productivity insights network

PIN - Productivity Projects Fund

Pioneer Project Report

Matching People to Jobs and Hours: Drivers and Productivity Impacts of Under-employment

Report prepared by:

Colin Lindsay, University of Strathclyde

Donald Houston, University of Portsmouth

George Byrne, Research Consultant (https://georgebyrne.org/)

Robert Stewart, University of Strathclyde

www.productivityinsightsnetwork.co.uk

UKRI Economic and Social Research Council

About PIN

The Productivity Insights Network was established in January 2018 and is funded by the Economic and Social Research Council. As a multi-disciplinary network of social science researchers engaged with public, private, and third sector partners, our aim is to change the tone of the productivity debate in theory and practice. It is led by the University of Sheffield, with co-investigators at Cambridge Econometrics, Cardiff University, Durham University, University of Sunderland, SQW, University of Cambridge, University of Essex, University of Glasgow, University of Leeds and University of Stirling. The support of the funder is acknowledged. The views expressed in this report are those of the authors and do not necessarily represent those of the funders.

Table of Contents

1 Introduction

This report details the findings of research conducted by the University of Strathclyde and the University of Portsmouth. The research was funded by the Productivity Insights Network under the award: “Drivers and productivity impacts of under-employment – insights on labour market effects and employers’ decision-making in contrasting local labour markets” (ESRC Grant Award ES/R007810/1). The research was supported by the Universities of Strathclyde and Portsmouth and the Scottish Trades Union Congress.

The aims of the research were to:

a) explore spatial patterns in short-hours working and under-employment and identify associated local labour market conditions using relevant national survey data;
b) conduct qualitative research with employer representatives to understand better the drivers of under-employment, employers’ understanding of the problem, and views of its impact on productivity and performance; and
c) draw on these mixed methods analyses, along with engagement with policy and workplace stakeholders, to arrive at policy implications and insights on reducing under-employment and enhancing productivity and skills formation.

The interest driving the research is the continuing presence of high levels of under-employment in regional and local labour markets in the UK. For our purposes, under-employment is defined as the process by which employed workers find themselves involuntarily in part-time work or are otherwise unable to secure sufficient hours of work. The UK Office for National Statistics defines under-employed workers as people who during the reference period:

- want to work more hours in their current job, or are looking for an additional job or a different job with more hours;
- are available to start working more hours within two weeks; and
- are currently working 48 hours or less per week (40 hours for those under the age of 18 years).

In late 2020, it was estimated that more than 3.5 million UK workers were under-employed (approximately 8.7% of the labour force). Under-employment has the potential to impact negatively on employees’ wellbeing; contributes to in-work poverty; and limits opportunities for learning and progression, undermining career development. These negative impacts on employees contribute to socio-economic inequalities and may undermine the performance and productivity of organisations, sectors and regions.

It has been suggested that the COVID19 crisis offers the opportunity to reflect on business and workplace practices and create a ‘new normal’ that overcomes some of the challenges that have previously affected many UK workplaces and delivers benefits in terms of productivity and fair work. It is therefore timely to conduct new research on factors contributing to under-employment, business leaders’ attitudes and understandings of the problem, and ‘what might work’ in terms of policy responses.

2 Methodology

The project involved three phases of primary research.

In Phase One, we conducted quantitative analysis examining relationships between under-employment, productivity and labour market conditions across local labour market areas. We constructed a dataset for 179 NUTS3 regions across the UK of key measures of under-employment, productivity and labour demand and supply (Table 1).

Under-employment is not published for local areas. We therefore calculated under-employment rates, and other labour market indicators, for local areas using the three-year pooled Annual Population Survey/Labour Force Survey (APS/LFS) microdata for 2016-18. The advantage of the three-year pooled micro data is that it provides a sample size sufficient (n=307,711 persons aged 16-64) to calculate under-employment and unemployment rates for local areas not possible using annual or quarterly data (which don't include geographic identifiers below twelve broad regions). The smallest geographical identifier in the three-year pooled APS/LFS microdata available under 'Safeguarded' license via the UK Data Service is EU NUTS3 regions. The local spatial analysis of relationships is augmented by a context-setting UK-wide assessment of demographic, regional and sectoral patterns. Specifically, UK-wide under-employment rates are assessed by gender, age and region in order to understand the impacts of under-employment. In helping understand the drivers of under-employment, we assess under-employment by industry, occupational group and skills level. We also compare our newly developed hours-based measures of labour demand and supply against existing measures based on persons or jobs, according to gender, age, region and skills level.

In Phase Two, we conducted 28 interviews with business leaders and HR managers in Scotland (17) and the Solent area of South East England (11), the regions hosting the two universities involved in the research). A purposive sample frame in both geographies took in employers of various sizes and (for the most part) operating in sectors and areas of work that have reported relatively high levels of under-employment, such as retail, hospitality and social care. While most of the employers who we engaged with conducted business in the urban conurbations that dominate the Solent region (the urbanised Portsmouth-Southampton corridor) and the central belt of Scotland, some were national-level businesses operating across a range of locations, and we included a small number of organisations operating in rural communities in Scotland.

We sought to engage with employers for whom challenges of under-employment were of interest/concern. Accordingly, a minority of our interviewees argued that under-employment was not a current problem for their organisation, but were interested in sharing examples of workforce planning and HR practice that had helped to mitigate under-employment risks. A smaller number of employers reported significant challenges associated with under-employment, while many suggested that under-employment was sometimes a risk for a minority of employees. Interviews focused on workforce planning and broader HR practices, broader issues of business models and organisational priorities, issues around and responses to under-employment, and the extent to which the COVID19 crisis had fundamentally changed the organisational and business context. Members of the research team identified and refined themes from an initial review of interview data, before finalising the analysis and identifying illustrative quotations. A summary of the organisations participating in the qualitative research is provided in Appendix 1.

