008 (the global recession) compared to other regions, and employment rates never falling below 70%. There has been less scope for the East Midlands to experience the same extent of improvement in employment as London, for example, which had an employment rate in 2007 of 68.6%, meaning that the increase in employment in the capital to 74% (closing the gap with the UK average) is notable.

All Core Cities experienced an overall increase in employment in 2017 compared to 2007, except Nottingham

Nottingham appears to be an outlier when you look within the (former) English Government Office Regions. Nottingham experienced a significant fall in employment, masked at an East Midlands masked at an East Midlands regional level by the relative resilience of labour markets elsewhere in the region – particularly the counties of Leicestershire, Lincolnshire, Nottinghamshire, Derbyshire and Northamptonshire.

All cities in the Core Cities group experienced an increase in their employment rates between 2007 and 2017, except for Nottingham. In Nottingham, the rate of employment fell from 62.5% in 2007 (the lowest of the cohort, slightly below Birmingham at 62.7%) to 57.4% in 2017. This is a statistically significant difference compared to the 2007 estimate, and is now significantly lower than Birmingham. Several cities experienced strong employment growth over the decade, notably Bristol, Manchester and Liverpool.

Chart 4: Employment rates for the English Core Cities (plus Derby), 2007 and 2017



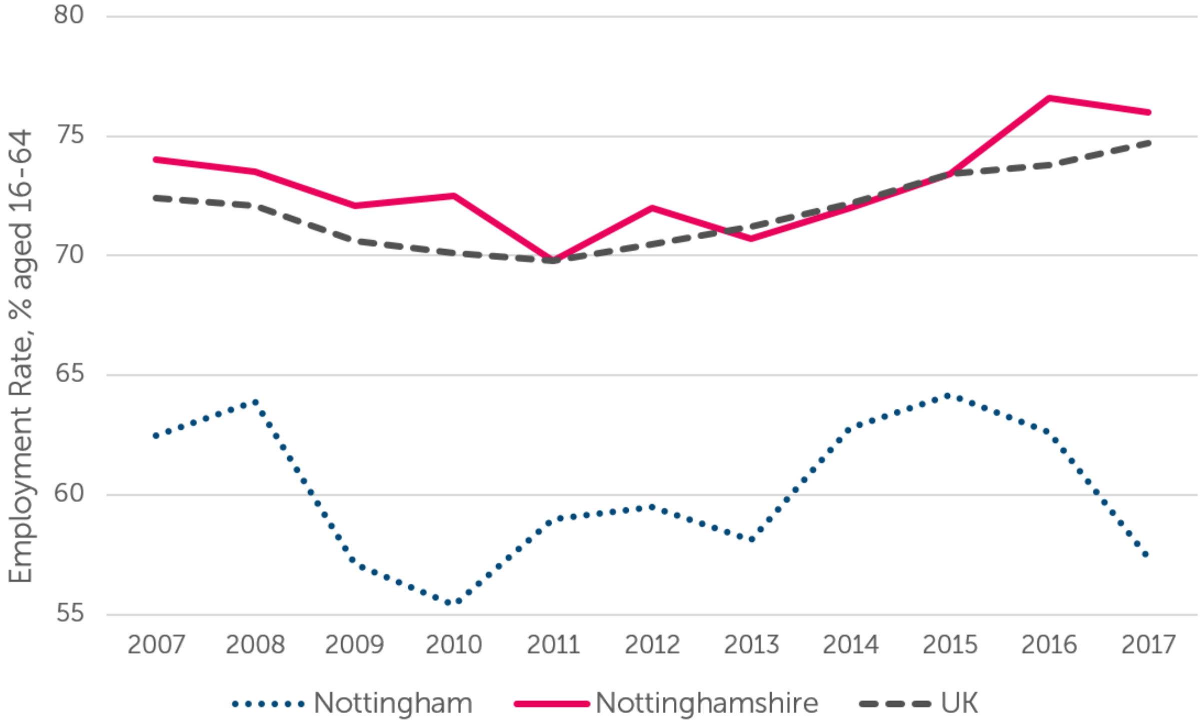
Source: ONS Crown Copyright, 2018. 'Annual Population Survey', January—December 2007 and January—December 2017 [from NOMIS, accessed 18 December 2018].

The data on employment rates highlights a weaker performance in Nottingham City, with employment rates for Nottinghamshire following the UK average closely. Whilst the employment rate for both the UK and Nottinghamshire fell to a low of 69.8% in 2011, before starting to recover (to 76% in Nottinghamshire in 2017), the employment rate of Nottingham fell to a low of 55.4% a year earlier (in 2010) – 17 percentage points lower than the rate in Nottinghamshire. Employment in Nottingham recovered slightly in 2011 (to 59%, still more than 10 percentage points below the UK and the county), and then more strongly between 2013 and 2015: increasing to a peak of 64.2% in 2015, and exceeding the pre-recession rate.

However, employment in Nottingham City then fell between 2015 and 2016, and again between 2016 and 2017. It is now close to the 2010 rate; at 57.4% in 2017.

Employment in Nottingham fell sharply between 2015 and 2017, and is now close to the low point that followed the recession; at 57% in 2017, compared to 55% in 2010.

Chart 5: Employment rates (% of residents aged 16-64), 2007–2017



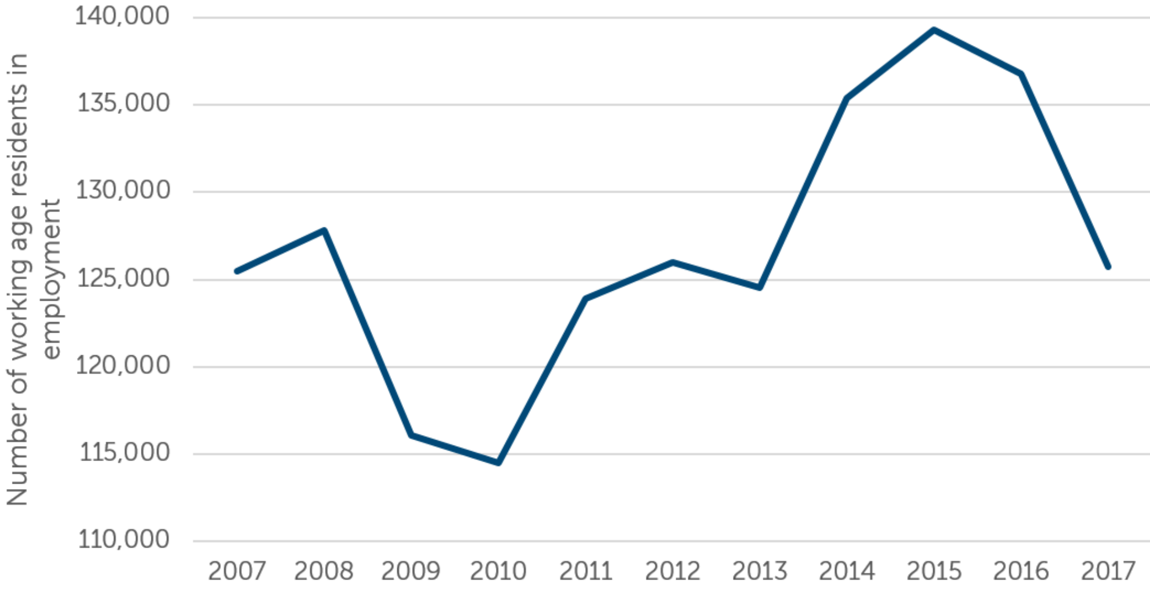
Source: ONS Crown Copyright, 2018. 'Annual Population Survey', January—December 2007 to January—December 2017 [from NOMIS, accessed 18 December 2018].

Employment in the city fell by 11,000 between 2007 and 2010, and then increased by 24,800 by 2015 (with 139,800 residents in some form of employment, which significantly exceeded the pre-recession peak). However, it then fell by 13,600 between 2015 and 2017, to 125,700; below the pre-recession peak shown in Chart 6.

To understand the dramatic falls in the employment rate in Nottingham between 2008 and 2009 – and again, between 2015 and 2017 – we need to look at the rate of growth in the numbers employed compared to the rate of growth in the total resident population.

Between 2007 and 2017, the numbers employed in Nottingham increased by just 0.2% whilst the total resident population increased by 9.1%

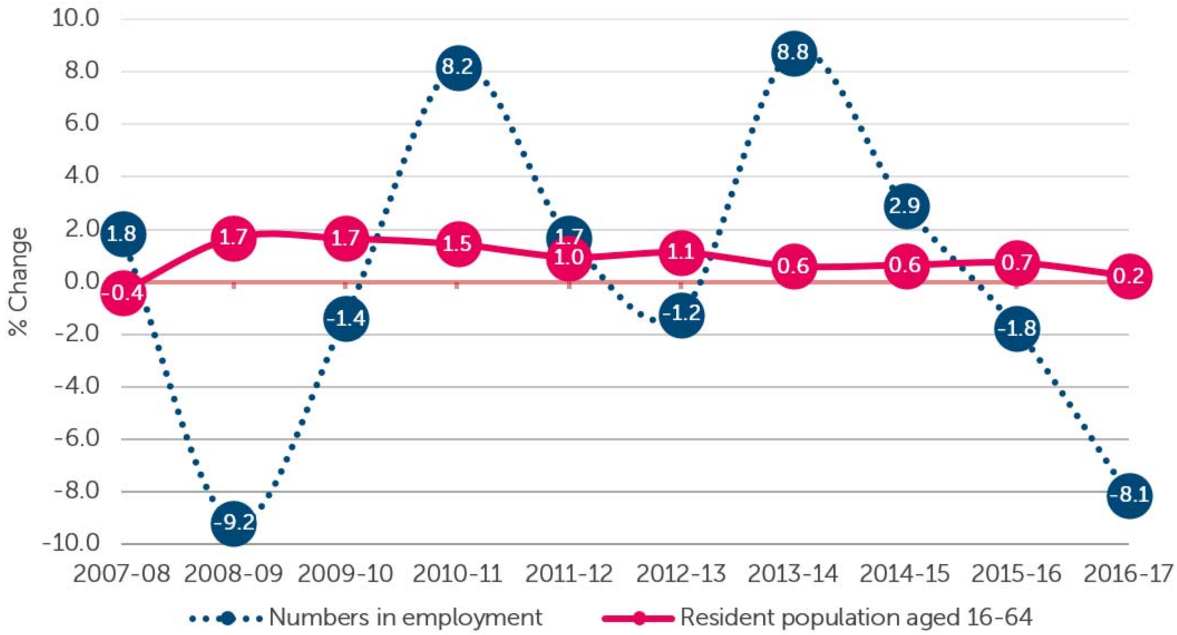
Chart 6: Employment levels, Nottingham City Unitary Authority, 2007–2017



Source: ONS Crown Copyright, 2018. 'Annual Population Survey', January—December 2007 to January—December 2017 [from NOMIS, accessed 18 December 2018].

In 2010-11 and 2013-14 in particular, the number of employed residents in Nottingham grew significantly more than general population growth. However, in 2008-09 (with the onset of recession) and in 2009-10, 2012-13, 2015—17, the numbers employed in Nottingham fell (by as much as 9.2% in 2008-09 and 8.1% in 2016-17). However, in each of these years, the size of the resident population increased – exacerbating the speed at which the employment rate contracted. In 2007, there were estimated to be 200,800 residents aged 16—64 in Nottingham City; by 2017, there were 219,000.

Chart 7: Annual growth in employment levels and working age resident population, Nottingham City Unitary Authority, 2007-08 to 2016-17



Source: ONS Crown Copyright, 2018. 'Annual Population Survey', January—December 2007 to January—December 2017 [from NOMIS, accessed 18 December 2018].

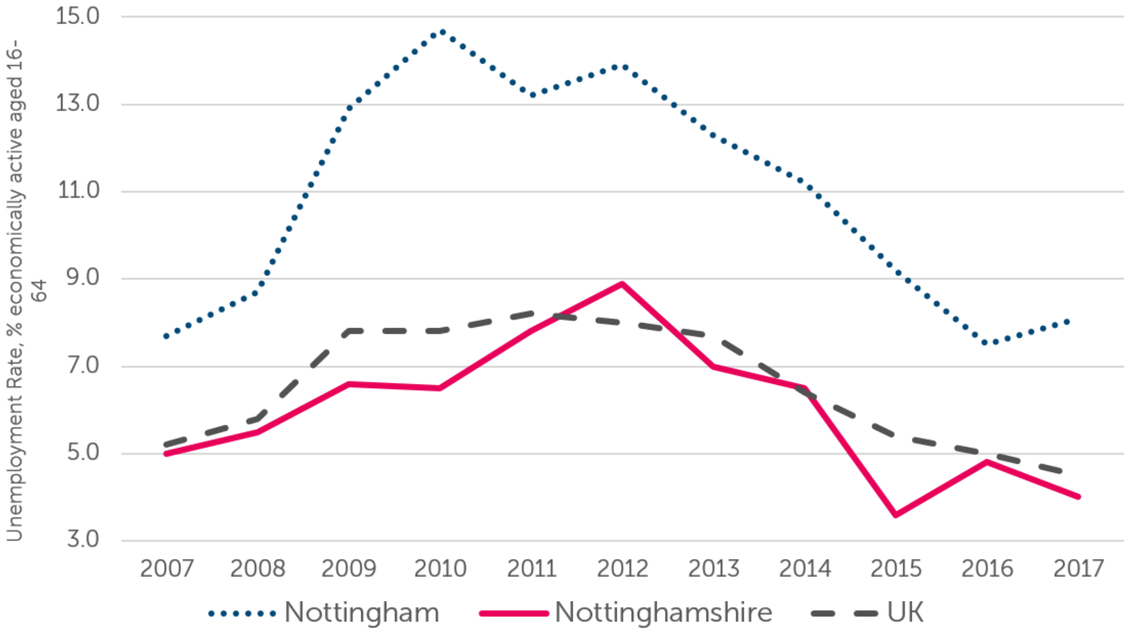
Therefore, at five instances during the decade, the number of people in work in Nottingham shrank, whilst the population continued to grow. In terms of total percentage growth rates over the period 2007—2017, the total number employed in Nottingham City increased by just 0.2%, whilst the resident population increased by 9.1%.

This trend was not reflected in Derby, or any of the other Core Cities. In every other city, the number of residents employed increased over the decade at a faster rate than the total working age population – demonstrating in each case an increase in the regional rate of employment. In Manchester, for example, the numbers employed rose by 23.6% (compared to a 15.8% increase in the working age population), and in nearby Derby the numbers employed grew by 5.6% (compared to a population growth of 4.1%).

The employment rate gap has therefore widened between Nottingham and the county of Nottinghamshire – from 11.5% lower in 2007, to 18.6% in 2018. The gap between Nottingham and the UK average has also increased significantly – from 9.9% lower in 2007, to 17.3% in 2017.

