The Data Deficit

Why a lack of information undermines the UK skills system
March 2018
Executive summary

Skills: a story of persistent policy failure

Skills: a story of chronic information failure

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This report, the first from the new Centre for Progressive Policy, looks at a longstanding policy problem in the UK – skills. For decades we have recognised the importance of skills in driving productivity, improving the living standards of households, and enabling individuals and communities to respond to new opportunities and manage the risks of structural economic change. But successive governments have failed to establish a stable and effective skills system.

The Centre for Progressive Policy provides new analysis on the extent to which the post-16 education and training system is undermined by a series of chronic information failures. Our analysis focusses on England (skills is a devolved matter for Scotland, Wales and Northern Ireland) and applies the following definitions throughout the report:

**Further Education:** While there is no commonly accepted definition of Further Education, this report follows the definition used by government: “Further education (FE) includes any study after secondary education that’s not part of higher education (that is, not taken as part of an undergraduate or graduate degree).” ¹ For the types of further education courses included in the mismatch analysis presented in the case studies of D2N2 and TVB LEPs please see the appendix.

**Higher Education:** Higher education qualifications include diplomas, bachelor degrees, foundation degrees and postgraduate degrees.² Higher Education Statistics Authority (HESA) destinations data used throughout this report includes relevant higher education qualifications whose study was full-time or part-time.³

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¹ See government guidance on further education courses and funding. Available at: [https://www.gov.uk/further-education-courses](https://www.gov.uk/further-education-courses)
² See government guidance on higher education courses. Available at: [https://www.gov.uk/higher-education-courses-find-and-apply](https://www.gov.uk/higher-education-courses-find-and-apply)
³ See HESA survey coverage for a list of all excluded courses. Available at: [https://www.hesa.ac.uk/collection/c16018/coverage](https://www.hesa.ac.uk/collection/c16018/coverage)
Executive summary
Skills: a story of persistent policy failure

The skills system in the UK is an example of chronic policy failure. For decades, the fragmented array of institutions, funding arrangements, incentives and accountability mechanisms have not provided learners with the skills they need to access highly paid jobs, or businesses with the workers they need to grow. The system suffers from comprehensive market failure, seemingly unable to bring together the supply and demand for skills. Launching the major review of post-18 education in February, Theresa May lamented the “wasted human potential” this has caused.¹

Our inability to equip people with the type and level of skills they need has helped to accelerate the shift to a more polarised labour market. While the UK is a global leader and net exporter of higher education, there is huge variation in the access to and quality of post-16 education and skills. Despite government attempts to drive productivity through skills, the inability of the system to respond has helped to incentivise businesses to rely increasingly on low-skilled, low value-added labour – often accompanied by the kind of precarious working practices that have been the subject of recent review.

Nearly half of all graduates now do not go on to graduate jobs and employers are struggling to fill almost one in every three vacancies for core technical jobs due to a lack of available skills

Failure to ensure businesses have access to high quality skills has also deepened regional imbalances and compounded other social, economic and political problems, notably the sense that many people have been ‘left behind’. Peel back the layers of many current debates on our economic position post-Brexit – whether our openness to trade and immigration or the yearning for more ‘inclusive growth’ where the economy works for everyone – and skills will be at the core.

In the policy community, ‘skills’ is a term that quickly narrows to institutional structures, qualifications and funding mechanisms. But underneath our managerial understanding of these systems and processes are broader ideas and identities, including class, culture and sense of self-agency, that are intrinsically bound to the efficacy of programmes and policies. These intangible issues cut across policy agendas and local, sub-regional and national bureaucratic boundaries. Even under new (albeit limited) devolved, place-based policy and investment arrangements, the question of how we create a more effective and responsive ‘skills system’ remains elusive.