Table 1 Definition of variables for quantitative data analysis

Variable	Source	Definition
Productivity and growth:		
Productivity	RPRD[1] 2017	GVA per hour
Productivity growth	RPRD[1] 2017	% growth in GVA per hour, 2017-18
Jobs growth	RPRD[1] 2017	% growth in jobs, 2017-18
Hours growth	RPRD[1] 2017	% growth in hours, 2017-18
Under/over-employment:		
Under-employment rate	APS[2] 2016-18	Under-employed persons (wants more hours, available to work more hours, currently works under threshold hours) as % of employed persons
Over-employment rate	APS[2] 2016-18	Overemployed persons (wants to work less hours for less pay) as % of employed persons
Jobs-based employment:		
Employment rate	APS[2] 2016-18	Employed persons as % of persons aged 16-64
Unemployment rate	APS[2] 2016-18	Unemployed persons as % of economically active (employed + unemployed) persons
Job density	ONS Jobs Density[3] 2017	Workplaces per resident aged 16-64
Hours-based employment:		
FTE employment rate	APS[2] 2016-18	Total hours worked/37.5 as % of residents aged 16-64
FTE unemployment rate	APS[2] 2016-18	Estimated hours wanted by the unemployed[4] plus extra hours wanted by the employed as % of total potential hours (total potential hours = hours worked + extra hours wanted + estimated hours wanted by the unemployed)
FTE job density	RPRD[1] 2017 & ONS Jobs Density[3] 2017	Mean workplace hours per resident aged 16-64 / 37.5

See Endnotes 1-4 for further information on data sources and definitions.

In Phase 3, we held a Zoom policy stakeholder webinar during which we presented emerging findings and gathered insights on priorities for policy action. There were 37 participants at the Zoom, including representatives of: local and county government in the Solent region and multiple local government areas in Scotland; The Scottish Government; The Fair Work Convention (the advisory body advising the Scottish Government on employment and job quality); trade union organisations; third sector organisations campaigning for labour market quality and flexibility; and management and business representative bodies.

The discussion followed a 'Chatham House Rule'-type format to encourage participants to share ideas freely without being quoted. We have drawn on this discussion and insights from the other elements of the research to arrive at 'implications and insights for policy'.

3 Mapping and analysis of under-employment in the UK

Patterns and impacts of under-employment

Under-employment has a distinctive geography across NUTS3 regions (Figure 1). The geographical pattern of under-employment shows some similarities with unemployment (r=0.204), but also important differences. In particular, the highest rates of under-employment are found in remoter rural areas, whereas unemployment tends to be low in rural areas (although youth unemployment is higher in rural areas). Under-employment is also quite high in cities, where unemployment also tends to be high. The lowest rates of under-employment are found in accessible and affluent rural areas, particularly in southern England. Although a north-south regional pattern is evident, some coastal and rural areas in the south have high rates of under-employment. Northern Ireland has lower under-employment than other northern regions.

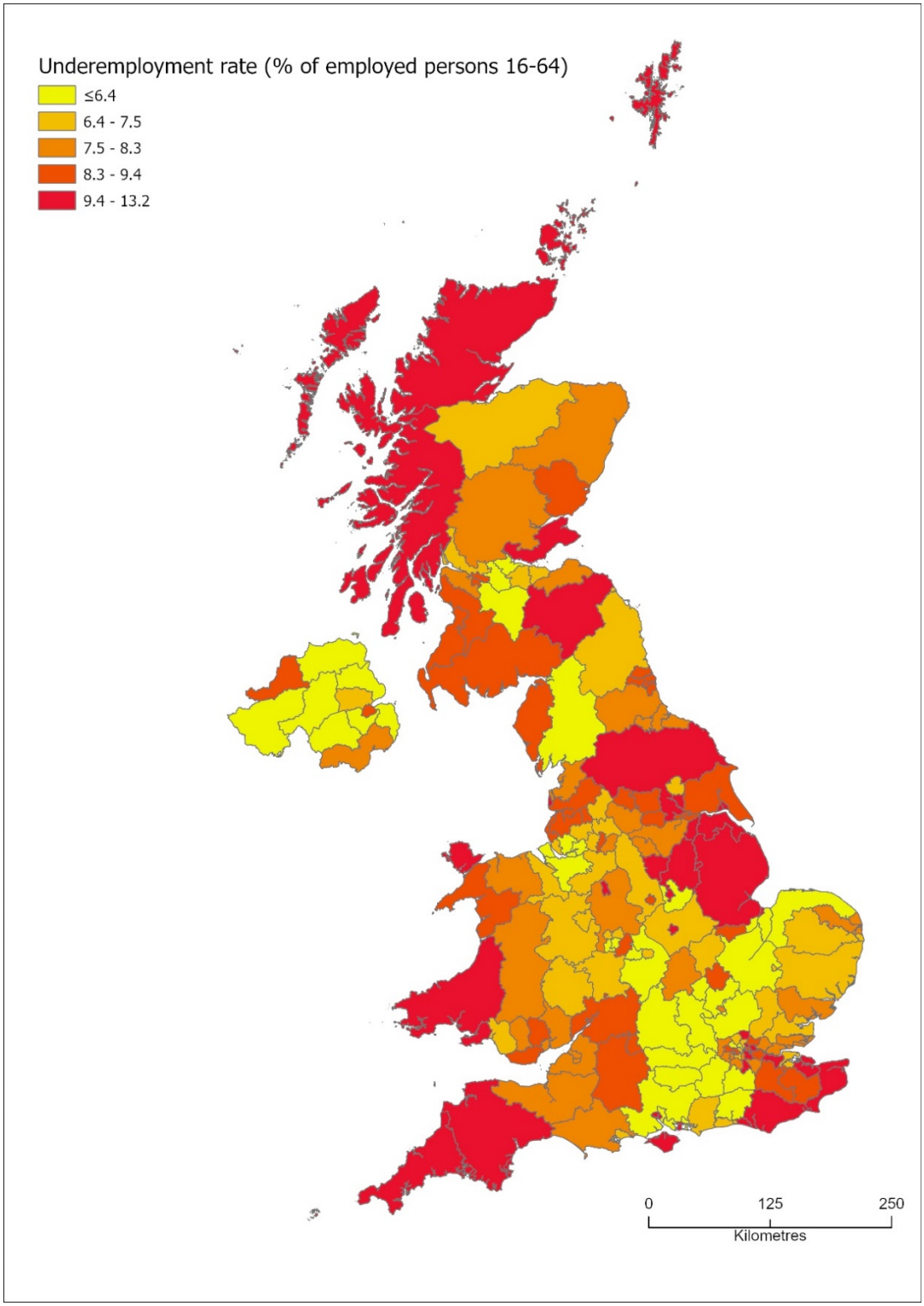
Overall, 7.9% of employed persons of working age in this sample were under-employed (Table 2). On average, under-employed persons want to work 15.4 extra hours per week. Women are slightly more likely to be under-employed than men (8.6% of employed women, 7.2% of employed men) (Table 2). A large proportion (14.7%) of younger employed persons (age 18-24) are under-employed (Table 2). This is double the proportion of workers aged 25-49, and nearly three times the proportion of older workers (age 50-64).