To understand the drivers behind this trend – as well as the social and economic consequences of Nottingham's declining employment rate – we will look at two things: patterns in unemployment, and the structure of economic inactivity (i.e. people who are neither unemployed nor actively seeking or available for work, including full-time students and people with work-limiting illness and / or disabilities). We will also examine trends in the industrial structure of employment, and outcomes

Chart 8: Unemployment rates (% of economically active residents aged 16—64), 2007—2017



Source: ONS Crown Copyright, 2018. 'Annual Population Survey', January—December 2007 to January—December 2017 [from NOMIS, accessed 15 January 2019].

for earnings. This analysis will help to identify the industry sectors that have experienced significant contraction; it will also allow us to ascertain whether trends in earnings correspond with the patterns predicted by this employment data (with weak or falling employment likely to be associated with slow or even negative earnings growth, due to the limited pressure on employers to raise wages).

Unemployment rates across the city and county (Chart 8) show that the trend in unemployment does not quite correspond with the recent trend in employment (at least for the city of Nottingham) – indicating that this also needs to be understood in terms of changing rates of economic inactivity.

The unemployment rate in Nottingham City is currently 8.1% (in 2017) but has significantly recovered from its recession peak (which reached a high of 14.7% in 2010, equivalent to 19,700 people). Despite a drop to 7.5% in 2016, the figure of 8.1% is now above the pre-recession rate of 7.7%. This amounts to 11,000 residents who were available for and actively seeking work, but unemployed.

The unemployment rate in Nottingham has significantly recovered from its recession peak. However, a slight increase since 2015 means that unemployment is currently higher than its pre-recession level.

What is the difference between unemployment and economic inactivity?

Unemployment: the number of people who are available for and actively seeking work. The unemployment rate is the number unemployed as a percentage of the total economically active population (employed plus unemployed). As the employment rate is simply the number employed as a percentage of all working age residents in a given area, employment **and** unemployment rates can increase or decrease at the same time, due to a change in the size of the economically inactive population.

Economic inactivity: the number of people who are neither employed nor unemployed (thus excluded from the population denominator used to calculate the unemployment rate). This group includes full-time students, full-time parents and carers, retirees, those with work-limiting illness or disability, and "discouraged workers" who have stopped actively looking for employment.

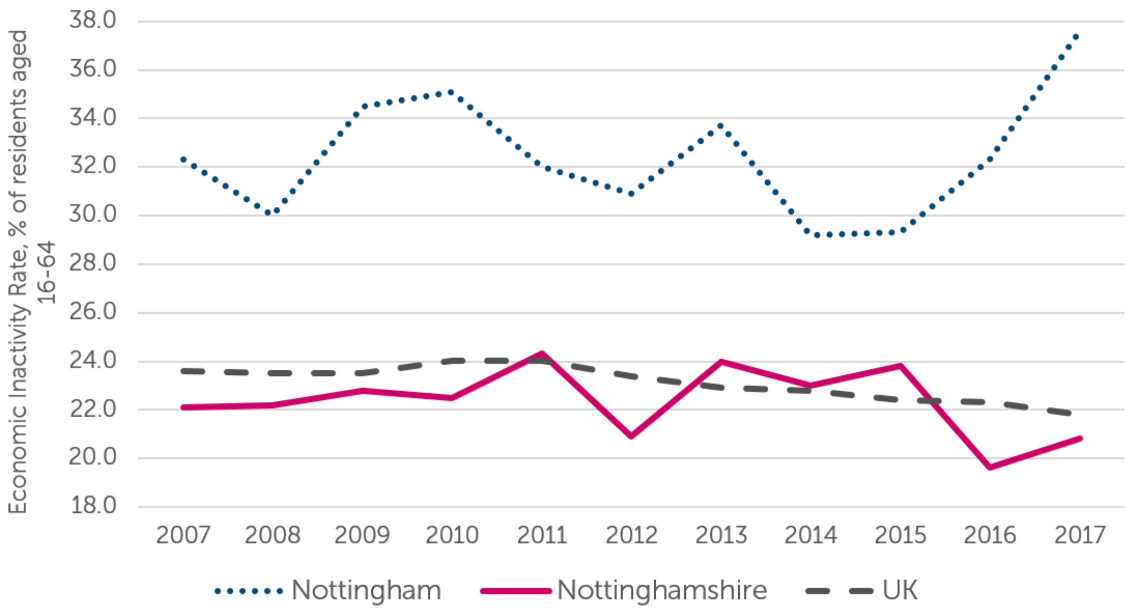
In the most recent annual estimates, unemployment rates and numbers have continued to fall – across both the county and the UK. The rate for Nottinghamshire was 4% in 2017, compared to 5% in 2007 – and in the UK, the rate has fallen from

5.2% to 4.5% in the same period. The increase in unemployment between 2016 and 2017 is not statistically significant – unlike the fall in employment discussed earlier. However, the picture for Nottingham City (where unemployment is at best flat, or is potentially even increasing slightly) does not reflect these trends.

In Nottingham, there were an estimated 136,000 economically active (employed plus unemployed) residents in 2007 and 136,800 in 2017. This small increase fell well below the rate of population growth, resulting in an overall fall in Nottingham's rate of economic activity – from 67.7% in 2007, to 62.4% in 2017. This fall increased the gap between Nottingham and the UK's rate – from an 8.7% lag in 2007; to 15.8% in 2017 (the largest gap in the decade). In the same period, Nottinghamshire County saw an overall increase in the numbers of residents who were economically active; from 381,800 (or a rate of 77.9%) to 393,400 (79.2%).

In 2017, the difference between Nottingham's economic activity rate and the UK's average was at its widest in a decade.

Chart 9: Economic inactivity rates (% of residents aged 16–64), 2007–2017



Source: ONS Crown Copyright, 2018. 'Annual Population Survey', January—December 2007 to January—December 2017 [from NOMIS, accessed 15 January 2019].

Therefore, the other group we must consider are those who are **economically inactive**. In line with the recent falls in employment in Nottingham, economic inactivity appear to be increasing significantly, from 29.3% in 2015 to 37.6% in 2017 – a higher rate than at any time during the recession (Chart 9).

The rate of economic inactivity in Nottingham in 2017 is higher than at any time during the recession, and the number who are economically inactive is approximately 17,500 higher than in 2007

Between 2007 and 2017, the number of people in Nottingham who were neither employed nor unemployed increased by approximately 17,500. The chart also shows how the gap between Nottingham, Nottinghamshire and the UK had widened, as the trend in economic inactivity both nationally and in the County has generally been downward.

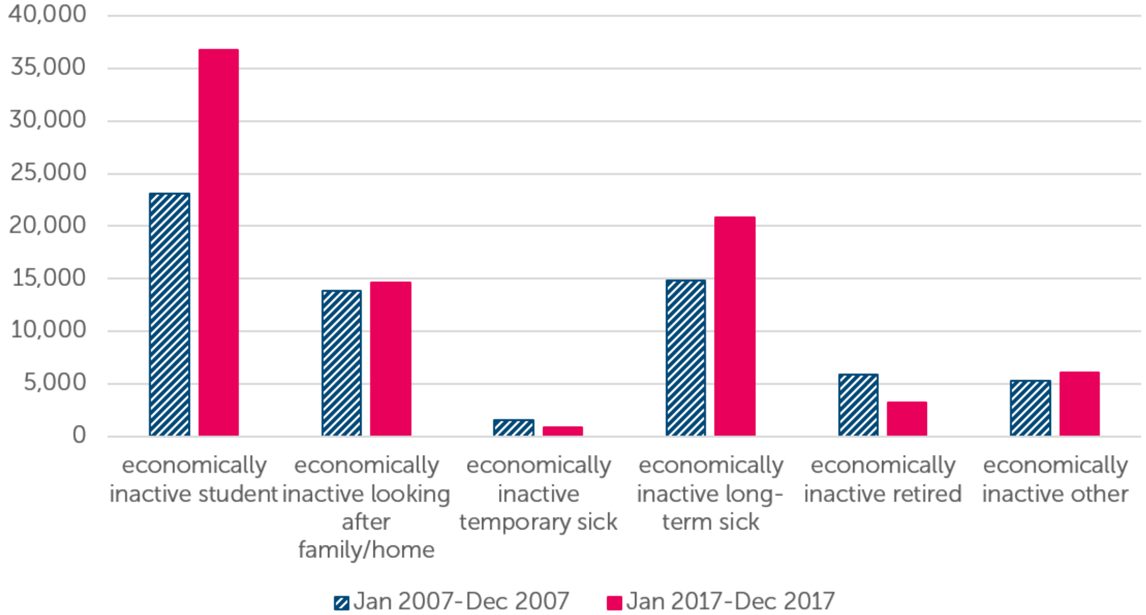
Who are these individuals, and why are they not participating in the labour force? The estimates below show the makeup of Nottingham City's economically active populations in 2007 and 2017 (for categories in which estimates are available: they are supressed for those identified as "discouraged workers" due to very small numbers sampled).

The chart shows an increasing share of economic inactivity due to respondents being students who are neither employed nor looking for work (increasing from 35.6% to 44.6% of all economically inactive residents over the decade). It also shows that a rising proportion of economically inactive residents declared themselves as long-term sick (increasing from 22.9% to 25.2% across the reporting period). These two groups make up the largest shares of economically inactive respondents nationally, alongside people who are looking after their family or home. Students in particular account for a higher than average share in Nottingham – in terms of absolute numbers, the estimated number of students resident in Nottingham who were economically inactive increased from 23,100 in 2007 to 36,700 in 2017, and the estimated numbers of economically inactive residents with long-term illnesses increased from 14,800 to 20,800.

The rise in student numbers at both the University of Nottingham and Nottingham Trent University (and the large share of those students who are resident within the City Unitary Authority boundary) will have contributed to this trend; however, we must remember that similar increases have occurred in all other UK Core Cities. According to the Higher Educations Statistics Agency (HESA student enrolled by institution, accessed 18th March 2019), the number of students at the two Nottingham universities increased from 58,800 in the 2014/15 academic year to 61,885 in the 2016/17 academic year, an increase of 5%. This compares to a 41% growth in the number of economically inactive students in Nottingham between 2015 and 2017.

A weakened demand for part-time and casual labour - in retail and hospitality for example - may have significantly affected student economic activity.

Chart 10: Economic inactivity by reason, Nottingham City residents aged 16–64, 2007 and 2017



Source: ONS Crown Copyright, 2018. 'Annual Population Survey', January—December 2007 and January—December 2017 [from NOMIS, accessed 15 January 2019].

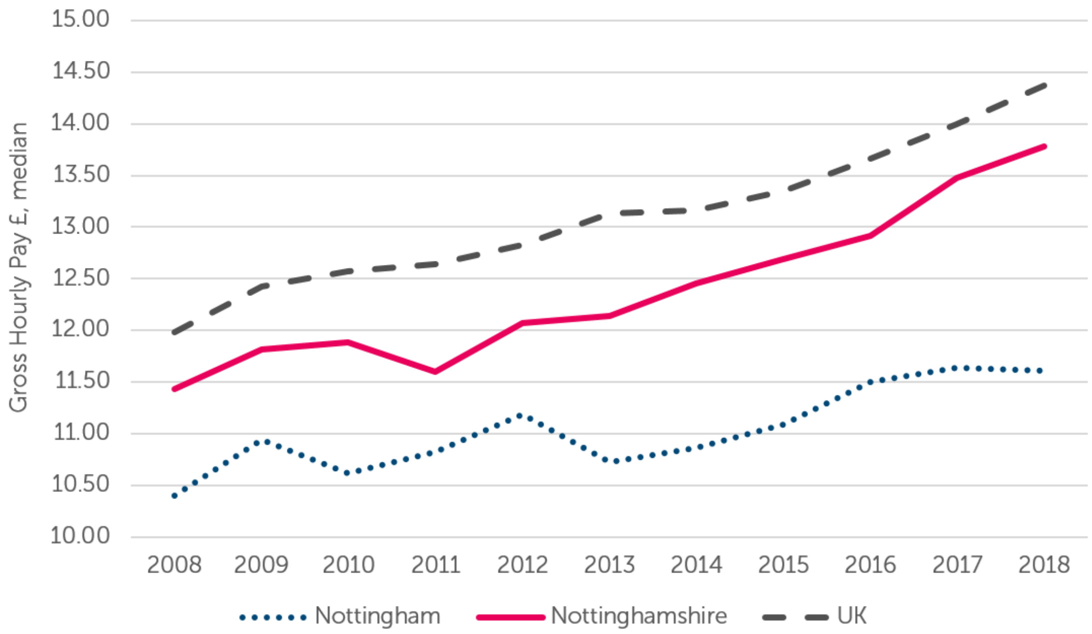
The growth in the number of residents who are economically inactive due to long-term sickness may be associated with a phenomenon known as "hidden unemployment". Beatty and Fothergill (2017) define this group as recipients of incapacity-related benefits (primarily Employment and Support Allowance) who "might have been expected to be in work in a genuinely fully employed economy... [and] do not represent fraudulent claims."

In summary, the longer-term trend of recovery in the labour market of Nottingham City has been marred by a recent and significant two-year fall in employment (both rates and numbers), which corresponds with a slight increase in unemployment, but a much more significant increase in economic inactivity. This is due to both a growing (economically inactive) student population, and an increase in potentially "hidden unemployed" working age residents in receipt of long-term sickness benefits.

Does work pay in Nottingham?

The slow overall growth in employment between 2007 and 2017 is reflected in a slower growth in earnings in Nottingham City. (For a fuller discussion on the economic theory behind wage determination, please see the appendix)

Chart 11: Median hourly earnings (£) of residents working full-time, 2008–2018



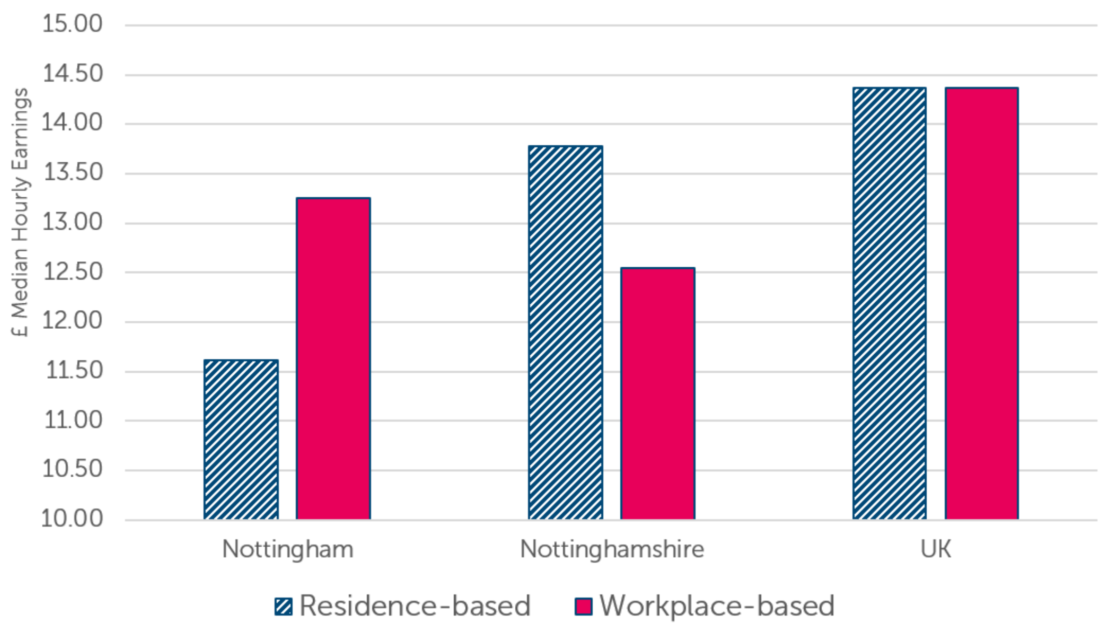
Source: ONS Crown Copyright, 2018. 'Annual Survey of Hours and Earnings', residence-based analysis. 2008–2018 [From NOMIS, accessed 15 January 2019].