² Core technical roles are defined as those linked to technical education with an average qualification of level 3 or above, as identified by average highest qualification held in the Labour Force Survey


Number of vacancies employers are struggling to fill for core technical jobs due to a lack of available skills

The complexity of the skills agenda is further intensified by path dependency. Successive governments have presided over increasingly centralised attempts to bring together the supply and demand for skills. In so doing they have created a post-16 education system that does not deliver. In over-promoting higher education, nearly half of all graduates now do not go on to graduate jobs within 5 years and employers are struggling to fill almost one in every three vacancies for core technical jobs⁵ due to a lack of available skills. Policy makers continue to scratch their heads as to how we solve the productivity problem in the face of a skills market characterised by three types of failure:

- **Market failure**: The system’s incapacity to effectively bring together the supply of skills flowing from FE colleges and other providers with employer demand
- **Policy failure**: Policymakers, despite successive attempts at reform, have been unable to drive a significant shift in outcomes, destabilising the system for few discernible gains
- **Information failure**: Arguably the root cause of market and policy failure, a lack of information on a range of aspects of the system – from course quality to expected salary outcomes – prevent optimal decisions from being made by learners, providers and policymakers alike.

“We can no longer afford to accept mediocrity on such a grand scale. We cannot allow this state of affairs to continue. Things have got to change.”

Sir Michael Wilshaw, former chief inspector of schools in England
Skills: a story of chronic information failure

This report, the first from the new Centre for Progressive Policy, argues that for the UK’s skills system to function properly, we must tackle the pervasive information gaps currently preventing optimal outcomes.

As a prospective learner, which course will set me up with the best job and earning prospects, and at which institution? As a policymaker, should I incentivise the provision of certain courses over others? If so, where? As an employer, how do I go about finding people with the skills I need to grow my business? What role should I play in the skills system and will engagement pay off for my company?

Piecemeal efforts to ‘fix’ structural weaknesses, ensure ‘parity of esteem’ between technical and non-technical routes, or create qualifications which have little or no reference to the needs of employers have done little to address these information failures. Unless we can tackle the root causes of the system’s problems, we will continue to look across to our key competitors, notably Germany, with bemused admiration.

This report presents four key insights that can ease chronic information failures and drive improved outcomes across the system. These are: the wage differentials myth; the potential for significant increases in incomes; the persistent technical skills shortages; and, the importance of place-based skills policy.

These four key insights – when used as a basis to address crucial information failures in the system – will help to bring the supply of skills in line with demand from employers and enable people to identify routes into high paying careers. We believe that, in time, this will allow places to strengthen their offer to investors, create additional quality jobs and empower people to contribute and benefit from growth. The Centre for Progressive Policy is working with local and combined authorities to apply data-driven analysis and make inclusive growth a reality.

The UK desperately needs a skills system able to attract inward investment, help people into high quality careers and increase prosperity for all. This report recommends:

- **Enhancing data and information across post-16 education, skills and careers advisory, especially through:**
  - FE and HE destinations data published at five-digit SOC code level to give sufficient granularity to existing destinations data. This must be done at the local and regional level, as part of – or in addition to – the ESFA Localities Data Cube
  - Comparable measures of FE and apprenticeship course quality, readily available and easily accessible, by qualification type and institution
  - Easier access to the ESFA Localities Data Cube, so that local and sub-regional policy makers, as well as third parties, can assess the demand for skills and inform a range of cross-cutting policy and investment decisions

- **Place-based, data-driven commissioning through devolved skills funds:** so as to better align post-16 provision with local labour market needs

- **National and local government to work with business-led initiatives, such as ‘Be the Business’**: designed to promote productivity enhancing behaviours amongst firms and provide another route to encourage employer engagement and investment in workforce training; and,

- **Investing in the national and regional evidence base**: on how different education and training inputs lead to productivity and competitiveness outcomes

Successive attempts at structural reform – whilst in some instances positive – have not been accompanied by the necessary levels of information for them to work successfully. Key to this is recognising that while there are problems with the skills system, there are plenty of examples of excellent courses and qualifications. To root out the poor provision and allow the good to flourish requires bridging the informational failures described in this report.
The data deficit: four key insights