Table 2 Hours worked, extra hours wanted and under-employment by gender and age

Gender and age categories	Hours worked (employed)	Hours worked (under-employed)	Extra hours wanted (under-employed)	Under-employment rate (% of employed)
All (age 16-64)	32.0	22.9	15.4	7.9%
Men	36.3	26.2	16.6	7.2%
Women	27.2	19.9	14.2	8.6%
Age 18-24	29.1	21.8	17.4	14.7%
Age 25-49	33.1	24.3	14.9	7.4%
Age 50-64	31.7	21.9	14.5	5.8%

Source: Authors' calculations using 3-year pooled Annual Population Survey micro dataset January 2016 to December 2018; accessed via UK Data Service; under-employment as defined in Table 1.
Note: Hours figures are mean weekly.

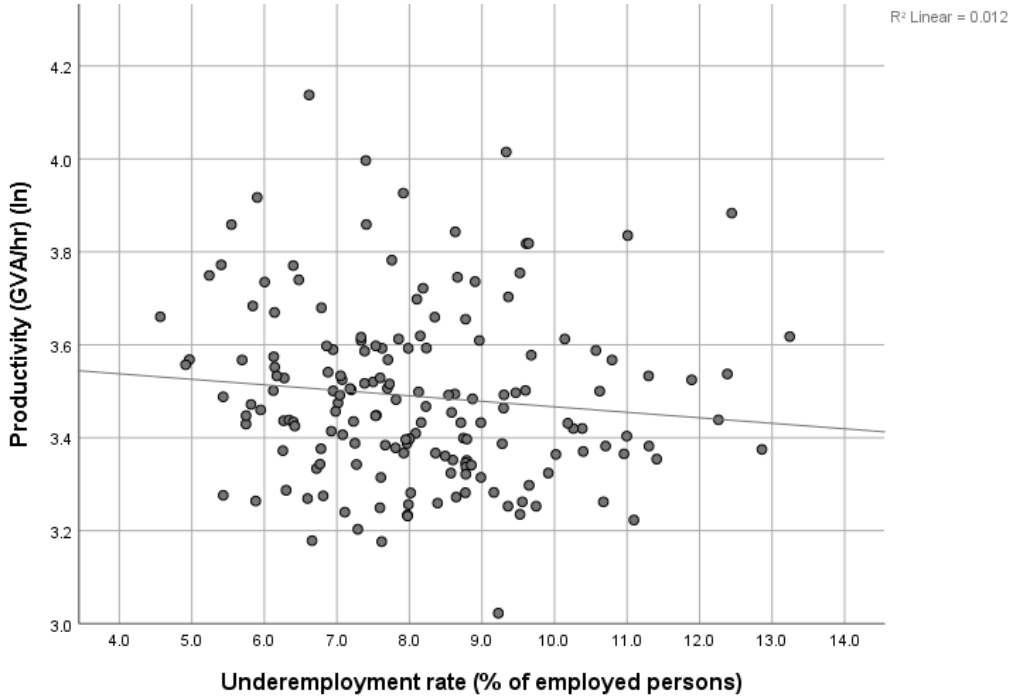
Figure 1 Under-employment rate across NUTS3 regions, 2016-18



Source: Authors' calculations using 3-year pooled APS micro dataset January 2016 to December 2018; accessed via UK Data Service. Digital boundaries from UK Government Open Data.

Under-employment is weakly negatively correlated with productivity per hour worked across NUTS3 regions (r=-0.110, Fig. 2). Under-employment is not linked with productivity growth at local labour market level (r=-0.038). Similarly, over-employment (being required to do too many hours) is also weakly negatively correlated with productivity per hour (r=-0.134).

Figure 2 Productivity and under-employment, NUTS3 regions, 2017



Sources and definitions as set out in Table 1.

If under-employment is only weakly correlated with productivity, what other local labour market conditions are linked with productivity? Of the variables examined, productivity per hour is most strongly correlated with jobs density (r=0.195) and FTE jobs density (r=0.246). Importantly, the hours-based 'FTE' measure of jobs density is more closely associated with productivity (both per hour and per job) than the conventional jobs density measure, suggesting that the hours-based measure more accurately reflects the labour market conditions that are connected to productivity. Productivity growth was negatively correlated with unemployment (r=-0.156) and jobs growth (r=-0.224). This suggests that stable growth and low unemployment are linked with local productivity growth.

Drivers of under-employment

Under-employment appears to be associated both with remote rural areas (many of which have low unemployment), but also with high-unemployment urban areas. Local areas with the highest rates of under-employment display a wide range of labour market conditions, suggesting multiple and contingent factors driving under-employment. Under-employment across NUTS3 regions is linked with unemployment, but the correlation is not strong (r=0.235).