Between 2008 and 2018, earnings in Nottingham on a residence-basis increased by just £1.21 per hour (compared to an increase of £2.35 per hour in Nottinghamshire, and £2.39 across the UK). This represents an 11.6% increase throughout the reporting period – just over half of the 20.6% increase experienced in Nottinghamshire, and 19.9% in the UK. This slower rate of growth has led to a widening gap between the earnings of residents of the City and the County, as well as the national average. In 2008, with the onset of recession, earnings in Nottingham were £1.58 per hour lower than the UK – at £10.40, compared to £11.98 (and £11.43 in Nottinghamshire). By 2018, earnings in Nottingham were £2.76 lower than the national average, at £11.61 compared to £14.37 (and £13.78 in Nottinghamshire). In terms of annual earnings, residents of Nottingham earned a median of £6,286 less than the national average (with average full-time annual earnings of £23,288, compared to the UK average of £29,574). Annual earnings for residents of Nottinghamshire County in 2018 were closer to the national average, at £28,095. For a more in-depth discussion of household incomes at a neighbourhood level, we recommend reading our report mapping ordinary working families across the region. (Black 2017)

The earnings of Nottingham residents have grown more slowly than in Nottinghamshire or in the UK overall. This may be due to the lower employment rates in the city, which mean less pressure on employers to raise wages.

The earnings of residents contrast significantly to the earnings of people working in Nottingham. This contrast is reflected in residence-based indicators from the LFS (e.g. Nottingham's recent falls in employed residents) and the workplace-based indicators we will look at in the following section from the Business Register and Employment Survey (which show Nottingham's relatively strong growth in workplace-based jobs over the same period). Chart 12 illustrates these differences by comparing ASHE estimates on a workplace basis for 2018 to those residence-based estimates also shown in Chart 11.

Chart 12: Median hourly earnings (£) on a residence and workplace basis, 2008–2018



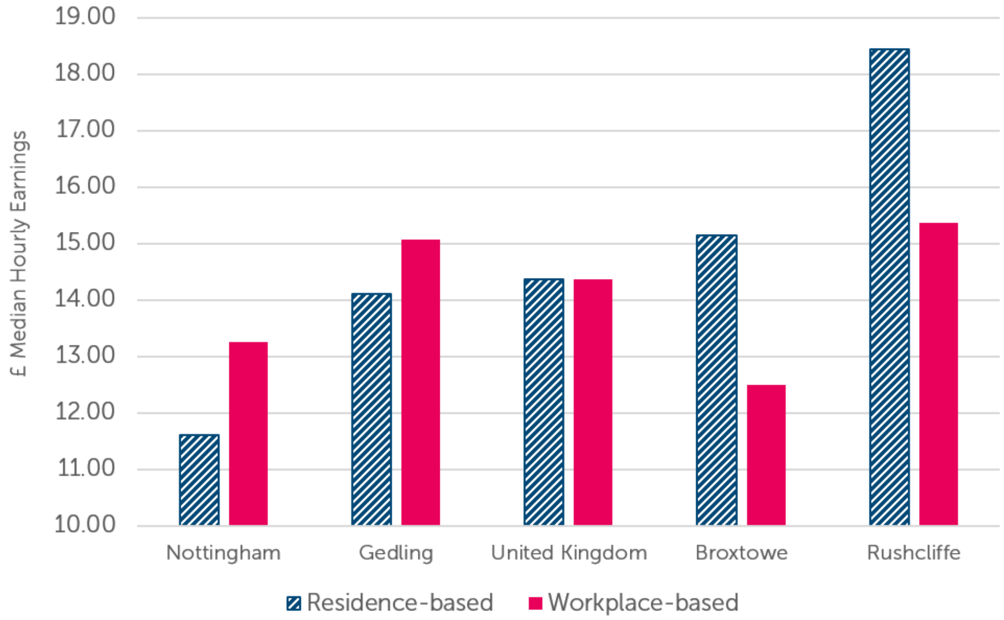
Source: ONS Crown Copyright, 2018. 'Annual Survey of Hours and Earnings', residence-based analysis. 2008–2018 [From NOMIS, accessed 15 January 2019].

In Nottingham, the average earnings of people working in the city (but potentially living elsewhere) significantly exceeds the earnings of those living in the city.

The earnings for people working in Nottingham are significantly higher (by £1.64 per hour) than those of residents (regardless of workplace location), and closer to the UK average at £13.25 per hour. Although the gap with the UK average is smaller for workers in Nottingham than it is for residents, it has still grown over time. In 2008, workplace-based earnings in Nottingham were just 23p per hour lower than the national average (and in 2009, earnings for people working in Nottingham were 9p higher than the UK). As the national economy started to recover, the rate of wage growth finally began to pick up from 2016 onwards, whilst earnings for workplaces in Nottingham continued to grow more slowly. Over the decade from 2007, workplace-based earnings in Nottingham grew by 12.8% (compared to 19.9% in the UK as above).

Although the average earnings for people working in Nottingham are closer to the UK average than those of residents, they are still growing more slowly than average, and the gap with the UK has widened over the decade since 2007.

Chart 13: Median hourly earnings (£) for the Greater Nottingham area on a residence and workplace-Basis, 2008—2018



Source: ONS Crown Copyright, 2018. 'Annual Survey of Hours and Earnings', residence-based and workplace-based analysis. 2007—2017 [From NOMIS, accessed 15 January 2019].

Conversely, in Nottinghamshire County, workplace-based earnings are lower than residence-based earnings, at £12.55 per hour (£1.23 lower) in 2018, although they have grown more strongly than earnings in Nottingham City over the decade (by 19.5%, which is close to the UK rate of growth). Therefore, the difference between the earnings of workers in the City and County has decreased: in 2008, people working in Nottingham were paid a median of £1.25 per hour more than people working in Nottinghamshire; by 2018, this difference had fallen to just 70p per hour. This suggests that although people working in Nottingham (some of whom commute from elsewhere) remain significantly more highly paid than residents of Nottingham (some of whom may commute out of the city to work elsewhere), the relative weakening of labour market conditions in Nottingham over recent years has also impacted on workplace-based earnings.

These differences between workplace and residence-based earnings can be explained by the direction and extent of commuting flows. Higher workplace-based earnings in Nottingham indicate a net in-commuting of more highly paid, highly skilled workers, whilst higher residence-based earnings in Nottinghamshire County indicate net out-commuting of such workers. A more detailed understanding of this can be gained by reviewing the districts which immediately border Nottingham City, and are frequently aggregated into the "Greater Nottingham" area – namely Broxtowe (to the west of Nottingham), Rushcliffe (to the south) and Gedling (to the northeast). Rushcliffe has by far the highest residence-based earnings, at a median of £18.45 per hour – exceeding earnings from workplaces in the district by £3.08 per hour.

According to the 2011 Census 'location of usual residence and place of work' tables (from NOMIS, accessed 27 February 2019), 49% of the 30,341 commuter outflows from Rushcliffe were to workplaces in Nottingham, significantly exceeding all other destinations (Charnwood in Leicestershire was the next most significant destination for commuters from Rushcliffe, accounting for just 7% of outflows). Broxtowe also had higher residence-based earnings (£2.65 an hour more than on a workplace-basis), with Nottingham accounting for 46% of the district's 33,363 commuter outflows. In both cases, Nottingham was also the most important origin for commuter inflows into the districts, but these were much smaller – with both Rushcliffe and Broxtowe being significant net-exporters of commuters.

Residents of Nottingham City are, on average, less able to access or progress into higher paid jobs compared to residents commuting in from surrounding areas

In summary, earnings data suggests that residents of Nottingham City are, on average, less able to access or progress into higher paid jobs compared to residents commuting in from surrounding areas (particularly Rushcliffe and Broxtowe). This will be investigated in more detail in the next section, through:

- the segmentation of the working populations of Nottingham – and its surrounding areas – by the jobs they do
- the skill levels required to do these jobs
- the highest level of qualification they hold (as a frequently used, albeit imperfect, proxy measure of skill).

Is the structure of the local economy right for "Good Work?"

To understand why the recent performance of Nottingham's labour market appears to be weaker than elsewhere, we must explore changes in the industrial structure of employment, represented by broad groups of Standard Industrial Classifications (SICs). These estimates are drawn from the Business Register and Employment Survey (BRES), which differs significantly from the source for all the estimates presented so far.

Charts 3 to 10 are based on the LFS – a large household survey based on the place of a respondent's residence (i.e. all the data discussed so far has been related to where people live, rather than where they work). The BRES is a survey of employers, who base their responses on records of employment and PAYE; as such, the estimates relate to the location of the employers' main workplaces. In a city like Nottingham, which experiences significant inward commuting (particularly of more highly paid and more highly skilled workers), trends in the rate of (residents') employment can therefore be quite different from trends in the number of jobs at workplaces in a given area.[1]

Analysis shows that Nottinghamshire has a similar industrial structure to the national average, with the relative size of most broad sectors differing little from Great Britain.[2] (The one significant exception is Manufacturing, which accounts for 14.4% of workplace-based employment in the County – 6.3% more than the proportion employed in Manufacturing in Great Britain as a whole). The structure of employment in Nottingham City differs significantly from the County (and thus Great Britain, in all cases except for Manufacturing) in the following areas:

- Employment in the Construction and Manufacturing sectors is underrepresented in Nottingham, accounting for just 2.4% and 4.2% of workplace-base jobs respectively.
- The Wholesale and Transport & Storage sectors also account for comparatively smaller shares of employment in Nottingham, as does Accommodation and Food Services – one of the fastest growing sectors in the city since 2015 (Chart 14).
- Information and Communications is relatively over-represented in Nottingham, and is an area of recent growth (Chart 14) – although it remains a comparatively

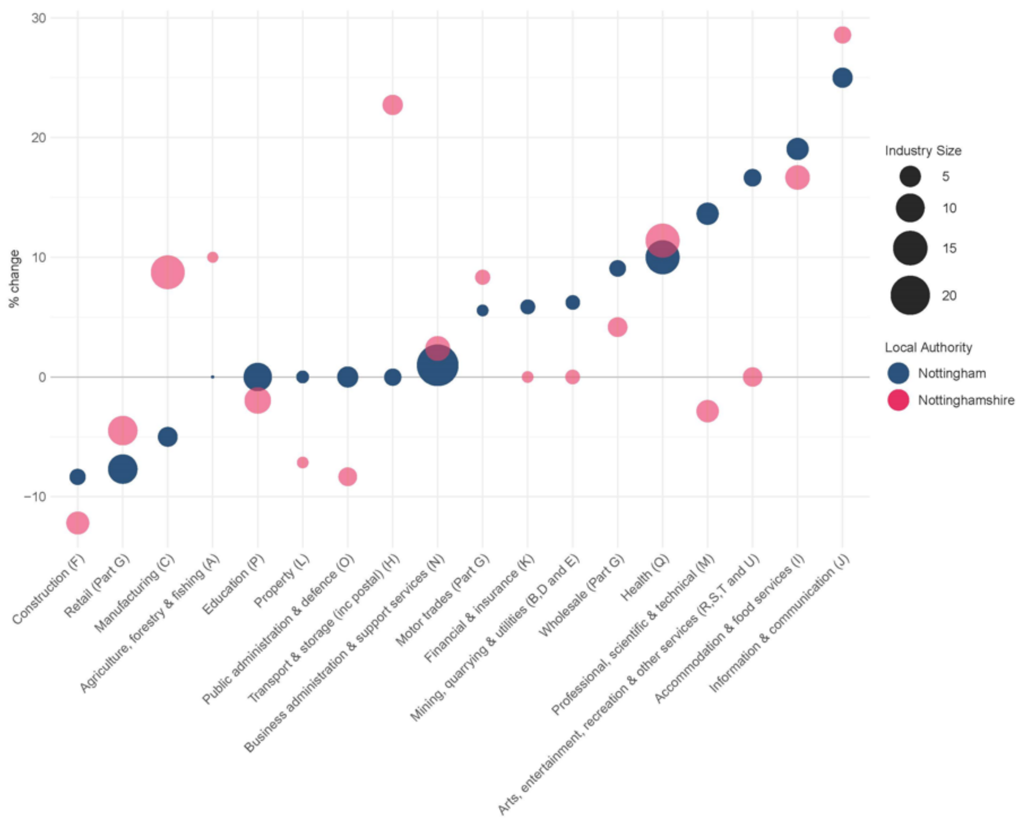
1 Comparable estimates from the BRES are available for 2015, 2016 and 2017 (estimates are available back to 2009, but the method has been improved from 2015 onwards to include smaller enterprise unites registered for PAYE only – the prior exclusion of which was one of the key weaknesses of the BRES).

2 Great Britain is the national average available in the BRES, which is England, Wales and Scotland – but not Northern Ireland (which has its own statistical office). The national average from the LFS (the UK) includes data from all four home nations.

small sector, accounting for 3% of workplace-based employment in the city.

- Public Administration & Defence and Education are over-represented in Nottingham City, relative to both the County and the national average, indicating the city's status as a centre for public service employment. However, Chart 15 illustrates that over the last two years these sectors experienced no employment growth in Nottingham City, whilst contracting in Nottinghamshire County (associated with nationwide cuts to public services from 2010).
- Nottingham exhibits a very significant over-representation of employment in the Business Administration & Support Services sector, which accounted for 22.8% of workplace-based employment in 2017 (compared to 7.1% in Nottinghamshire, and 9.1% across Great Britain). Previous research has identified Nottingham as an outlier nationally, with a higher proportion of workplace-based jobs in this sector than in any other Core City (see: Lawton, Bickerton and Thompson, 2014). This SIC includes "back office" service activities, such as call centre and other support services, and recruitment agency employment. It is by far the largest employment sector in Nottingham, which makes the city vulnerable to certain kinds of demand-side shocks (i.e. particularly those that affect other service sectors) as many activities in this sector can be relatively rapidly downsized (e.g. the discontinuation of contracts with temporary and agency staff).