1. **Wage differentials myth:** This report presents evidence which debunks the myth that higher education is the sole route to high earnings. Analysis suggests that at least 75,400 higher education students who graduated in 2015/16 were in non-graduate roles six months later. The average advertised salaries of these non-graduate roles done by graduates was £25,560 in 2017, lower than for more than two thirds of the 54 occupation groups identified by CPP as linked to technical education. Adding in those who graduated in 2015/16 and were unemployed 6 months later, this suggests that every year at least 92,800 higher education graduates could have been better off choosing the technical route instead.

2. **Potential for significant increases in incomes:** The potential increase in incomes across the country of helping more people access high quality technical education is considerable. In 2017 there were 1.4 million postings in the UK for core technical roles, with an average salary of £34,800 – a premium of £9,240 per year over the average advertised salaries of the non-graduate jobs being done by graduates. Arguably more important from an inclusive growth perspective is helping people access these jobs who otherwise would not have entered higher or further education. At £21,150 per person, the potential salary increases on offer for people moving from Living Wage occupations paying £13,650 into these types of technical jobs is significant.

3. **Persistent technical skills shortages:** The steady march of higher education towards 50% participation has been matched by the growing proportion of graduates in non-graduate roles. Both now sit at up to 49%. At the same time, skills shortage rates for skilled trades roles have remained stubbornly 10–15 percentage points above those for all other occupation groups. Supplying the skills for these types of roles continues to be a challenge. The productivity strategy of successive governments of boosting the numbers of graduates has been misguided, failing to get to grips with the highest rates of skill shortages, particularly in manufacturing which makes the highest contribution to national productivity.

4. **Importance of place-based skills policy:** National skills shortage analysis does not tell the full story, with significant skills shortage rate variation at the Local Enterprise Partnership (LEP) level. The skills shortage rates for skilled trades roles, for example, is as high as 73% in the Black Country LEP and as low as 26% in Cheshire and Warrington LEP. The salaries on offer for various technical job groups also varies by LEP area. Case studies of the supply and demand of technical skills in D2N2 and Thames Valley Berkshire LEPs show that in some instances provision could be better aligned, both with the needs of local businesses and with the opportunities for high wages that technical education can offer. This can be done through regional skills commissioning, with local areas able to incentivise courses in particularly high demand among employers through adjustments to funding tariffs.

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7 This figures uses a lower percentage for graduates in non-graduate jobs than that reported by the ONS. For methodology please see the appendix.
8 Based on a minimum wage 35 hour a week job
9 The Labour Force Survey puts the percentage of working graduates in non-graduate roles at 49% for 2017 Q3. CPP analysis of HESA Destination of Leavers of Higher Education survey data gives a figure of 33% for 2015/16 graduates six months after graduation. For more details, please see the appendix.
10 The percentage of vacancies that employers struggle to fill due to skills shortages
11 Interestingly, there is very little correlation between skills shortage rates and average advertised salaries for skilled trades roles, which also perhaps suggests the presence of market failure.
Introduction
A story of persistent policy failure

Despite generations of institutional and structural reform, vocational education in the UK has left learners without the skills they need to access highly paid jobs, businesses without the workers they need to grow and local economies without the inclusive productivity gains they need to ensure living standards continue to improve.

“The continued rise in job vacancies is further confirmation of the chronic skills shortages faced by businesses across the UK. Our own survey data confirms that the lack of available workers with the right skills continues to be a drag on overall business activity.”

British Chambers of Commerce

As far back as 1887, Sir Bernhard Samuelson wrote in the report of the Royal Commission on Technical Instruction, “I will conclude this somewhat hasty review with an expression of the hearty wish that our people throughout the country may at length arrive at a full sense of our educational deficiencies, and at the determination that they shall cease to exist.” 131 years and countless reports later it seems we are no closer to fulfilling Samuelson’s hearty wish.