Under-employment is very weakly negatively correlated with the employment rate (r=-0.100) but somewhat more strongly correlated with the FTE employment rate (r=-0.339). Illustrating the wide range of local labour market conditions in which under-employment can be prevalent, the Western Isles has the highest under-employment rate in the UK (13.2%) but very low unemployment (2.4%), while its near neighbour on northern mainland Scotland, Caithness and Sutherland and Ross and Cromarty, has a similar under-employment rate (and the UK's second highest at 12.6%) but substantially higher unemployment (6.4%). The locality with the third highest under-employment rate in the UK (12.4%), the Isle of Wight, is at the other end of the country in southern England with a moderate (but high for the south) unemployment rate (5.0%). Areas with the highest under-employment tend to be remoter rural areas, but the city of Kingston upon Hull comes in with the fifth highest under-employment (12.3%) coupled with very high unemployment (8.0%). Two industry groups stand out with particularly high rates of under-employment: Distribution, Hotels and Restaurants (13.0% of employed persons) and Other Services (11.6% of employed persons) (Table 3).

Table 3 Hours worked, extra hours wanted and under-employment by industry

Industry	Hours worked (employed)	Hours worked (under-employed)	Extra hours wanted (under-employed)	Under-employment rate (% of employed)
All	32.0	22.9	15.4	7.9%
Agriculture, forestry and fishing	44.0	24.6	17.9	4.1%
Energy and water	36.7	30.9	13.4	4.7%
Manufacturing	36.4	31.0	14.4	5.3%
Construction	37.2	28.4	17.6	5.1%
Distribution, hotels and restaurants	29.4	21.4	15.8	13.0%
Transport and communication	35.5	27.2	17.0	6.1%
Banking and finance	33.3	23.3	16.2	6.3%
Public admin, education and health	29.3	21.3	13.1	7.2%
Other services	28.8	19.9	17.5	11.6%

Source: Authors' calculations using 3-year pooled Annual Population Survey micro dataset January 2016 to December 2018; accessed via UK Data Service; under-employment as defined in Table 1.
Note: Hours figures are mean weekly.

Managers and professional occupations have particularly low levels of under-employment (Table 4). The highest under-employment rates are found in Caring, Leisure and Other Service occupations, Sales and Customer Service occupations and in Elementary occupations. Administrative and Secretarial occupations are distinctive in that they have low hours worked but also low under-employment and low extra hours wanted; this can most likely be explained by these occupations being feminised with associated high levels of elective part-time employment. There are only relatively small differences in hours worked and under-employment according to skills (as proxied by highest qualification – Table 5).

Table 4 Hours worked, extra hours wanted and under-employment by occupational group

Occupational group	Hours worked (employed)	Hours worked (under-employed)	Extra hours wanted (under-employed)	Under-employment rate (% of employed)
All	32.0	22.9	15.4	7.9%
Managers, directors, senior officials	38.0	26.3	14.2	2.8%
Professional occupations	33.3	25.1	12.7	4.4%
Associate professional and technical	33.2	23.5	15.2	6.2%
Administrative and secretarial	28.9	23.5	12.3	6.9%
Skilled trades	37.1	27.7	17.0	6.5%
Caring, leisure and other service	27.1	20.8	13.8	10.8%
Sales and customer service	25.8	20.8	16.7	15.1%
Process, plant and machine operatives	36.4	28.6	18.3	7.5%
Elementary occupations	26.7	20.0	16.7	17.0%

Source: Authors' calculations using 3-year pooled Annual Population Survey micro dataset January 2016 to December 2018; accessed via UK Data Service; under-employment as defined in Table 1.
Note: Hours figures are mean weekly.

Table 5 Hours worked, extra hours wanted and under-employment by highest qualification

Highest qualification	Hours worked (employed)	Hours worked (under-employed)	Extra hours wanted (under-employed)	Under-employment rate (% of employed)
All	32.0	22.9	15.4	7.9%
Degree or equivalent	33.3	23.8	14.6	5.9%
Higher education	32.0	23.3	14.9	7.3%
GCE A level or equivalent	31.6	22.8	15.1	8.9%
GCSE grades A*-C or equivalent	30.5	21.6	14.9	9.5%
Other qualification	32.3	23.9	16.9	10.6%
No qualification	30.7	21.8	18.5	8.7%

Source: Authors' calculations using 3-year pooled Annual Population Survey micro dataset January 2016 to December 2018; accessed via UK Data Service; under-employment as defined in Table 1.
Note: Hours figures are mean weekly.

Jobs-based and hours-based measures of labour demand and supply

The existing conventional jobs-based employment rate is considerably and consistently higher than the hours-based FTE employment rate across various socio-demographic categories (Tables 6 and 7). Similarly, the existing conventional person-based unemployment rate is considerably and consistently lower than the hours-based FTE unemployment rate (Tables 6 and 7). Finally, the existing jobs-based Jobs Density measure of labour demand relative to the working age residential population is considerably and consistently higher than the hours-based FTE Jobs Density (Table 8).

The UK's FTE unemployment rate is double the conventional unemployment rate (9.1% versus 4.6% - Table 6). The FTE hours-based employment rate is nearly 11% points lower than the conventional jobs-based employment rate (Table 6). FTE jobs density is 0.15 per person of working age lower than the conventional jobs-based measure (Table 8).
Women and young workers display the greatest differences between jobs-based and hours-based measures of employment and unemployment (Table 6). On the FTE unemployment rate, women display greater unemployment than men – the opposite pattern to the conventional unemployment rate. The FTE unemployment rate for younger workers (aged 18-24) is nearly 20%.