Chart 14: Structure and employment growth of employment (workplace-based) by broad industrial group (SIC 2007), 2015-2017 (% change)



Source: ONS Crown Copyright, 2018. 'Business Register and Employment Survey', 20152017. Derived from safeguarded access BRES series, accessed via Chancellor's Notice [From NOMIS, accessed on 22 January 2018].

Nottingham has one of the highest proportions of workplace-based employment in the Business Administration and Support Services sector in the UK, which mainly comprises of back-office services and agency work. Employment in this sector is particularly vulnerable to demand-side shocks.

Although the number of residents in employment in Nottingham fell between 2015 and 2017 employment in workplaces in the city grew strongly, by a total of 3.4% - higher than both the Nottinghamshire rate and the national average. This overall growth in (workplace-based) employment in Nottingham was driven by strong growth in sectors such as Accommodation & Food Services (by 19%, equivalent to an additional 2,000 jobs since 2015); Information & Communication (by 25%, or an additional 2,000 jobs); and Professional, Scientific and Technical services (by 13.6% and 1,500 jobs). However, the latter two sectors – typically associated with higher skill employment in professional, associate professional and technical occupations – are likely to be highly dependent on commuters.

In contrast, Retail employment declined significantly (by 7.7% or 2,000 fewer jobs). Employment in Construction and Manufacturing also fell in Nottingham City between 2015 and 2017, but as Chart 14 shows, this sector accounts for a relatively small number of jobs in Nottingham – just 15,000 in Manufacturing and Construction combined in 2017, compared to 61,500 throughout Nottinghamshire. Retail is significant, because residents of Nottingham City are likely to account for a significant share of the sector's workforce. This sector is associated with lower pay and lower levels of skill or qualification, as well as higher levels of part-time and casual or temporary employment – meaning there is less incentive for people to travel significantly to fill vacancies. Despite the recent decline, Retail also accounted for a significant number of employed individuals, at 24,000.

An area's occupational structure of employment, and the extent it matches the local supply of skills, has a strong bearing on the quality of employment (for example, with significant over-qualification or under-employment likely to be highly detrimental to people's job satisfaction, as well as productivity; whilst under-qualification can result in stress, over-work and lack of job security).

The assumption from economic theory is that "employment quality" can and should be improved by market forces. When employment rates are high and firms are struggling to fill vacancies, this typically precipitates a shift in power towards employees and potential recruits. In the absence of an unemployed "reserve army", employers need to be more responsive to the needs of their existing workforce. Workers can be more confident that they could easily find alternative employment if they left a job that did not meet their expectations for pay and conditions, prospects, job satisfaction etc. As stated in the appendix, the model these hypotheses derive from assumes parity of power between employers and labour, which includes the assumption of significant collective bargaining power. In reality, the proportion of UK workers who are members of Trade Unions is at a record low, at 20.7% of national employment in 2017 – this, compared to 25.3% a decade earlier, and 34.1% when comparable records began in 1989 (ONS, 2018).

As we have seen in Nottingham City since 2015, loosening labour market conditions – at least for a two-year period up until 2017 (with some indications of recovery in 2018) – are likely to have further eroded the extent to which market forces can bring about improvements in employment quality. Interventions are required to address both market failures and longer-running structural issues (such as a relative over-reliance on the lower productivity, back-office or consumer services sectors identified by the BRES).

To investigate the extent to which the structure of Nottingham's economy impacts upon the quality of work, we will first look at the occupational profile.

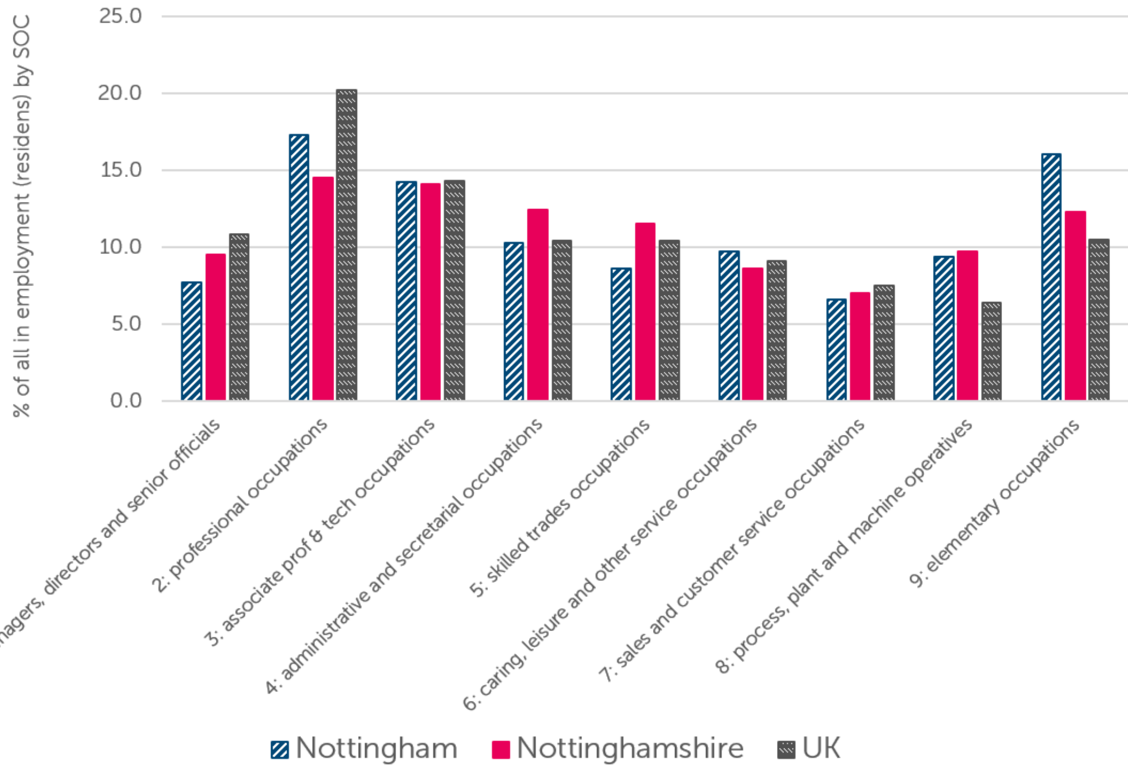
Standard Occupational Classifications (SOCs)

A job catergorisation system that categorises by the **skill level** required and the **skill** specialisation the type of activities involved (e.g. cognitive, interpersonal or manual activities). This enables generalisations to be made about skills match, with the highest skill level occupations – managers, professionals and associate professionals (SOCs 1-3) – requiring skills (although not necessarily formal qualifications) broadly equivalent to a first degree, and the lowest skill occupations – process, plant and machine operatives, and elementary occupations (SOCs 8-9) – requiring no formal qualifications or training to perform. The intermediate-skilled occupations (SOCs 4-7) are associated with a mix of specific vocational qualifications and training (equivalent to an NVQ Level 2 or 3, such as a Higher Apprenticeship) or school or college-leaver qualifications (i.e. five GCSEs at grades A-C, or a NVQ Level 2 such as an entry-level Apprenticeship).

Nottingham City is under-represented in the higher skill occupations compared to the national average, although it exceeds Nottinghamshire County in the proportion of residents who are in Professional Occupations (SOC 2), and is level with the National and County averages for employment in Associate Professional and Technical Occupations (SOC 3). This means that Nottingham's overall underrepresentation at the higher-skill end of the occupational hierarchy is due to the significantly lower proportion of residents working as managers or senior officials – at 7.7%, compared to 10.8% nationally. At the other end of the occupational hierarchy, Nottingham is significantly over-represented in employment in the Elementary Occupations, which account for 16% of employment, compared to 10.5% in the UK.

Compared to the UK, Nottingham has a higher proportion of residents employed in the occupations requiring little or no skill or qualification, and a lower proportion of employment in occupations requiring higher level skills.

Chart 15: Structure of employment by SOC, 2017 (% of total in employment)



Source: ONS Crown Copyright, 2018. 'Annual Population Survey', January—December 2017 [From NOMIS, accessed on 25 January 2019].

Nottingham has a smaller proportion of residents working in highly skilled occupations than the UK average (although more in Professional Occupations than residents of Nottinghamshire), and a significantly higher proportion of residents working in occupations that require little in the way of skill or formal qualification. We would expect that the supply of qualifications – the stock of human capital in the city – to mirror this trend. Estimates of the structure of the (employed) resident workforce by highest qualification support this assumption to some extent. However, there are a number of interesting contrasts with Nottinghamshire County that suggest that challenges for the quality of work in Nottingham City cannot be understood in supply -side terms alone:

- There is indeed a significantly higher proportion of Nottingham residents who lack the equivalent of five GCSEs at grades A*-C (an NVQ Level 2); 25.5%, compared to 21.2% in the UK. In this case, Nottingham does not differ significantly from Nottinghamshire (25.4%).

- However, there is a higher proportion of employed residents in Nottingham with qualifications equivalent to at least the first year of a degree (NVQ Level 4+); at 38.4% compared to 33.7% in 2017. Although this is lower than the UK (43.4%), this is one indicator in which the national average is significantly skewed by the high concentration of graduates in London (where 51.8% of working residents of the wider London city region have at least a Level 4, compared to 87.9% of working residents of the City of London).
- There is a higher proportion of residents qualified to intermediate levels in Nottingham City (21.2% of employed residents have a Level 3 but no higher, and 15.1% have a Level 2 – this, compared to 18.8% and 16.7% respectively in the UK). Conversely, Nottinghamshire has an intermediate skills profile more heavily weighted towards the lower-intermediate side –21.2% of working residents have a highest qualification equivalent to a Level 2, and 19.5% equivalent to a Level 3.

Qualification levels

Individuals' highest level of qualification are categorised by the level of their equivalent National Vocational Qualification (NVQ), from Level 1 through to Level 4+, and are widely used as proxy measures for skill. Although qualification levels are imperfect indicators of individual skill (with many people exhibiting skills that are at a higher level than their highest qualification), on average there is a reasonably close correlation between level of qualification and various measures of skill or competence.

Highest qualifications are a useful analytical tool alongside occupations, as they can indicate the extent to which the local workforce (in aggregate) has skill levels that match those required by the occupational structure of employment. Under- or over-qualification likely to lead to a welfare loss in terms of stress, over-work, lower productivity, lower returns on investment in education and training, lower work satisfaction and wider well-being.

For Nottinghamshire, these estimates obscure the variation between the relatively affluent southern part of the county, and the former coalfields areas to the north. For example, the proportion of working residents in Rushcliffe in 2017 with a Level 4 and above was 50.6%, but was only 18.1% in Mansfield and 20.7% in Ashfield. Equally, the proportion of working residents with a highest qualifications below a Level 2 was just 11.1% in Rushcliffe, but 36.6% in Ashfield.

As skilled people tend to be concentrated in urban centres (part of what is known as the "agglomeration effects" experienced by successful cities), it is not surprising that Nottingham outperforms the skills profile of Nottinghamshire (overall). However, compared to other Core Cities, Nottingham is still one of the weaker performing urban areas (although it is improving more quickly than elsewhere). The proportion of residents lacking a Level 2 qualification fell in all eight cities between 2007 and 2017.

However, a similar level of decrease (and therefore upskilling at the lower end of the skills continuum) has also been experienced in Nottingham. The proportion lacking a Level 2 qualification fell 13%, from 38.5% in 2007 (only Birmingham had a higher proportion of residents lacking qualifications at Level 2 in 2017, at 28.1%).

Chart 16: Highest level of qualification structure, 2017 (% of total in employment)

Source: ONS Crown Copyright, 2018. 'Annual Population Survey', January—December 2017 [from NOMIS, accessed 5 March 2019].

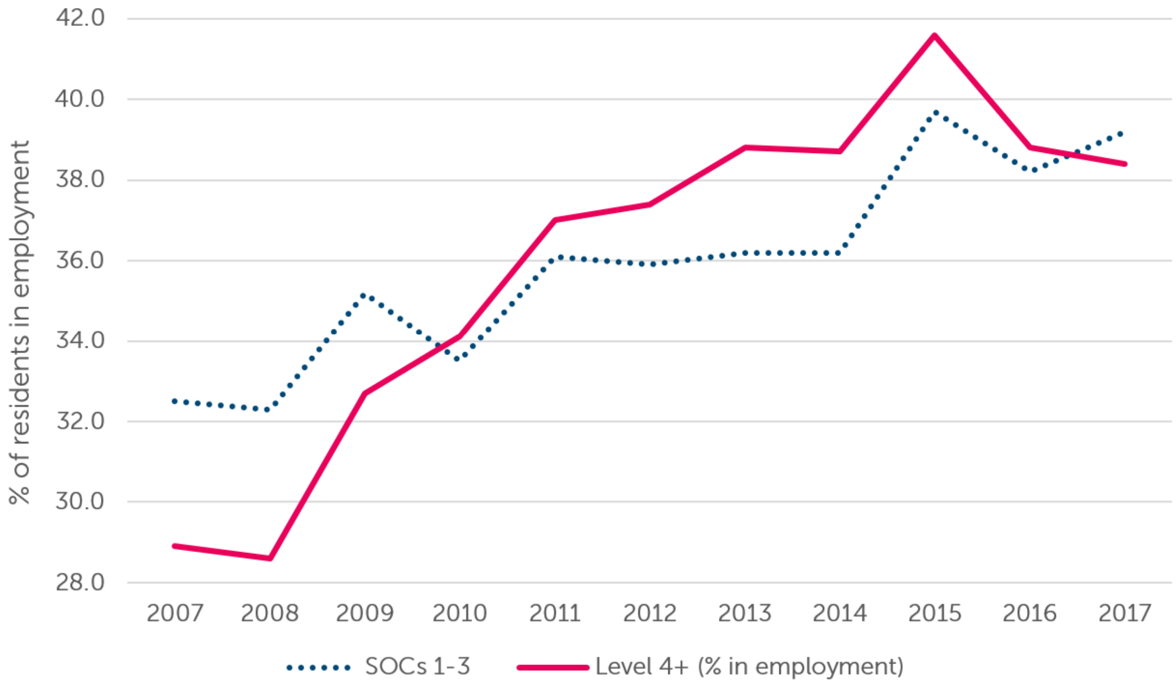
A similar pattern can be observed for higher level qualifications, with Bristol having both the highest proportion of employed residents qualified to a Level 4 and above in 2017, and showing the greatest increase since 2007 (from 43.3% to 62.4%). Again, Nottingham has one of the lowest proportions (with only Birmingham lower, at 37.7% in 2017), but the city also experienced a significant improvement over the decade, with the proportion of working residents qualified to a Level 4 and above increasing by 9.5%, equivalent to 11,900 more individuals.