Among 16 to 19-year-olds, the Wolf Review estimated that at least 350,000 get little to no benefit from the post-16 education system

Professor Alison Wolf sums up the general failure of the contemporary system succinctly in her 2011 review of vocational education: “The staple offer for between a quarter and a third of the post-16 cohort is a diet of low-level vocational qualifications, most of which have little to no labour market value. Among 16 to 19-year-olds, the Wolf Review estimated that at least 350,000 get little to no benefit from the post-16 education system.”

The 2016 Review of Technical Education, this time led by Lord Sainsbury, is no less condemnatory, concluding “Whatever their background, individuals need access to a national system of technical qualifications which is easy-to-understand, has credibility with employers and remains stable over time. Our current system fails on all these counts.”

This failure to build an effective skills system has far-reaching consequences. It lies at the heart of much of the economic discontent that continues to grind away in the background of the nation’s consciousness, peaking at key moments in the long aftermath of the financial crisis. It is central to understanding the prevailing sense among whole communities that they have been ‘left behind’, unable to access the economic gains offered by the rapid onward march of globalisation and technological development. Viewed through this lens of chronic skills system failure, the gradual emergence of protectionism and economic nationalism is perhaps unsurprising.

The situation on living standards is such that millennials may well be the first generation for more than a century to be worse off than the generation before them. Research by the Resolution Foundation suggests that millennials have not yet achieved incomes that are higher than those of Generation X at the same age. Added to this is an increasing level of precariousness – now faced across all age groups – in access both to housing and to secure employment.


16 Those people born between 1981 and 2000

And so attention has once again turned to turned to skills reform. Despite governments’ disappointing record, policy makers are right to invest their faith – and public money – in skills. Done right the UK’s skills system has the potential to unlock the kind of productivity growth the economy desperately needs. Yet it will need to rely on more than faith to succeed. While there exists a general agreement that skills are central to the problem, judging by the repeated failed attempts at reform, the connection is not fully understood.

Even then, the challenge of bringing more people into and progressing within the labour market cannot be met through the skills system in isolation. Effective skills strategies will hinge upon effective integration with employment services, welfare, health, provision of affordable childcare, housing, planning and transport, connecting people to quality jobs. Managing this complexity will require place-based solutions that respond to local variation, connect into regional industrial strategies and are supported by national funding and accountability frameworks.

The major review of post-18 education recently announced by government represents an admission that the education and skills market is not working. The near uniform price of all degree courses is just one example of market signals failing to aid decision-making. There also appears to be only weak market incentives for HE providers to compete for students on course quality, with an NAO study finding “a provider moving up five places in a league table gains just 0.25% of additional fee income through increased student numbers.”

It is therefore right that this is being reviewed, yet the absence of 16–18 education is problematic, given that an effective transition from 16–18 to post-18 education – and on into lifelong learning – is vital for achieving the best outcomes. In excluding 16–18 education from its scope, the review risks deepening the divide and exacerbating the problem.

“There is no meaningful price competition in the sector to drive down prices for the benefit of the student and taxpayer. When the government introduced higher fees in 2012, it expected price competition to drive fees to an average of £7,500. In 2016, 87 of the top 90 English universities charged the maximum permissible fee of £9,000 a year for all courses.”

National Audit Office

Why haven’t we solved the skills policy problem?

Why has this area of public policy so persistently and so egregiously fallen short? It certainly is not due to a lack of government intervention. In fact, the skills system has become something of a policy playground, characterised by lots of tinkering but little stability. A recent Institute for Government report found that “In the FE sector, since the 1980s there have been 28 major pieces of legislation, 48 secretaries of state with relevant responsibilities, and no organisation has survived longer than a decade.”

Repeated attempts at reform, rather than improving outcomes, have acted to destabilise the sector and compromise the ability of those working in it to deliver the best results.