Table 6 Comparison of conventional and Full-Time Equivalent (FTE) employment and unemployment rates, by gender and age

Gender and age category	FTE Employ-ment Rate	Employ-ment Rate	Diff.	FTE Unemploy-ment Rate	Unemploy-ment Rate	Diff.
All (16-64)	63.6	74.6	-10.9	9.1	4.6	4.5
Men	76.8	79.3	-2.6	8.5	4.7	3.9
Women	50.7	69.9	-19.2	9.9	4.5	5.5
Age 18-24	47.7	61.5	-13.8	19.4	10.9	8.5
Age 25-49	73.6	83.5	-9.9	7.7	3.4	4.2
Age 50-64	59.8	70.8	-11.0	6.4	3.1	3.2

Source: Authors' calculations using 3-year pooled Annual Population Survey micro dataset January 2016 to December 2018; accessed via UK Data Service; rates defined in Table 1.

The FTE unemployment rate for all groups those without post 16 qualifications is over 10% (Table 7). The FTE employment rate for those with no qualifications is only 37% (Table 7). Jobs-based labour market measures overstate labour utilisation and understate under-utilisation of available labour. Hours-based or 'FTE' alternatives more accurately capture labour demand and supply in an era of widespread part-time and variable hours of work. This does not imply, however, that jobs-based measures are unimportant, just that they measure different things. On the contrary, jobs-based measures are crucial in understanding the extent of labour market exclusion and inclusion. Nevertheless, hours-based measures may better capture the overall levels of labour demand and supply.

Table 7 Comparison of conventional and Full-Time Equivalent (FTE) employment and unemployment rates, by highest qualification

Highest qualification	FTE Employ-ment Rate	Employ-ment Rate	Diff.	FTE Unemploy-ment Rate	Unemploy-ment Rate	Diff.
All	63.6	74.6	-10.9	9.1	4.6	4.5
Degree+*	76.2	85.9	-9.7	6.2	2.8	3.4
Other HE	68.9	80.9	-12.0	7.4	3.0	4.4
GCE A level*	63.2	75.1	-11.9	9.3	4.4	4.9
GCSE A*-C*	56.3	69.1	-12.8	11.6	6.4	5.2
Other qual.	59.5	69.2	-9.6	12.7	6.6	6.1
No qual.	37.0	45.3	-8.3	14.9	9.1	5.7

Source: Authors' calculations using 3-year pooled Annual Population Survey micro dataset January 2016 to December 2018; accessed via UK Data Service; rates defined in Table 1.
* or equivalent

Table 8 Comparison of conventional and Full-Time Equivalent (FTE) Jobs Density, by region

Region	Jobs Density (jobs per resident 16-64)	FTE Jobs Density (FTE jobs per resident 16-64)	Diff.
UK	0.86	0.71	-0.15
North East	0.73	0.60	-0.13
North West	0.83	0.69	-0.14
Yorkshire and The Humber	0.81	0.65	-0.16
East Midlands	0.80	0.65	-0.15
West Midlands	0.82	0.67	-0.15
East of England	0.85	0.68	-0.17
London	1.03	0.85	-0.18
South East	0.87	0.70	-0.17
South West	0.89	0.71	-0.18
Northern Ireland	0.76	0.61	-0.15
Scotland	0.81	0.65	-0.16
Wales	0.76	0.59	-0.17

Sources: Authors' calculations based on ONS Regional Productivity Time Series (RPRD) and ONS Jobs Density for 2017. Jobs Density comprises workplaces of employees, self-employed, government-supported trainees and HM Forces, as a proportion of residents aged 16-64 from ONS population estimates.

Key issues from the quantitative data analysis

Overall, under-employment is only weakly associated with lower productivity per hour across local labour markets, although a link is observable. The relationship of under-employment across local labour markets with productivity is complex and multi-facetted, and causality may run in either, or more likely both, directions. Productivity is linked with high labour demand relative to supply (jobs density and hours density). In contrast, productivity growth is linked with low unemployment and a lower rate of jobs growth. That a lower, rather than higher, rate of jobs growth is associated with greater productivity growth suggest that steady rather than rapid jobs growth is more beneficial for productivity growth. These findings are consistent with a set of recursive and interdependent processes involving productivity growth and the stable and predictable matching of labour demand and supply.

Under-employment disproportionately affects women, younger workers and remoter northern and western regions and localities, which tend to have weaker local and regional economies. These demographic and spatial patterns are associated with weaker positions in the labour market. As such, under-employment may be both cause and consequence of labour market disadvantage, compounding low pay and peripheral status in the 'secondary' labour force.

Under-employment appears to be associated both with remote rural areas, but also with high-unemployment urban areas. Local areas with the highest rates of under-employment display a wide range of labour market conditions. Under-employment is, nevertheless, linked to unemployment and employment across local labour markets, but in complex and contingent ways that require further research. Although relationships are weak, where the unemployment rate is higher, under-employment tends to be higher. Where the FTE employment rate is higher, under-employment tends to be lower. These findings suggest that under-employment is, in part, an outcome of weak labour demand.

Our findings point to the underlying role of labour demand in driving up productivity and driving down under-employment. As part-time employment and variable hours become more prevalent in the labour market, it is important that measures of labour demand and supply are able to adequately capture this fluidity and complexity. Existing headline labour market indicators published by ONS are based on jobs and persons. In order to better measure labour demand and supply in the context of prevalent part-time and variable hours, we have created hours-based 'full-time equivalent' (FTE) measures.

To be clear, we are not implying that existing jobs-based measures are flawed in any way – simply that they measure slightly different things to our newly created hours-based measures. Hours-based measures are a complement to, and not a replacement for, existing jobs-based measures. Existing jobs-based measures are crucial in understanding labour market exclusion/inclusion. However, hours-based measures may more accurately reflect aggregate levels of labour demand and supply, which may be important in understanding upward and downward pressures on wages and productivity. Indeed, our empirical analysis reveals that productivity is more closely correlated with hours density than with jobs density. Similarly, compared to the employment rate, the FTE employment rate is more closely correlated with key labour market indicators, in particular jobs density, hours density and under-employment.

4 Perspectives of employer representatives on under-employment and workforce planning

As discussed in Part Two, we engaged with a range of employer representatives managing people within public, private and third sector organisations. Our analysis identified a number or recurring themes as to factors shaping employers' understandings of under-employment and broader approaches to workforce planning.