Together with the occupational data presented earlier in this section, these estimates enable us to make broad observations about the extent of (aggregate) job-skill matching in Nottingham. This is important, as previous research (e.g. Lawton et al., 2014 and 2016) has indicated that there have recently been two distinct periods in Nottingham's labour market. Prior to 2010, there was a significant under-supply of highly skilled workers, as the growth of professional and managerial occupations outstripped the number of people with higher-level qualifications. Since 2010, however, changes in the proportion employed in these occupations stalled, whilst the number of graduates and employed students continued to increase, exceeding the number of people employed in higher skill occupations and leading to an over-supply. The latest data suggests that, over the last two years of available data, Nottingham's labour market has moved towards convergence at the upper end of the skills hierarchy.

In 2017, 38.4% of Nottingham's working residents were qualified to a Level 4 and above, whilst 39.2% worked in managerial, professional or associate professional occupations (a slight under-supply, but far more closely matched than previously). The trend also supports the observations made in earlier research:

- Between 2007 and 2009, there were more residents working in higher skill occupations than there were employed residents with Level 4+ qualification.
- The trend in higher-level qualifications then stagnated between 2010 and 2014, whilst the stock of highly skilled residents increased significantly. By 2013, 38.8% of working residents were qualified to a Level 4+, whilst 36.2% were working in SOCS 1-3.
- Growth in both fell off between 2015 and 2017 (in line with the wider weakening of the labour market during that period), with the proportion qualified to a Level 4+ falling more significantly – potentially indicating a net out-migration of graduates (or a fall in the number of working university students), and leading to near parity between the two measures.

Chart 17: Comparison of working residents with higher-level skills and those in professional and managerial occupations in Nottingham City (%), 2007–2017



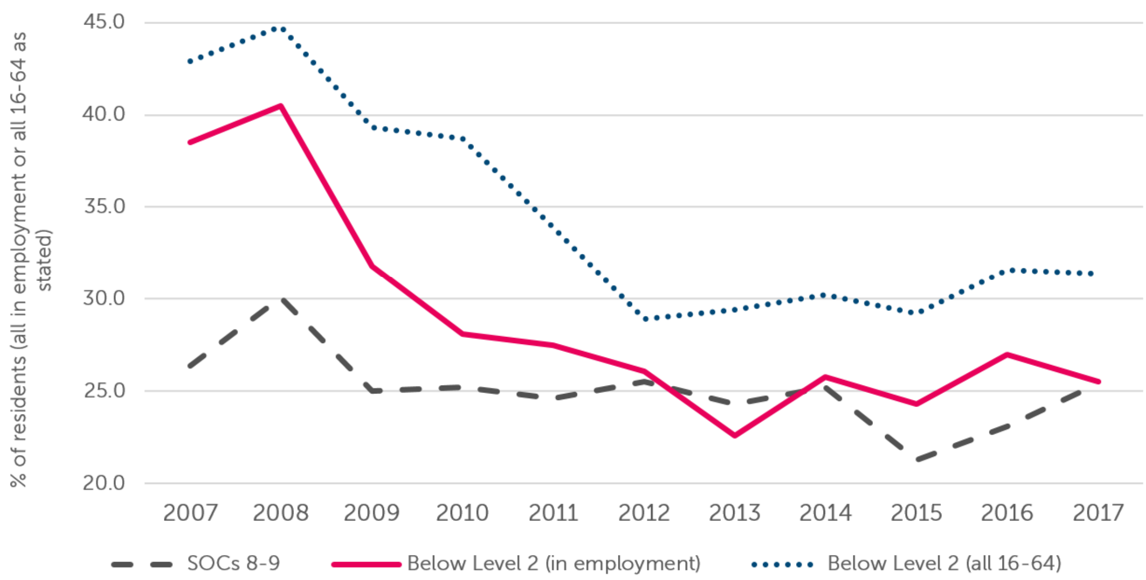
Source: ONS Crown Copyright, 2018. 'Annual Population Survey', January—December 2007 to January—December 2017 [from NOMIS, accessed 5 March 2019].

At the other end of the job-skills hierarchy (Chart 18), the proportion of employed residents with qualifications below a Level 2 fell steeply between 2007 and 2012 (before levelling off between 2013 and 2017). As in the case of higher-level skills, these numbers moved towards parity with the proportion in low skill occupations (process, plant and machine operative and elementary occupations). In 2017, there were 25.4% of residents in Nottingham in SOCs 8 and 9, compared to 25.5% holding qualifications lower than a Level 2. The chart also shows that, since 2009, the proportion of people working in SOCs 8-9 has been flat (with the exception of a decrease between 2014 and 2015), with the 2017 rate differing little from a decade ago. Therefore, the main change has been on the supply side (significantly fewer people with few or no qualifications over the decade), suggesting that demand for low-skilled jobs has remained resilient despite the very significant fall in lower-skilled individuals.

A reduction of 15,000 working age adults with less than a Level 2 qualification demonstrates the significant up-skilling amongst Nottingham's resident population over the decade.

The chart includes an additional series for the proportion of all residents with qualifications below Level 2 – including those who are unemployed or economically inactive. It is important to include this second measure to demonstrate that there has been a wider fall in the resident population with few or no qualifications, rather than

Chart 18: Comparison of working residents with higher-level skills and those in low-skilled occupations in Nottingham City (%), 2007–2017



Source: ONS Crown Copyright, 2018. 'Annual Population Survey', January—December 2007 to January—December 2017 [from NOMIS, accessed 5 March 2019].

the trend for the employed population being solely down to low-skilled individuals being pushed into unemployment or economic inactivity. The fact that the proportion of all working age residents in Nottingham with qualifications below a Level 2 has fallen from 42.9% to 31.4% (a reduction of 15,000 working age adults) demonstrates that there has been significant up-skilling amongst Nottingham's resident population over the decade.

In summary, the increasing match between the skills needed for employment (implied by the "skill level" of occupational classifications) and the level of qualifications held by working residents in Nottingham indicates a significant level of upskilling (and certainly at the bottom end of the skills hierarchy). However, at a higher and intermediate level of skill, the data does not support the idea that job quality and business productivity can be improved by upskilling alone. At an aggregate level, Nottingham currently appears to have the "right" proportion of more highly skilled people compared to jobs – especially when we consider the significant in-commuting from more affluent, highly skilled areas in south Nottinghamshire.

This is a challenge for policy makers, because the lower earnings in Nottingham – particularly for residents – alongside the recent weakening in employment rates suggests that there are significant structural weaknesses in the city's labour market. Supply-side interventions – including increased investment in workforce training, the improved "responsiveness" of further and higher education, and improved information, advice and guidance (IAG) to aid job-skill matching – are all relatively easy to imagine, even if they are more difficult to implement. Demand-side interventions are much more challenging to conceive; particularly as the data so far implies a need to consider how the sectoral and occupational structure of employment in Nottingham might need to change, if the city's relatively low (and slower growing) level of pay is to be addressed.

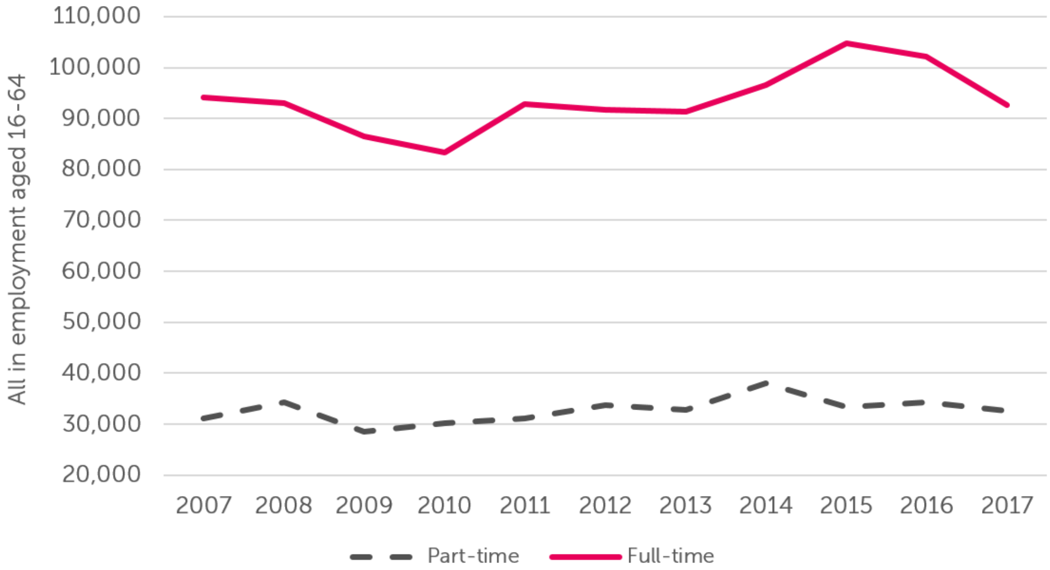
Other indicators of the structure of employment that may affect job quality include the proportion of part-time workers (and those working part-time because they cannot find full-time employment), self-employment and temporary employment, and the affect these forms of working have on average hours worked, and overall labour productivity (in terms of output per hour worked).

Nottingham's proportion of part-time workers was close to the 2017 UK average (25.9%, compared to 25%), and has increased very slightly since 2007. This puts Nottingham in the middle of the Core Cities, with the highest proportion based in Newcastle (30.7%). The time series in the absolute numbers working part-time in Nottingham also shows a slight increase, with 31,100 residents working part-time in 2007 compared to 32,600 in 2017. However, the most salient message of Chart 19 is that the falls in overall employment were principally due to a loss in full-time jobs. Following the recession that started in 2008, the number of residents in full-time employment fell from 93,100 to 83,400 by 2010, and between 2015 and 2017 this number fell from 104,700 to 92,700 (below the pre-recession level).

Whilst the number of people working part-time in Nottingham has been relatively stable, the number working full-time fell to below the pre-recession level between 2015 and 2017.

This suggests that Nottingham's employment challenges are more to do with the relative vulnerability of full-time work, rather than a comparative over-reliance on part-time work.

Chart 19: Number of residents working part-time and full-time in Nottingham City, 2007–2017



Source: ONS Crown Copyright, 2018. 'Annual Population Survey', January—December 2007 to January—December 2017 [from NOMIS, accessed 5 March 2019].

The picture for Nottinghamshire is rather different. The share of part-time workers in the County increased significantly with recovery from the recession (from 25.7% of all employed residents in 2008 to 29.3% in 2011), but this proportion fell back as full-time work recovered. Compared to Nottingham City, this change in absolute numbers employed part-time and full-time is striking:

- Over this ten-year period, the numbers employed part-time in Nottingham grew by 4.8% over the decade, from 31,100 to 32,600. Meanwhile, the numbers employed full-time contracted by 1.6%, from 94,200 to 92,700.
- However, in Nottinghamshire, the numbers employed part-time grew by grew by 13% – from 90,300 individuals in 2007, to 102,000 in 2017. The numbers employed on a full-time basis grew very slightly (by 0.7%), from 272,500 to 274,300.
- More striking still is the change between 2015 and 2017. In Nottinghamshire, both the numbers of residents employed in part-time and full-time work increased (by 11.5% and 1.1% respectively), whilst in Nottingham City both numbers contracted (by 2.4% and 11.5% respectively). The number employed full-time in Nottingham in 2017 was 12,000 fewer than in 2015.

The numbers employed part-time and full-time increased in Nottinghamshire County between 2015 and 2017, whilst in Nottingham City both numbers decreased. The numbers in full-time employment in the City contracted by 12%.

Other structural indications of precarious employment may therefore be a higher than average – or significantly increasing – proportion of workers in temporary employment. In the case of Birmingham, for example, 8.1% of employed residents were in "non-permanent" employment in 2017, compared to 5% in the UK – which has also increased from 5.7% in 2007 (whilst the average has remained the same). However, there is less of an indication that Nottingham is affected by either a similar over-representation or a significant growth in potentially precarious temporary work, with 6.1% of working residents in "non-permanent" employment – only slightly up from 5.9% in 2007 (ONS Crown Copyright, 2018).

Other indicators of increasing precarious or casualised work can be found in the extent and change in self-employment rates, and particularly when compared to business start-ups – with rising self-employment but lower start-up rates potentially indicating "gig" or "bogus" self-employment. "Gig" work describes discrete, bite-sized tasks, where the worker is paid for each task rather than on an hourly or salaried basis. "Bogus" self-employment can include some gig work – for example in the case of app-based service providers who are, to all intents-and-purposes, the gig worker's employer. More generally, it describes a situation in which an employer sets a worker's hours and wider T&Cs, yet the worker is classified as self-employed.

In some cases, this may be in the individual worker's interest – for example if variation of the amount of work over the year is desired, or if they are working on a "portfolio" of several different jobs simultaneously. However, "bogus" self-employment describes cases where this is overwhelmingly in the employer's interests – to reduce tax, pension and other pay-roll costs for example, or to reduce the workers' ability to access holiday and sick pay. These forms of working have been significant concerns nationally, in part prompting the *Taylor Review* (see Section 1.2) and prompting the TUC to highlight the rise of the "odd jobber" in response to former Chancellor George Osborne's celebration of rising UK self-employment following the 2008 recession (TUC, 2014).

Statistics for Nottingham and Nottinghamshire show a different picture for self-employment than in the UK (Chart 20). Whilst the proportion of working individuals who are self-employed has increased steadily in the UK – from 13.1% in 2007 to 15.1% in 2017 – and including during the period of recession, self-employment in both Nottingham and Nottinghamshire declined sharply between 2007 and 2009.

Self-employment rates in Nottinghamshire County have since moved closer to the national average (15.1% in 2017), but fell in Nottingham City between 2015 and 2017, from 13.1% to 12.4%.