The history of institutional reform in the skills system is littered with initiatives. In terms of qualifications, NVQs, GNVQs, AVCES, applied A-levels, advanced diplomas, technical awards, tech levels and tech certificates have all been introduced since 1986 with little meaningful effect. Numerous national agencies have come and gone, from the Manpower Services Commission introduced in 1973 to the UKCES abolished last year, with the Training Commission, Training Agency, Further Education Funding Council, Young People’s Learning Agency, Skills funding Agency and the Education Funding Agency in between. We now have the Education and Skills Funding Agency and the Institute for Apprenticeships and Technical Education. How long will these last, and what impact will they have? A multitude of local level organisations came and went over the years in quick succession, including Area Manpower Boards, Training and Enterprise Councils and Learning and Skills Councils.

More recently, Regional Development Agencies and now Local Enterprise Partnerships have seen changing emphases in their role on skills commissioning, with institutional reform helping to keep decision-making in practice highly centralised. Only a few local areas with devolution deals or (to a lesser extent) City Deals have seen any flexibility on skills. Even then, discretion over the Adult Education Budget, for example, is small in comparison to total local capital and current expenditure on post-16 education and skills and comes on top of the FE sector losing a third of its budget in recent years (2010–2015).

The percentage of colleges operating in deficit has risen from 20% in 2010/11 to 55% in 2015/16.
The financial pressure on the sector has had a deleterious impact, reducing any incentives FE colleges might have had to respond to local economic need and fulfil their potential as a powerful agent for more inclusive local growth. Whilst this has started to shift in recent months, the fact remains that many colleges have become national in scope, not just local or regional, as they have looked to shore up their balance sheets. The opportunity of the Area Based Reviews, conducted in 2015 and 2016, was largely lost as a means to identify the extent to which local provision had the capacity to meet existing and emerging demand for skills. Instead it became an exercise in financial viability assessment, and was also dogged by lack of data and information. There are innovative examples of FE colleges adapting to these pressures (see page 27), and – in so doing – improving their offer to learners, but the challenges for the sector are sustained and significant.

Politically, it remains the case that – at a national level, at least – we have not been serious about Further Education. Despite repeated attempts at reform, the rhetoric of parity of esteem and the rebranding of apprenticeships as the big idea of successive Prime Ministers, we have never truly believed in and fully backed the role of the sector to transform life chances, drive the productivity of places and really be the ‘engine of growth’ it has been ascribed to be. In practice, policy makers have prioritised increasing higher education participation as a central tenet of productivity and competitiveness. Latest reforms go some way to shifting this culture (see page 31), but the skew of political interest away from FE and towards HE may go some way to explaining the disappointing record of reform in technical education.

The data deficit: why lack of information undermines the skills market

For an individual entering post-16 education, decision-making is still based largely on a hunch, driven by cultural myths, social networks and incomplete information. A lack of accurate price signals, quality indicators and outcome measures across technical education – and, in important respects, higher education – have led to a breakdown of what claims to be a demand-led system.

Key data deficiencies, for individuals and policymakers across the post-16 education and training landscape, include:

- **Course quality**: There is very little data to guide decisions based on course quality. If an individual chooses a specific course, is there a good chance that he or she will gain high quality, relevant skills?
- **Institution quality**: Similarly, there is an information failure surrounding the quality of different institutions. If an individual wants to study a certain subject in a certain town, which college in the area offers the best option?
- **Local demand**: Individuals face information failures over which types of courses (e.g. hair dressing or engineering) will set them up with good job prospects in their area. Readily available data of how many jobs there are relative to how many courses are being completed would allow individuals to make informed decisions based on realistic job prospects.
- **Career prospects**: Very little is known about how career prospects vary by course subjects and how earnings might progress as people develop within an occupation.
- **Productivity impact**: At the margins, our understanding of how different qualifications impact on productivity is still sub-standard. For example, at the national level is it preferable to get more people doing A-level maths or BTEC science? Regionally, areas do not yet have comprehensive means to effect policy or investment change to boost productivity, even if they have sufficient evidence of what this change should look like.