Business models and customer demand shaped approaches to under-employment

First, the assumptions underlying business models and/or organisational strategy, and how these fed into the capacity of, and strategies adopted by, the HR function were important.

Some employers had taken action to mitigate the risk of under-employment because their business model depended on minimising turnover among employees, reflecting valued skills and/or the tightness of local labour markets (for example, we engaged with hospitality employers in rural areas in Scotland, who feared losing employees who would be difficult to replace). Elsewhere, some larger public and third sector organisations were willing and able to absorb the costs of having large workforces on longer fixed hours contracts, and pointed to investments in workforce planning capacity as a means of reducing the risk of under-employment for most employees.

However, some employers in retail, hospitality and social care saw maximising staffing flexibilities as essential – because their businesses provided time and place-specific, face-to-face services that demanded a large and replaceable workforce at peak times of demand; and/or because their business model was based on minimising access to costly, 'long hours' contracts. Some of these employers acknowledged explicitly that there was a substantial minority of employees who were at risk of under-employment. For example, a representative of a large retailer spoke of pressure from senior management to maximise staffing flexibility by reducing the number of 'long hours' contracts in 'over-contracted' outlets (those with 'too many' staff on full-time and/or long hours contracts). While there was – as with many other employers – an attempt to characterise this as a problem of employees not demonstrating the flexibility to fit with shift demands, there was also an acceptance that under-employment was a problem.

> It definitely comes through loud and clear to me… that people would like more hours and to have larger contracts. Again, it is that agility and that kind of flexibility that we need them to do. More often than not, the hours are there. It's just if they're there when they want to do them. [Retail SCO1]

The same interviewee recognised that, for some employees, being under-employed at the organisation in question meant having to work multiple jobs to earn sufficient money. And it was suggested that the increasing use of shorter hours contracts meant fewer opportunities for learning, development and progression. A representative of a second retailer and a hospitality employer similarly acknowledged that 'some' employees were likely to experience under-employment, but saw this as a product of a combination of peaks in demand for staffing and the limited flexibility demonstrated by some employees (especially people with caring responsibilities).

> There may be people that say, “I want more hours,” but it depends on their flexibility, both in where they want to work and the hours that they commit themselves to. [Retail SCO2]

> So, I think the reason why we can't give more hours is that the availability of hours is all at the same time. So, if the person wants to do hours at a particular time, then we don’t need everybody in at that time, so those additional hours fall out with that. [Hospitality SCO3]

Even hospitality sector employers offering relatively long hours part-time contracts (such as a basic of 30 hours per week) acknowledged that the demand for ‘full flexibility’ in the shifts allocated to staff meant that employees would struggle to find a second job with complementary hours, again creating the risk of under-employment.

Representatives of NHS employers in both of our geographies spoke of the extensive use of ‘bank’ employees to provide flexibility in covering absence, staff shortages and spikes in demand. In both geographies, these interviewees rejected the idea that this could contribute to under-employment. They suggested that the need for 24-7 services to be staffed meant that there was usually ample demand for hours to be filled, but did not acknowledge that a conflict between shift demands and, for example, employees’ caring responsibilities could contribute to a risk of under-employment. Among third sector and for-profit social care employers, there tended to be a similar belief that the sheer volume of work available meant that few employees would report being short of hours, but some of our interviewees acknowledged that fitting shifts with caring responsibilities (especially in female-dominated occupations) could be challenging for some employees.

Employers in these sectors tended to assume that women need or want more flexibility, and that they preferred to work part-time or variable hours. In fairness, where women were a large proportion of the workforce (particularly in social care), interviewees were able to cite a range of workforce planning practices designed to assist employees to manage work and family demands. However, even in these organisations, flexibility for employees had to be balanced with the requests of donors/funders and the needs of service users.

> We are led by client need. We… provide 24/7 services. First and foremost we are building our services around what the clients need, so that will drive all the hours we have available. So internally, say for example, I’ve got eighty hours of care that are required. Potentially I’ve then got two people at forty hours a week but actually you’d be better with four people at twenty hours a week and there’s a number of reasons for that: if somebody’s off sick, or on holiday there’s less time to cover; for the person it’s a better work-life balance. [Social Care SCO1]

Ultimately, for many employers, where there was a clash between fulfilling business needs and offering flexibility on employees’ termd, business needs came first.

The HR function and opportunities for voice shaped approaches to under-employment

Our interviews suggested that there may be a link between managers’ awareness of (and action on) under-employment and the capacity and centrality of the HR function. Those organisations where interviewees were able to describe systematic workforce planning

processes and a well-resourced HR function were generally more likely to prioritise ensuring a good fit between employees' needs and the shifts and hours made available by employers.

Representatives of these (generally larger) employers provided examples of the use of workforce planning and HR metrics at team and business unit level to identify potential mismatches, including: absence levels, turnover (compared within the organisation and against sectoral benchmarks), and in some cases performance data. Employee engagement exercises and employee forums were seen as important in allowing people to voice concerns about working hours. In organisations where trade unions were recognised or there was 'substantial membership, managers reported that constructive relationships with unions provided useful voice and challenge to inform better workforce planning.

However, we also heard of examples of centralised workforce planning focused almost entirely on maximising flexibility to the benefit of the employer and minimising staffing costs. In these cases, financial management trumped HR management, with workforce planning dominated by budgets set from the top down with HR and/or business unit managers given the instruction to stay within budget at all costs and make savings if at all possible.

In some of those organisations that reported most concerns regarding under-employment, this 'financialisaton' of workforce planning was a key feature. A representative of a large hospitality employer expressed frustration at local managers' lack of power to challenge financial imperatives and short-term cost containment strategies.