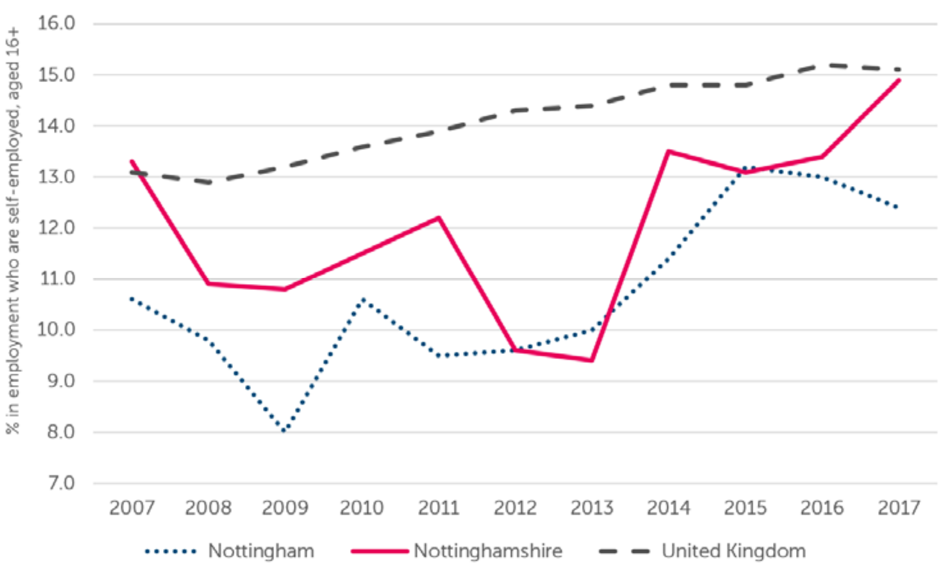
The proportion of people who were self-employed in Nottingham also fell between 2015 and 2017, suggesting that the fall in total employment over this period was not due to a substantive increase in "gig" or "bogus" self-employment.

This corresponds with the wider weakening of the labour market during these two years, providing little evidence of a significant displacement of employees into involuntary self-employment. Compared to other Core Cities in 2017, self-employment in Nottingham accounted for a lower proportion of employed residents than Bristol (15.3%), Birmingham (14.5%) and Manchester (13.3%).

The business birth rate for Nottingham (i.e. the number of new businesses born in a given year, as a percentage of the total count of active businesses) was 13.8% in 2017. This is slightly higher than the UK average of 13.1% and the Core Cities of Bristol, Leeds and Sheffield, but lower than several others, including Manchester (27.3%) and Liverpool (21.9%).

In summary, little stands out in terms of the structure of employment by status that would appear to explain Nottingham's lower pay and the recent vulnerability of total employment. The fall in employment since 2015 was predominantly driven by a loss of full-time employee jobs, with little supporting evidence to suggest that individuals were being shifted into either involuntary part-time work or self-employment. This further strengthens the view that Nottingham's quality of work challenges can be understood by its occupational and sectoral structure.

Chart 20: Proportion of employed residents, who are self-employed (%), 2007–2017



Source: ONS Crown Copyright, 2018. 'Annual Population Survey', January–December 2007 to January–December 2017 [from NOMIS, accessed 5 March 2019].

Does our work make us productive and happy?

British policy-makers recognise that a number of European countries maintain higher levels of productivity than the UK, whilst working fewer hours on average. The average number of hours worked annually in France in 2016 was 1,503 for example, compared to 1,515 in the UK (OECD, 2018). However, UK productivity, in terms of GDP per hour worked, was 22.8% lower than France in 2016, with the gap widening from 22.2% in 2015 (ONS, 2018). Looking within the UK, there is very little variation in average hours worked by region or local area. The average number of hours worked per week in both full-time and part-time capacities was 37.0 in Nottingham in 2018, unchanged from 2008, and in-line with the UK average (which is also unchanged since 2008). There are a few outliers – in Liverpool, for example, the average weekly hours worked were 35 (down from 36 in 2008). On balance, though, the data from the Annual Survey of Hours and Earnings (ONS, 2018) does not indicate that variations in the hours worked (the intensity in which labour is utilised) may explain differences in either employment quality or productivity for Nottingham.

Productivity

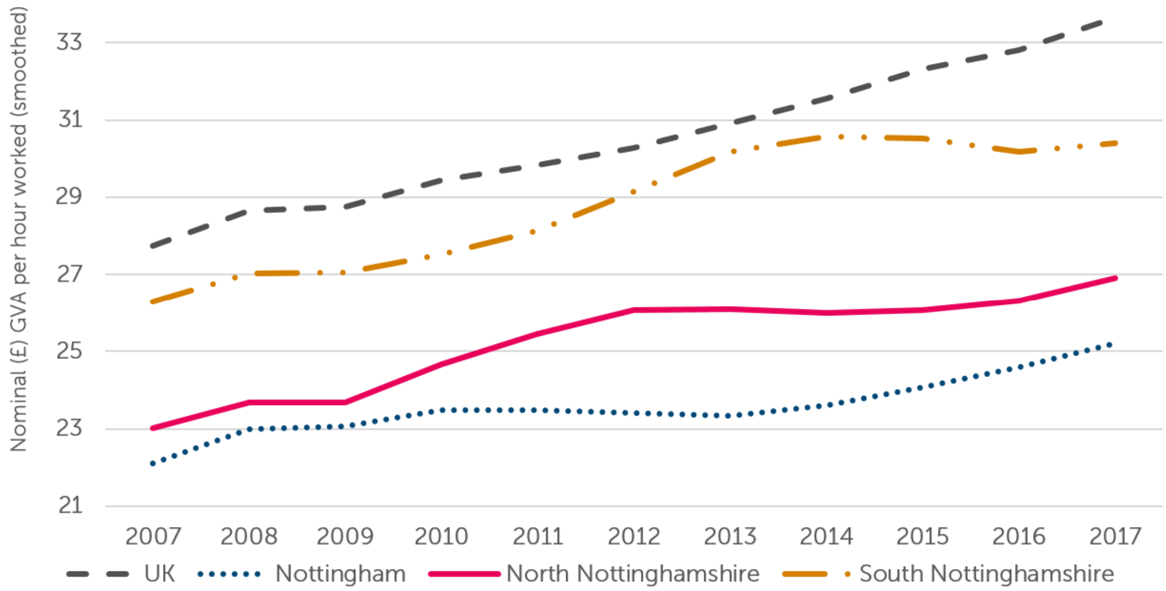
The efficiency with which factors of production (labour, raw materials etc.) are utilised to create wealth (or output). Labour productivity is usually measured by either GVA per worker, or GVA per hour worked. The latter is a more meaningful measure of labour productivity than GVA per head because not all residents of an area work: some are children or elderly, some are unemployed, and some are economically inactive. GVA per hour worked also addresses variations in the intensity of work, ensuring that a local or sectoral economy does not appear to be more productive simply because workers provide more hours of labour.

Labour productivity can be influenced by many factors. These include workers' skills (the quality of labour as a factor of production – human capital); the effective utilisation of manufactured capital (machines, ICT etc.); people management; and the extent to which workers are assigned roles that optimise their skills. The mismatching of skills to tasks is likely to result in a sub-optimum level of productivity, as well as a loss of individual wellbeing.

Despite the relative size of its economy, in terms of GVA per head, Nottingham lags significantly behind the UK in estimates of labour productivity – and the gap between the city and the national average is increasing over time. On an index of the UK=100, labour productivity in Nottingham fell from 79.7% of the UK average in 2007, to 74.9% in 2017.

Although productivity did not fall in Nottingham to the same extent as the UK with the onset of recession, it then flat lined between 2010 and 2014 at a time when it was recovering elsewhere in the UK – including in both North and South Nottinghamshire. In 2017, workers in Nottingham produced £25.20 per hour, compared to £33.65 in the UK. This was the lowest level of labour productivity out of the eight English Core Cities – despite, as established in Section 2, Nottingham having the fourth largest economy in terms of GVA per head.

Chart 21: Labour productivity – GVA per hour worked (£ nominal) by NUTS3 areas, 2007–2017



Source: ONS Crown Copyright, 2018. 'Sub-regional productivity: labour productivity indices by UK NUTS2 and NUTS3 subregions', Table A3: Nominal (smoothed) GVA (B) per hour worked (£); NUTS 2 and NUTS 3 sub-regions, 2004–2017 [Accessed 1 March 2019].

Compared to Nottinghamshire County, this means that although workplaces in Nottingham account for a larger amount of output overall, they are, on average, making less productive use of labour. This was particularly clear during the period of recovery from recession, when Nottingham fell further behind both the national and County averages. Out of all the NUTS3 areas in England, only Cornwall and the Isles of Scilly, Blackpool and Torbay had lower levels of GVA per hour worked in 2017.

Despite the relatively large size of its economy, Nottingham has one of the lowest levels of labour productivity in England.

It is reductive, therefore, to characterise the challenge facing Nottingham's employment quality as a simple case of skilled commuters travelling into the city and to productive workplaces, whilst residents – with their increasing skill levels – are less able to access "good jobs". There is a larger case to answer – namely, that workplaces themselves seem to be less productive within the city. This is not to say that there are not many highly productive firms within Nottingham that fully utilise their employees' skills – it is that, as a whole, there are more workplaces with lower levels of productivity in Nottingham compared to other towns and cities. Again, this is most likely to be a function of Nottingham's particular industrial structure, including an over -reliance on the relatively low value, back office and consumer service sectors illustrated in Section 4.

The data suggests that the structure of employment in Nottingham is the key driver of lower productivity, lower wages, and the vulnerability of work to demand-side shocks.

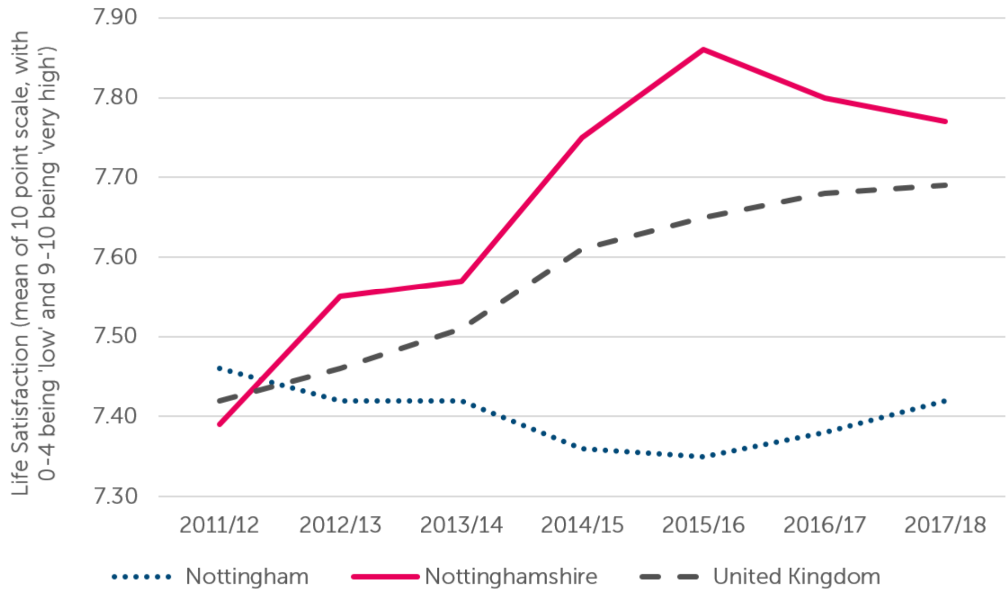
If this is the case, what are the implications for the wellbeing of workers and residents in the city compared to elsewhere? Following the 2010 launch of their *Measuring National Wellbeing* (MNW) programme, the ONS have included questions on "subjective wellbeing" within the Annual Population Survey element of the Labour Force Survey. Statistics from this source represent respondents' views on their own sense of wellbeing, life-satisfaction and happiness and anxiety – rated on a scale of 0 to 10, where 0 is "not at all" and 10 is "completely". If, as discussed in Section 1.2, the quality of work is closely linked to individual wellbeing, we might expect to see lower ratings in areas where there are potential over-representations of low-quality work (although this will also be influenced by many non-work factors, such as respondents' physical health, the quality of public services, and the natural and built environment).

The ONS view individual ratings for life satisfaction, worth and happiness to be "poor" if a score of 4 or less is given; for anxiety, a score of 6 or more is deemed to be "poor" (as it indicates higher anxiety). Data is available at a local level for both the average rating (mean) and the proportion of respondents in the thresholds for "poor" up to "very high" (9-10).

Life satisfaction in Nottingham is slightly lower in Nottingham than in the UK and Nottinghamshire. The differences have been consistent over time, and are generally getting larger.

In the case of life satisfaction, the mean score given by residents in Nottingham was 7.42 during the period March 2017 to March 2018, which was below the mean scores of 7.77 in Nottinghamshire (and 7.98 in Rushcliffe) and 7.69 in the UK. In the UK, just 4.4% of respondents rated their life satisfaction as "poor", but this was 6.7% in Nottingham. The data shows that, although these differences with the national average are relatively small, they are consistent over time and getting larger. In 2011-12, life satisfaction was slightly higher in Nottingham than in the UK – but it has generally fallen over time, whilst steadily increased in the UK.

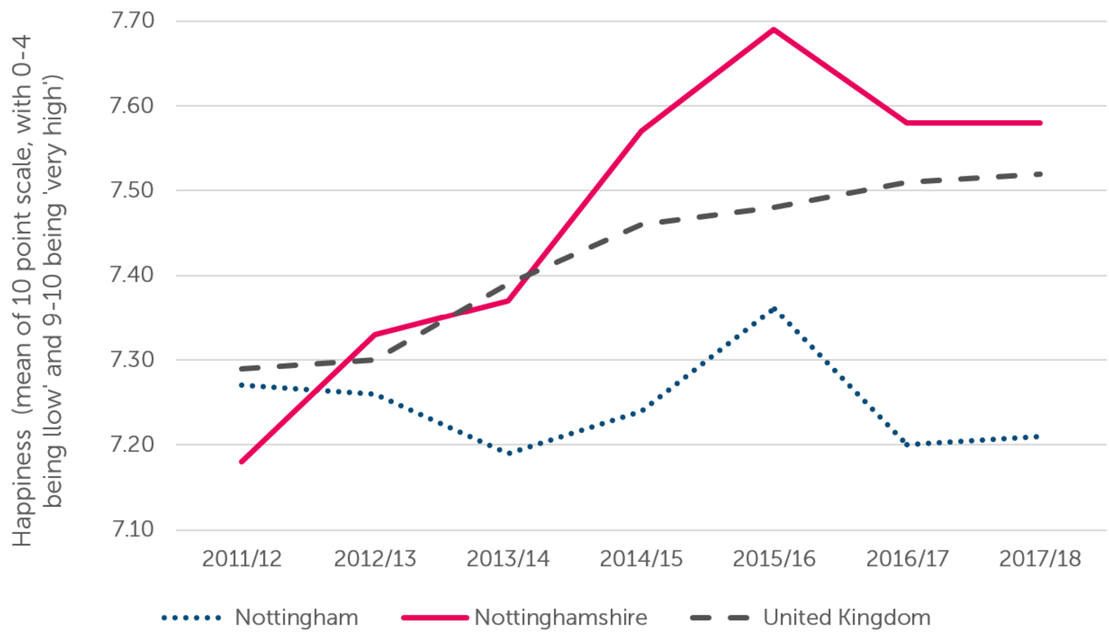
Chart 22: Personal wellbeing - mean score for "life satisfaction", March 2011–March 2012 to March 2017–March 2018



Source: ONS Crown Copyright, 2018. 'Headline estimates of personal well-being from the Annual Population Survey (APS): by counties, local and unitary authorities, year ending March 2012 to year ending March 2018' [accessed 6 March 2019].