The percentage of colleges operating in deficit has risen from 20% in 2010/11... to 55% in 2015/16...
The importance of careers advisory for addressing the first four of the above information gaps should not be understated. The historical failure of careers guidance in the UK – “patchy and inconsistent”\(^23\) by the government’s own admission – has acted to compound the failings of the skills system. The UK has long been operating with skeletal careers advisory, unable to provide guidance in an engaging way both to those starting out and those looking to reskill and change career direction. Careers guidance has often been in the fine print of devolution deals, but there has been little innovation and many areas are yet to get anything substantial off the ground.

The careers guidance strategy published by the government in late 2017 creates an opportunity for progress.\(^24\) The requirement for more and better outcomes data – indicated in the industrial strategy too – with the new Skills Advisory Panels tasked to produce “rigorous analysis of the current and future supply and demand for skills and help areas form a clearer understanding of their skills requirements”\(^25\) is a step in the right direction. But its success will hinge on the nature of the data and how it is used to effect real world change.

“Success in the skills system is about a million different decisions made every day, by companies, learners and providers. The goal should be to set a market framework that helps these decisions to go the right way. Not another programme where government designs provision which generates numbers – but doesn’t lead to career progression or economic growth”.
Confederation for British Industry\(^26\)

A national skills system that meets the aspirations of young people and adults, meets the needs of our employers and drives productivity and shared prosperity as a result, hinges on tackling endemic data deficiencies so that local commissioning and individual learners’ decisions are backed up by the kind of robust labour market intelligence presented in this report.

“The adult skills system is experiencing a market failure, because it is not sufficiently led by employer demand, and businesses are not properly incentivised to invest in the skills of their existing workforces”
Core Cities UK, Invest, Reform, Trust (September 2017)

This is not to say that structural reforms are irrelevant for driving improvements in outcomes. Some structural reforms – particularly those to simplify the FE qualifications landscape following the Wolf and Sainsbury reviews – have been important steps forward. However, it is key that alongside these reforms we enhance learners’ and policymakers’ abilities to make better decisions within the system.

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\(^{24}\) See also the associated guidance for schools from January 2018 and for colleges from February 2018


The wage differentials myth
Ever-increasing participation in higher education

While ministers have been tinkering with institutions, higher education has focused on reaching ever higher levels of participation. The UK’s productivity strategy – as far as education is concerned at least – has since the 1990s largely focused on getting more people into university. This has resulted in a rapid increase in the number of people gaining university degrees, with 50% participation in higher education a flagship education target for the Blair government. At 49% for 2015/16, this target is within touching distance. With UCAS reporting that the rate of 18-year-olds in England applying for university have reached a record high, this trend looks set to continue.  

The rate of recent (and non-recent) graduates in non-graduate roles has closely tracked the rising participation rate in higher education. What’s more, the percentage of professional vacancies employers that have struggled to fill due to skills shortages has risen from 19% in 2011 to 32% in 2015. Besides the 1990s boost to productivity that some have attributed to the growth in higher education participation, productivity has not increased with more graduates. Research has also suggested that after the student loan repayment threshold rises to £25,000 later this year, 83% of graduates will not have fully repaid their loans by the time they are written off by the government.  

It seems now is the time to ask, have we reached peak HE?

![Over 9 in 10 parents agree apprenticeships are a good option for young people...](image)

...but only a third think it is best for their child

The rate of recent (and non-recent) graduates in non-graduate roles has closely tracked the rising participation rate in higher education

![Higher education initial participation rates (HEIPR) vs % recent and non-recent graduates in non-graduate roles](image)

This strategy has contributed to the highly damaging cultural myth that the academic route (A-Levels followed by a university degree) is the only pathway to prosperity. It is an assumption that is beginning to be challenged at the edges by consistent calls for ‘parity of esteem’ between the technical and academic routes. Yet it still holds considerable sway. Polling conducted by Demos for a report in 2015 accurately articulates this sentiment, finding that “Over 9 in 10 parents agree apprenticeships are a good option for young people, but only a third think it is best for their child.”