> It is quite challenging not having any HR leadership in the middle, if that makes sense, because you often get the asset manager saying, "This is what I want to happen." Then [senior management] says, "Make it happen."… That can be very, very frustrating, because although you are a well-paid HR manager you are doing a HR administrators job and moving spreadsheets about. I think it depends what you want in a job. [Hospitality SCO4]

Some other employers in sectors such as retail and financial services described a similar emphasis on the devolution of financial responsibility to stay within staffing budgets to local/business unit level, with cost containment again the dominant priority for workforce planning.

Place and labour supply shaped approaches to under-employment

Place and the availability of labour (in both tight labour markets in the south and rural areas of Scotland) clearly informed workplace practice for some employers. For example, in the South East of England, some employers struggled to recruit, especially for low-paid jobs. This had led some to improve their offer in terms of flexible working (which employers perceived to be in line with the needs and wishes of employees) and emphasise 'growing their own' staff through training and apprenticeship investments, with an emphasis on retention.

> One of the things we do look for is people who are willing to be flexible. So, we're really flexible with them, but then we want people to be flexible. So, and we try and give people opportunities to learn about as many different aspects of the businesses as possible. [Education SE1]

In the same region, a manager of a leisure facility described a constant struggle to hire young people, which meant being extremely flexible, including tolerating employees arriving late, cancelling, or not showing up for shifts..

> …We just have to take who we can get until we come to a point where it's a more attractive job and then we can be a bit more selective. [Leisure SE1]

More often, though, young people and students were seen as an extensive source of cheap, flexible labour. Employers who we engaged with in the central belt of Scotland were generally less concerned by recruitment problems and were less inclined to offer flexibility in terms of hours and shift times. Large pools of students and young people meant that employers in hospitality, retail and entertainment services encountered few recruitment challenges. Some concerns were raised about high turnover rates, but this rarely led to any changes in practice, given the ease with which employees could be replaced.

Students were seen as a crucial part of a flexible workforce for some employers, and the large number of part-time, short hours contracts was made viable by an extensive supply of students who were able and willing to accept flexible hours and a variety of different shifts. But it was acknowledged that those who wanted more hours outside of term time could be left frustrated and under-employed. Employees - or potential employees - who wanted to work but not in the available hours were sometimes characterised as lacking flexibility.

> You've always got that student population that are quite happy, probably, just doing a reasonably low contract if they're trying to tie it in with uni, college, school, whatever the case may be. When those are off, yes, there's absolutely that appetite there for more. [Retail SCO1]

Key issues from the qualitative research with employer representatives

Our interviews with employer representatives confirmed that a complex range of factors play into decision-making on workforce planning and therefore the risks that employees face in terms of under-employment. We found that workplace norms and practices matter. Representatives of some organisations where HR and workforce planning practices were formalised and connected to broader business decision-making were able to articulate how a range of data and employee engagement mechanisms were used to guard against under-employment. Employers who were better able to include the voice of trade unions, employees and other stakeholders in decision-making also seemed better able to consider the costs of under-employment for the organisation and its employees. But others described a 'financialisaton' of the HR function, with cost containment through maximum staffing flexibility the dominant consideration in designing hours and shifts.

These sort of practices reflected the broader business models that shaped the logic of employers' workforce planning decisions. Representatives of organisations whose business was the delivery of (sometimes 24/7, often time and place-specific) labour intensive services were able to make a case that it was challenging to provide longer hours contracts while also staffing peaks in demand from customers. But some employers clearly have under-employment hardwired into their workforce planning, driven by their commitment to minimising cost to the organisation while demanding full flexibility on the part of employees.

Importantly, we found that employers could be persuaded to re-balance flexibilities and give ground to their employees where labour market conditions demanded. So, whereas organisations in urban labour markets with access to plentiful, inexpensive labour were content to absorb the turnover and disengagement sometimes caused by under-employment, those employers who struggled to recruit in tighter labour markets were more likely to offer flexibilities to retain employees. It is beyond the scope of this report, but we should also note that many of our interviewees described how they were in the midst of significant reforms to work organisation in response to the COVID19 crisis, with changes to shifts and a move to homeworking common. The lesson is that seemingly 'essential' and deeply embedded components of HR and workforce strategies can be challenged when the need arises.

5 Implications and insights for policy

The final part of our report combines insights gathered from our Chatham House-style engagement with policy stakeholders, with a broader review of conclusions, insights and implications for policy arising from our research and extant evidence.

Reflections on our quantitative analysis point to two recommendations. First, strong labour demand and low levels of unemployment and under-employment are linked with greater local productivity, therefore local economic development focused on increasing average hours of work and the creation of 'good jobs' or 'fair work' are required to boost labour utilisation and productivity in less buoyant labour markets. The increasing focus of policymakers in Scotland and Wales on such a fair work agenda is therefore welcome, and promoting better jobs should be a priority for strategies at all levels of government. We also need post-COVID19 strategies that have a target of delivering sufficient hours of work so that people get the hours and pay that they need without impacting negatively on the numbers of part-time jobs. There is no point in eliminating under-employment, only for more people to experience unemployment. Given sectoral concentrations of under-employment, the diversification of the sector base in weaker labour markets is also a priority. Second, to inform our understanding of labour market slack, hours-based or 'full-time equivalent' measures of employment and unemployment rates and jobs/hours density should be developed and published by ONS in addition to existing conventional jobs-based measures.

Reflections on our qualitative research raised a number of specific challenges for policy. First, we found that some organisations have under-employment 'hardwired' into their workforce planning practices because of overarching business models predicated on maximising flexibility (on the side of the employer) and minimising staffing costs. The embedded nature of such priorities may require a regulatory response that makes more demands of employers to justify their use of short hours contracts. A broader policy agenda might focus on encouraging employers and investors to consider more 'stakeholder-oriented' business models, which allow for a range of voices in decision-making processes and have a longer-term focus of the contribution of the organisation and its people to value creation.