In the case of respondents' subjective views of their happiness, the picture is very similar. Residents in Nottingham have a mean score of 7.21 in 2017-18, compared to 7.58 in Nottinghamshire, and 7.52 in the UK. In Nottingham, the latest value has fallen from 7.27 compared to 2011-12, whilst increasing in the UK, and increasing significantly in Nottinghamshire (from 7.18). Moreover, the proportion of people in Nottingham who rate their happiness as "poor" has increased from 10.8% in 2011-12 to 11.4%, whilst this has fallen in the UK from 10.7% to 8.3%.

Chart 23: Personal wellbeing - mean score for "happiness", March 2011–March 2012 to March 2017–March 2018

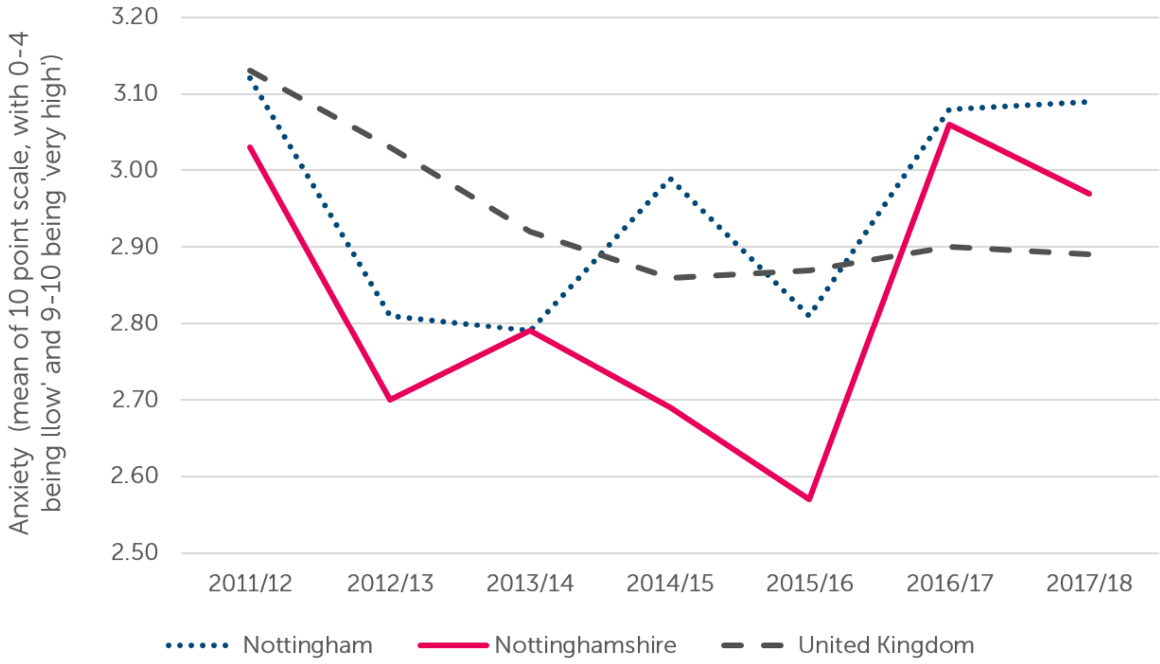


Source: ONS Crown Copyright, 2018. 'Headline estimates of personal well-being from the Annual Population Survey (APS): by counties, local and unitary authorities, year ending March 2012 to year ending March 2018' [accessed 6 March 2019].

Responses to the personal wellbeing question on anxiety have followed a different trajectory, which in the UK closely mirrors recovery from recession, with mean scores falling from 3.13 in 2011-12 and then stabilising below a score of 3 as employment rates increased, unemployment fell, and wages began to rise. However, scores for anxiety in both Nottingham and Nottinghamshire have fallen and then increased, with Nottingham's increasing significantly between 2015-16 and 2017-18, corresponding with the recent period in which the city's labour market appears to have weakened. The latest mean score for anxiety in Nottingham was 3.09 – this, compared to 2.97 in Nottinghamshire, and 2.89 in the UK. Moreover, although the proportion of people who rated their anxiety as "very high" (scores of 6-10) in the UK has fallen from 21.7% to 20% over the period, this has increased in Nottingham from 20.3% to 22.3%, and in Nottinghamshire from 20.9% to 21.6%. Again, these are relatively small differences, but consistent – and they closely follow the differing economic and labour market trends locally, compared to the national picture.

Although the proportion of people who are "very" anxious has fallen in the UK since 2012, in both Nottingham and Nottinghamshire it has increased, with the trend closely following employment rates and other indicators of work.

Chart 24: Personal wellbeing - mean score for "anxiety", March 2011–March 2012 to March 2017–March 2018



Source: ONS Crown Copyright, 2018. 'Headline estimates of personal well-being from the Annual Population Survey (APS): by counties, local and unitary authorities, year ending March 2012 to year ending March 2018' [accessed 6 March 2019].

Conclusions

The data presented in this report shows that although Nottingham is a relatively large economy, the way that its economic activity is structured is not necessarily conducive to either "good work" or productive, sustainable growth. On many of the indicators based on where people live – rather than where they work – Nottingham City significantly underperforms against both the national average and the surrounding county of Nottinghamshire, suggesting that the city's success in GVA per head is not matched in terms of either the wages or income of its residents. It needs to be emphasised that the area covered by Nottingham City Unitary Authority includes significantly disadvantaged neighbourhoods, such as St Ann's (one of the most deprived areas in Europe), Radford and Lenton, Clifton, and North Nottingham neighbourhoods like Bulwell and Basford. However, this same area also includes the centres of economic activity and wealth production.

In reducing supply-side barriers to accessing "good work", the city has achieved significant success in upskilling its resident workforce (although it is still behind other Core Cities in this respect, considering that skilled people tend to agglomerate in cities). Moreover, Nottingham increasingly looks like its skills profile is matching the needs of the occupational profile. This means that the challenges facing good work, earnings and productivity are not exclusively on the supply-side.

Nor are these challenges simply a case of skilled, productive commuters out-competing residents for "good work" in Nottingham's workplaces. The city's labour productivity, in terms of GVA per hour worked (a workplace-based measure), is one of the lowest in England. Although barriers that limit residents' access to more highly skilled, highly paid jobs must be addressed, this data suggests that there are also significant demand-side factors that are inextricably linked to the structure of economic activity in Nottingham – which includes how workers are deployed in the workplace, and how to make best use of their skills.

Other structural indicators that might point to particularly modern, post-recession phenomena of "gig"-based or otherwise precarious work (including "bogus" self-employment and involuntary part-time and temporary work), as investigated by the *Taylor Review*, do not reveal anything that stands out for Nottingham compared to either the UK or other Core Cities. Self-employment rates have fallen, whilst business birth rates (a better measure of entrepreneurship) are above average in Nottingham – both providing little indication that individuals are being displaced into precarious or involuntary freelancing and gig work. Strikingly, the data suggests that the main recent shift has been a fall in full-time employment, without a corresponding increase in part-time work. Together, these indicators suggest a vulnerability to demand-side shocks that are most likely explained by the kind of industry sectors that the city relies on for employment.

The key vulnerability in this respect is the very notable over-reliance (with almost a quarter of all workplace-based employment, and higher than any other Core City) on back office "support' services", alongside a high – and stable – proportion of people employed in elementary occupations that require little or no skill. The literature summarised in the introduction to this report indicates that growth in knowledge and other highly skilled work has tended to also create demand for low-skilled services, which often exhibit low job quality.

Finally, as well as impacting up on the "bottom line" of Nottingham's economy and business population – in terms of the notably low labour productivity – these factors may well be adversely affecting the average life satisfaction, happiness and feeling of anxiety of people living in Nottingham. The differences are relatively small compared to the national average, but consistent over time. Trends in the personal wellbeing indicators also closely follow trends in labour market indicators, notably overall employment and earnings. People in Nottingham appear to have become less happy and more anxious as employment rates have fallen in recent years – although, obviously, simple correlation can never be said to adequately demonstrate causation. Ongoing work on the lived experience of precarious and lower paid workers and "Ordinary Working Families" will be hugely helpful in this respect.

In all, this analysis paints a picture in which the structure of work in Nottingham (and specifically Nottingham City) is hurting both aggregate job quality (and potentially the resilience of the wider labour market in terms of employment and economic activity) and productivity. Therefore, there is a strong "bottom line" argument to be made for policies that focus on improving job quality. This is important, as addressing demand-side issues requires working with not only public sector policy makers, but also large and smaller businesses – as well as the community, charitable and Third Sectors. The productivity dimension, which is so striking in the case of Nottingham, provides a rationale for how a "good work" programme can be made to benefit businesses as well as workers – and should be the key message in raising the "Good Work City" agenda with policy makers.

Recommendations: How should “Good Work” be achieved in Nottingham?

This report has summarised observations from a proportion of what we can measure at a local level – notwithstanding further work that should be undertaken on factors affecting different population groups, and more fine-grained small area analysis. It has also demonstrated that there is a lot we do not know about the real drivers, the subjective and lived experience, and the impacts on more objective measures of physical and mental health.

Celebrating improvements in the supply side

Although big differences remain between the qualification levels of residents within Nottingham City compared to surrounding area, particularly Rushcliffe, the improvements in the skills profile of the city’s residents are notable. This has occurred at both the top and bottom of the skills hierarchy. We have seen an increasing proportion of Nottingham residents with degree level qualifications, and a notable fall in those lacking entry-level qualifications.

When comparing the level of highest qualification held against the level of skill required for a given occupation, supply and demand measures in Nottingham have moved towards parity. These improvements have addressed the previous under-supply of highly skilled workers and significantly reduced the over-supply of low skilled workers.

Dealing with the demand side

What our analysis has clearly demonstrated is that we cannot understand and address the issues affecting “good work” through the usual supply-side measures, and particularly the wealth of indicators around educational attainment and skills acquisition. These are fundamentally important for both productivity and social inclusion, but an exclusive focus on whether or not people have the ”right” skills for work individualises a structural problem.

Established demand-side policies include business support and investor development, perhaps targeted around growth sectors that provide potential for quality employment, alongside purposive use of procurement by public sector and other “anchor institutions” (with key suppliers provide quality employment opportunities if they are to qualify for public contracts). This includes agreements between those anchor institutions on common employment quality standards they would apply to their own recruitment and HRM strategies. All these potential interventions could be subjected to a "good work" test.

Data and understanding the local picture

The data that has been analysed also highlights areas to work on and explore further to help create a good work city. Recent activity to promote concepts of fair, decent and good work recognise the need to prove change has been achieved with any interventions. We don't believe that the current measurements tools provide an accurate picture of "good work" at any level. There are large gaps in our understanding about what "good work" looks like for workers. Proposed measurement matrixes such as the RSA / Carnegie framework help us move forward. We are arguing that any framework for measuring good work needs to begin at a local spatial scale, in order to capture the nuance and variation we have seen locally.

We need to look below the national and regional data when exploring the narratives on work, which must be challenged. The calls for better metrics within Measuring Good Work (RSA / Carnegie, 2017-18) are to be supported, but are more amenable for measurement through large national surveys, and may not necessarily provide sufficient local insight to ensure interventions; support and successes can be recognised and acted upon. In highlighting Nottingham's current challenges – which are in some cases quite different from the national picture – we have demonstrated that national metrics may miss or underrepresent pressing local issues. These have large-scale implications for how Local Authorities, LEPs and businesses consider their strategies. Our *Good Work Programme* will therefore attempt to identify and test metrics and research instruments that will be more responsive to place-based issues.

Although our report provides a helpful snapshot of the situation, it doesn't explore what it *feels* like to be economically insecure, unemployed or underemployed. We recommend that additional weight needs to be given to insights gained from these approaches, to ensure policy ideas are developed that build on these stories. Work undertaken alongside Nottingham Civic Exchange with researchers at NTU has been asking how people living with economic insecurity cope, and we have been gaining insights into their working lives.

Taking a multi-strand approach to promote good work across Nottingham

Helping Nottingham to become recognised as a city that champions "Good Work" cannot be accomplished by any one organisation or approach. We have been advocating for a coalition model with a four-pronged approach, to make a genuine difference.

As an anchor institution locally, we believe we need to be stepping out and providing space for this conversation on "good work". Alongside partners such as Nottingham Citizens and those organisations and individuals who have already joined us, we are asking you to raise the profile of the issues in this report. *Good Work Nottingham* requires action from a multitude of stakeholders. We need to create opportunities to listen to and work with local people and businesses to help make a difference, and develop Nottingham as a place that cherishes and supports everyone who works and lives here. By taking a multi-stream approach, we hope Nottingham can become a "Good Work City".

Appendix

Wage determination explained

Economic theory on wage determination predicts that there will be pressure on earnings to rise if employers' demand for labour outstrips supply. More individuals are then incentivised to provide their labour (or to work more hours), solving the under-supply of workers and then easing the pressure to raise wages (with the wage rate either settling at a new, higher equilibrium, or falling to its previous rate). Conversely, if supply outstrips demand – and / or there is a significant "reserve army" of unemployed workers – there will be little pressure on employers to raise wages. This can enable the wage rate to fall (meaning that the marginal benefit of working an additional hour decreases compared to the leisure time that must be sacrificed in order to work, and individuals withdraw their excess labour from the market). This model relies on a range of assumptions that can be highly questionable in a real world context, including:

- a competitive market, where employers are unable to set a wage rate above the equilibrium rate, because they lack the market power to do so – note that this is not the case where employers have monopoly power locally / within a given sector, or where there is weak collective bargaining power on behalf of workers
- a high level of homogeneity of both supply and demand – where workers and jobs are relatively interchangeable
- good information on wages, skills, and the potential productivity of labour – on behalf of both employers and workers
- workers having similar substitution rates for work over leisure (known as the "elasticity of labour supply").

An obvious example that challenges this generalised assumption is where a worker with caring responsibilities is much less able to work additional hours compared to a worker without such responsibilities, because their time caring for children, a spouse or elderly relatives incurs a range of costs. Likewise, individuals have different "reservation wages" (the minimum wage a worker can accept in order to meet their living costs) whilst employers can sometimes pay higher wages in order to attract more highly skilled, productive or specialised staff (known as the "efficiency wage").

With these caveats in mind, the relationships predicted by the theory – and the assumptions that need to be acknowledged and challenged – do enable us to draw useful interpretations from earnings data in the context of what we have seen so far.

The ONS' preferred source for estimates of earnings and hours worked is the

Annual Survey of Hours and Earnings (ASHE), which is based on a sample drawn from PAYE records. Estimates for median[3] hourly earnings for full-time workers for Nottingham City compared to Nottinghamshire and the UK show that residents of the city have experienced slower earnings growth than average.

3 The recommended measure of average earnings in the ASHE is the median._ The median is the centre of the distribution (if one imagines all individual earnings values from the ASHE set out in a line from lowest to highest); in contrast to the mean, the arithmetic average, which can be skewed by a small number of very high reported earnings.

References

Altmann, N. & Deiß, M., (1998) 'Productivity by Systemic Rationalization: Good Work-Bad Work-No Work?', Economic and Industrial Democracy, 19, pp. 137-159.

Amankwah, A. and Wales, P. (2016) Trends in self-employment in the UK: 2001 to 2015. Newport: Office for National Statistics.

Bambra, C. (2011) 'Work, Worklessness, and the Political Economy of Health', J Epidemiol Community Health. 2011 Sep;65(9):746-50.

Bartling, B., Fehr, E., & Schmidt, K. M. (2012). ‚Screening, competition, and job design: Economic origins of good jobs.' American Economic Review, 102(2), 834-64.

Beatty, C., Fothergill, S., and Gore, A. (2017). The Real Level of Unemployment 2017. Sheffield: Sheffield Hallam University and the Joseph Rowntree Foundation.

Black, P., Burton, S., Hunter, J., Lawton, C., Pickford, R. and Wheatley, D. (2017). Out of the ordinary: exploring the lives of ordinary working families. Nottingham: Nottingham Civic Exchange, Nottingham Trent University.

Bustillo, R. M. de et al. (2011) 'E Pluribus Unum? A Critical Survey of Job Quality Indicators', Socio-Economic Review, 9(3), pp. 447–475.

Coats, D., & Lekhi, R. (2008) 'Good Work': Job Quality in a Changing Economy, London: The Work Foundation.

Chandola, T., & Zhang, N. (2018) ‚Re-employment, job quality, health and allostatic load biomarkers: prospective evidence from the UK Household Longitudinal Study'. Journal of Epidemiology, 47:1, pp. 47-57.

Clark, I., 2018. 'Abandoned spaces and technology displacement by labour: the case of hand car washes'. New Technology, Work and Employment. ISSN 0268-1072.

Connell, J. and Burgess, J. (2016) 'Strategic HRM and its influence on quality of work: Evidence from nine Australian organisations in HRM and Organisational Effectiveness'. In Nankervis, A., Rowley, C., and Salleh, N.M. (Eds), Asia Pacific Human Resource.

Management and Organisational Effectiveness, Elsevier, pp171-192.
Dellot, B. (2018) When will we learn to live with low-skilled work? RSA. Available from: https://www.thersa.org/discover/publications-and-articles/rsa-blogs/2018/08/when-will-we-learn-to-live-with-low-skilled-work. [Accessed on 14/03/19]

Ezzy, D. (1997) 'Subjectivity and the Labour Process: Conceptualising "Good Work"'. Sociology, 31(3), pp. 427—444.

Fagan, C., Lyonette, C., Smith, M., Saldaña-Tejeda, A. (2012) 'The influence of working time arrangements on worklife integration or 'balance': A review of the international evidence'. Conditions of Work and Employment No.32: ILO.

Findlay, P., Lindsay, C., McQuarrie, J., Bennie, M., Corcoran, E. D., & Van Der Meer, R. (2017) 'Employer choice and job quality: Workplace innovation, work redesign, and employee perceptions of job quality in a complex health-care setting'. Work and Occupations, 44(1), 113-136.

Friedman, R. (2014) 'The best place to work: The art and science of creating an extraordinary workplace. New York: Perigee Book.

Gifford, J. (2018). UK Working Lives: The CIPD Job Quality Index. London: CIPD.

Green, A. E., & Livanos, I. (2015) 'Involuntary non-standard employment and the economic crisis: regional insights from the UK'. Regional Studies, 49(7), 1223-1235.

Green, B. P., Graybeal, P., & Madison, R. L. (2011) 'An exploratory study of the effect of professional internships on students' perception of the importance of employment traits'. Journal of Education for Business, 86(2), 100-110.

Green, F. (2006). Demanding work: The paradox of job quality in the affluent economy. Princeton: Princeton University Press.

Green, F., Mostafa, T., Parent-Thirion, A., Vermeylen, G., Van Houten, G., Biletta, I., & Lyly-Yrjanainen, M. (2013) 'Is job quality becoming more unequal?'. ILR Review, 66(4), 753-784.

Gregory, A., & Milner, S. (2009) 'Work–life balance: A matter of choice?'. Gender, Work & Organization, 16(1), 1-13.

Hammond, P. (2017). The Budget Speech in Full, Autumn Budget 2017. 22 November 2017. Available online: https://www.gov.uk/government/speeches/autumn-budget-2017-philip-hammonds-speech [Accessed on 18/03/19].

Hammond, P. (2018). The Budget Speech in Full, Autumn Budget 2018. 29 October 2018. Available online: https://www.gov.uk/government/speeches/budget-2018-philip-hammonds-speech [Accessed on 18/03/19].

Harvey, S. B., Modini, M., Joyce, S., Milligan-Saville, J. S., Tan, L., Mykletun, A., ... & Mitchell, P. B. (2017) 'Can work make you mentally ill? A systematic meta-review of work-related risk factors for common mental health problems'. Occup Environ Med, 74(4), 301-310.

Holman, D. (2012) 'Job types and job quality in Europe'. Human Relations, 66(4), 475–502.

Holman, D. (2013). 'Job types and job quality in Europe'. Human Relations, 66(4), 475-502.

Horowitz, J. (2016) 'Dimensions of Job Quality, Mechanisms, and Subjective Well-Being in the United States'. Sociological Forum, 31(2), pp. 419–440.

Hutchings, S. and Y. Khalil (2017) The barriers, challenges and solutions to employment for the over 29's in St Ann's, Mapperley and the Dales (Area 6): Final report. Nottingham: The Renewal Trust/Nottingham City Council/Nottingham Trent University.

International Labour Organisation (2013). 'Decent work indicators: guidelines for producers and users of statistical and legal framework indicators: ILO manual'. 2nd Version. Geneva: ILO. Available at: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---integration/documents/publication/wcms_229374.pdf (Accessed on 07/11/18).

Irvine, G., White D., and Diffley, M. (2018). Measuring Good Work: The Final Report of the Measuring Job Quality Working Group. London: The Carnegie Trust UK and RSA. Available at: https://www.thersa.org/discover/publications-and-articles/reports/measuring-good-work2 (Accessed on 07/11/18).

Jahoda, M. (1982) Employment and Unemployment: A Social-Psychological Analysis. Cambridge: Cambridge University Press.

Kalleberg, A. L., Reskin, B. F., & Hudson, K. (2000) 'Bad jobs in America: Standard and nonstandard employment relations and job quality in the United States'. American sociological review, 256-278.

Kasl, S.V. (1998) 'Measuring job stressors and studying the health impact of the work environment: An epidemiologic commentary'. Journal of Occupational Health Psychology, 3(4), 390-401.

Lawton, C. and Blackley, N., 2016. The Great Nottingham Debate 2016: research report. Nottingham: Nottingham Post.

Lawton, C., Bickerton, C. and Thompson, P., 2014. Benchmarking the economy and labour market of Nottingham. Nottingham: Nottingham Post.

McGovern, P., Smeaton, D., & Hill, S. (2004) 'Bad Jobs in Britain: Nonstandard Employment and Job Quality'. Work and Occupations, 31(2), 225–249.

Miller, J. (2006) 'Opportunities and Obstacles for Good Work in Nursing'. Nursing Ethics, 13:5, pp. 471-487.

Miller, J. (2011) 'Burnout and Its Impact on Good Work in Nursing'. Journal of Radiology Nursing, 30:4, pp. 146-149.

Murphy, G.C., & Athanasou, J.A. (2010) 'The effect of unemployment on mental health'. Journal of Occupational and Organizational Psychology, 72:1, pp.83-99.

McNamara, N., Stevenson, C. and Muldoon, O. (2013) 'Community Identity as Resource and Context: A mixed method investigation of coping and collective action in a disadvantaged community'. European Journal of Social Psychology. Vol. 43, No. 5, pp. 493–503.

O'Shaughnessy, T. (2011) 'Hysteresis in unemployment'. Oxford Review of Economic Policy, Volume 27, Issue 2, 1 July 2011, Pages 312–337.

Overell, S., Mills, T., Roberts, S., Lekhi, R., & Blaug, R. (2010). 'The employment relationship and the quality of work'. Provocations Paper, 7.

Rosso, B. D., Dekas, K. H., & Wrzesniewski, A. (2010) .On the meaning of work: A theoretical integration and review'. Research in Organizational Behavior, 30, 91-127.
Sayer, A. (2009) 'Contributive Justice and Meaningful Work'. Res Publica, 15(1), pp. 1–16.

Selenko, E., Mäkikangas, A., Stride, C. (2017) 'Does job insecurity threaten who you are? Introducing a social identity perspective to explain well-being and performance consequences of job insecurity'. Journal of Organizational Behavior. , Vol. 38 Issue 6, p856-875. 20p.

Sengupta, S., Edwards, P. K., & Tsai, C. J. (2009) 'The good, the bad, and the ordinary: Work identities in "good" and "bad" jobs in the United Kingdom'. Work and Occupations, 36(1), 26-55.

Shafique, A. (2018). Addressing Economic Insecurity. London: RSA.

Steger, M. F., Dik, B. J. and Duffy, R. D. (2012) 'Measuring Meaningful Work: The Work and Meaning Inventory (WAMI)'. Journal of Career Assessment.

Stevenson, C., McNamara, N. and Muldoon, O. (2014) 'Stigmatised identity and service usage in disadvantaged communities: Residents', community workers' and service providers' perspectives'. Journal of Community & Applied Social Psychology, Vol. 24, No. 6, pp. 453-466.

Strong, S. (1998) 'Meaningful Work in Supportive Environments: Experiences With the Recovery Process'. American Journal of Occupational Therapy, 52(1), pp. 31–38.

Taylor, M., Marsh, G., Nicol, D., & Broadbent, P. (2017) Good Work: The Taylor review of modern working practices, Department for Business, Energy & Industrial Strategy, 11.

Theorell, T., Karasek, R. A., & Eneroth, P. (1990) 'Job strain variations in relation to plasma testosterone fluctuations in working men-a longitudinal study'. Journal of internal medicine, 227(1), 31-36.

Trades Union Congress, 2014. More than two in five new jobs created since mid-2010 have been self-employed. Available online: https://www.tuc.org.uk/news/more-two-five-new-jobs-created-mid-2010-have-been-self-employed [Accessed on 12/03/19].

United Nations (2015) Decent Work and Economic Growth: Why It Matters. New York: United Nations.

Vidal, M. (2013) 'Low-autonomy work and bad jobs in postfordist capitalism'. Human Relations, 66(4), 587-612.

Wheatley, D., & Wu, Z. (2014) 'Dual careers, time-use and satisfaction levels: evidence from the British Household Panel Survey'. Industrial Relations Journal, 45(5), 443-464.

Work Foundation (2018) Web: http://www.theworkfoundation.com/wp-content/uploads/2016/10/The-Commission-on-Good-Work.pdf [Accessed on 17/01/19].

Wright, S., Warhurst, C., Lyonette, C. and Sarkar, S. (2018) Understanding and measuring job quality, CIPD Research Services Job Quality Study, Report 2. London: CIPD.

Warhurst, C., Wright, S. and Lyonette, C. (2017) Understanding and measuring job quality, CIPD Research Services Job Quality Study, Report 1. London: CIPD.

Yeoman, R. (2013) 'Conceptualising Meaningful Work as a Fundamental Human Need'. Journal of Business Ethics, 125(2), pp. 235–251.

About this report

This report has been published as part of a programme of work undertaken to provide a clear case for improving the quality of work in Nottingham. *Good Work Nottingham* will gather evidence and test new approaches, as we aim to assert Nottingham as a "Good Work City". The programme has a focus on Nottingham and Nottinghamshire, and a broader objective to influence policy at a national level: it combines research, community representation and engagement with employers to advise and adapt newer, more representative workplace policies.

The report is based on analysis of secondary data published by the Office for National Statistics (ONS), which has been used to understand the current state of employment. Laying the Foundations of a "Good Work City" highlights key metrics, and what they mean for Nottingham. It identifies a number of gaps in the data and issues with interpreting it, which *Good Work Nottingham* will need to address to ensure we can effectively measure and understand "good work" in places like Nottingham. The estimates published by the ONS are subject to Crown Copyright protection, and are reproduced here under the terms of the Open Government Licensing Framework. In the case of our report, no estimates that could reasonably enable the disclosure of the identities of survey participants or individual businesses have been reproduced, and we have been careful to comment on the reliability and statistical significance of key findings, excluding any estimates that the ONS would not themselves publish due to small survey sample size. Our use of ONS data in this work does not imply that they or the UK Statistics Authority have endorsed our summary or interpretation of the statistical data – observations, and any errors therein, are entirely the responsibility of the report's authors. This work uses research datasets, which may not exactly reproduce National Statistics' published aggregates, particularly when expressing aggregate data for certain non-official geographical areas (for example, Primary Urban Areas and city regions).

Nottingham Civic Exchange maximises research, policy and practical impact by bringing together Nottingham Trent University expertise with partners seeking to address the needs of local communities. Nottingham Civic Exchange acts as a resource to look at social and economic issues in new ways. This means facilitating debate, acting as a bridge between research and policy debates, and developing practical projects at a local, city and regional level.

Chris Lawton is the principal author. He has been supported by Rich Pickford and Jack Rendall from Nottingham Trent University, and Dan Wheatley from Birmingham University. Thanks are also due to Paula Black, Phil Juggins, Sally Andrews and Lesley Pasuto for comments and support given during the drafting of this report.

Good Work Nottingham

Good Work Nottingham aims to provide a clear case for improving the quality of work in Nottingham. Good Work Nottingham will gather evidence and test new approaches as we move towards Nottingham becoming a Good Work City. This programme will combine research, community representation, and engagement with employers. The programme has a focus on Nottingham and Nottinghamshire, and a broader objective to influence policy at a national level. This report forms part of a multi-strand programme to discover what good work means for people and how we can realise that vision.

Nottingham Civic Exchange

Nottingham Civic Exchange maximises research, policy and practical impact by bringing together Nottingham Trent University expertise with partners seeking to address the needs of local communities. Nottingham Civic Exchange acts as a resource to look at social and economic issues in new ways. This means facilitating debate, acting as a bridge between research and policy debates, and developing practical projects at a local, city and regional level.

NTU Nottingham Civic Exchange

Nottingham Trent University

Chaucer Building

Nottingham NG1 4BU

Tel: +44 (0) 115 848 2266

Email: notts.civicex@ntu.ac.uk

@NottsCivicE

www.ntu.ac.uk/goodworknotts

#GoodWorkNotts

8737/04/19