More specifically, our findings point to under-employment problems in organisations where there has been a 'financialisaton' of the HR function and where there is little HR capacity to challenge cost containment strategies driven from the top down. We should welcome the work of professional bodies such as the Chartered Institute for Personnel and Development in seeking to strengthen HR capacity and workforce planning capabilities within organisations, and there may be scope for national and regional policymakers to support and engage with this agenda.

In organisations where managers argued that they had addressed under-employment with some success, they pointed to effective practice including the use of employee engagement exercises, staff experience forums and partnership-working with trade unions, alongside investment in robust workforce planning systems. It is important that we are able to share such good practice. In more general terms, our findings on the importance of employee voice, and in some cases trade union representation, in alerting employers to problems of under-employment and offering constructive challenge point to the need for policies that help to facilitate union organising and collective bargaining.

A more immediate supply-side policy response might involve investment in further education and training to ensure that young people and other vulnerable groups have the opportunity to upskill as a route out of under-employment and low-skilled sectors. And within workplaces, employers need to think about the learning investments needed for multi-skilling, so that employees can be attached to multiple roles and so access an increased range of shifts.

A strong message from our policy stakeholder event focused on the gendered components of the under-employment problem. It is clear is that women are more likely to experience under-employment than men, and that sectors that employ more women tend to have more under-employment. There is a mismatch between the flexibility that female carers are offered and what they want (e.g. many women are unable to take up additional hours because shifts do not fit domestic caring responsibilities). Policy solutions need to address the unequal distribution of unpaid domestic labour, flexible childcare provision outside standard hours and more support for breakfast/after school clubs to enhance the choices open to women with caring roles. More broadly, the undervaluing of the unpaid labour characterised as 'caring' and mainly carried out by women needs to be acknowledged. Our engagement with policy stakeholders also prompted calls for further research on inter-sectional nature of under-employment and impacts on other potentially vulnerable groups such as disabled people and BAME workers.

Finally, despite the substantial challenges in influencing workplace practice in this area, we have seen that – even within the parameters of defined business models – there is considerable scope for employers to make choices that can support or constrain people's ability to access fair work and the right hours. Some of the employers who we engaged with were willing to demonstrate flexibility to retain employees in tight labour markets. Many spoke of how the COVID19 crisis has seen changes to employer-supported flexibility (e.g. in working hours and homeworking), alongside the radical and rapid reorganisation of workplace and management practices. Many of the fundamentals of work organisation – including the times and places where people are needed – will be permanently altered by the coming restructuring of the UK's key service sectors. The rebooting of our economy may offer an opportunity to arrive at fairer workplace practices that match people more effectively to hours and shifts. Employers and their employees, trade unions and stakeholders, and policymakers at national and regional levels have important roles to play in agreeing the actions that can help us to build back without under-employment.

Endnotes

1 ONS Regional Productivity Time Series (RPRD); GVA per hour reported in RPRD; % growth figures based on authors' calculations.

2 Authors' calculations using 3-year pooled Annual Population Survey micro dataset January 2016 to December 2018; accessed via UK Data Service.

3 ONS Jobs Density data series comprising workplaces of employees, self-employed, government-supported trainees and HM Forces, as a proportion of residents aged 16-64 from ONS population estimates; accessed via Nomis.

4 Mean hours wanted per unemployed person is assumed to be equal to mean hours worked + extra hours wanted by employed persons in each NUTS3 region.

Appendix 1 – Organisations participating in the qualitative research

Scotland organisations

ORGANISATION	AREA OF WORK	SECTOR	SIZE	NATURE OF UNDER-EMPLOYMENT CHALLENGE
Retail SCO1	Food/general retail	Private	Large	Substantial problem for staff
Retail SCO2	Food/general retail	Private	Large	Potential problem for some staff
Health care SCO1	Health care support	Third	Medium	Potential problem for some staff
Social care SCO1	Social care	Third	Large	Potential problem for some staff
Social care SCO2	Social care	Third	Small	Potential problem for some staff
Social care SCO3	Social care	Third	Small	Potential problem for some staff
Public SCO1	Health care	Public	Large	Effective mitigation in place/possible problem
Public SCO2	NDPB	Public	Small	Effective mitigation in place/possible problem
WebEnt SCO1	Internet/entertainment	Private	Large	Effective mitigation in place/possible problem
Hospitality SCO1	Hotel/hospitality	Private	Large	Substantial problem for staff
Hospitality SCO2	Hotel/hospitality	Private	Large	Substantial problem for staff
Hospitality SCO3	Hotel/hospitality	Private	Small	Effective mitigation in place/possible problem
Hospitality SCO4	Hotel/hospitality	Private	Medium	Potential problem for some staff
HospitalityTech SCO1	Hospitality IT services	Private	Medium	Effective mitigation in place/possible problem
Business SCO1	Business services	Private	Small	Effective mitigation in place/possible problem
FinServices SCO1	Financial services	Private	Large	Effective mitigation in place/possible problem
FinServices SCO2	Debt management	Private	Medium	Effective mitigation in place/possible problem

South East England organisations

ORGANISATION	AREA OF WORK	SECTOR	SIZE	NATURE OF UNDER-EMPLOYMENT CHALLENGE
Retail SE1	Office/electronics	Private	Micro	Effective mitigation in place/possible problem
Social Care SE1	Social care	Third	Large	Potential problem for some staff
SupportServ SE1	Support services	Third	Medium	Potential problem for some staff
YouthServ SE1	Youth services	Third	Medium	Potential problem for some staff
Education SE1	Training/education	Third	Small	Potential problem for some staff
TradeUnion SE1	Trade union office	Third	Small	Potential problem for some staff
Public SE1	Logistics	Public	Medium	Effective mitigation in place/possible problem
Public SE2	Health care	Public	Large	Potential problem for some staff
Hospitality SE1	Food and drink	Private	Small	Effective mitigation in place/possible problem
Hospitality SE2	Food and drink	Private	Micro	Effective mitigation in place/possible problem
Leisure SE1	Fitness/leisure	Private	Medium	Substantial problem for staff