“There remains a perception that going to university is really the only desirable route, while going into training is something for other people’s children.”

Prime Minister Theresa May

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28 For example, see Corry, D. et al. (2011), UK Economic Performance Since 1997: Growth, Productivity and Jobs. London: Centre for Economic Performance, LSE. Available at: [http://eprints.lse.ac.uk/47521/1/CEPS71.pdf](http://eprints.lse.ac.uk/47521/1/CEPS71.pdf)
31 Labour Force Survey, recent graduates are those which graduated within the last 5 years, non-recent graduates are those which graduated more than 5 years ago. See appendix for a discussion of estimations of graduates in non-graduate roles
A graduate premium?

Strongly related to the continued rise in university participation is the persistent information failure on wage differentials between the technical and academic routes. Most troublingly, there is an assumption in the UK that university is the sole route to high earnings. Even the almost trebling of student fees to £9,000 in 2012 has not dissuaded ever larger numbers of students entering higher education in pursuit of graduate employment and higher salaries.35

“With a system where almost all [Higher Education] institutions are charging the same price for courses – when some clearly cost more than others and some have higher returns to the student than others – it is right that we ask questions about choice and value for money.”
Damian Hinds, Education Secretary36

Salary data shows that graduate salaries are indeed generally higher than those for technical groups. But crucially, by some estimates, only 51% of recent graduates in work are employed in graduate jobs.37 Higher education is an important route into high paying occupations, but having a degree is no guarantee of getting these jobs.

Average advertised salaries for the non-graduate roles done by graduates was £25,560 in 2017. This figure is lower than for more than two thirds of the 54 occupation groups identified by CPP as linked to technical education, suggesting that every year at least 92,800 higher education graduates could have been better off choosing the technical route instead. Students of the above degree subjects (see Chart 1) go on to roles with the lowest average advertised salaries. They appear to be particularly at risk of not progressing into graduate employment and finding themselves in low paying non-graduate roles.

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34 Centre for Progressive Policy analysis of Burning Glass Vacancy Data and HESA Destination of Leavers Survey 2017 by JACS principal subject at the 4 digit soc code level. The data shows that jobs being done by those who graduate from ‘Theology and religious studies’ higher education courses, for example, were in jobs six months later that had average advertised salaries of £29,600.

35 Labour Force Survey, figures are for English-domiciled 17 to 30 year olds


37 The Labour Force Survey puts the percentage of working graduates in non-graduate roles at 49% for 2017 Q3. CPP analysis of HESA Destination of Leavers of Higher Education survey data gives a figure of 33% for 2015/16 graduates six months after graduation. For more details, please see the appendix.

38 This figure uses a lower percentage for graduates in non-graduate jobs than that reported by the ONS. For methodology please see the appendix.
Unfortunately, a similar calculation for FE learners is not possible as destinations data is not available at the four-digit SOC code level. However, it seems reasonable to assume, given high levels of technical skills shortages, that progression into related work from FE courses can be significantly higher, allowing learners to earn salaries well above those enjoyed by graduates in non-graduate employment, without anything like the levels of debt.

The advertised salaries of jobs linked with different degree subjects varies significantly, a finding consistent with research on graduate earnings published by the IFS. While those in graduate employment do tend to earn more than those in technical occupations, there is significant crossover in terms of average advertised salaries of the two. Chart 2 above shows where the majority of the cross over between the lower paying graduate groups and the higher paying technical occurs (between average advertised salary band of £30,000–£40,000 per year).

Key technical occupations such as IT technicians and telecommunication engineers – achievable via FE – have advertised salaries in excess of occupation groups that traditionally flow from higher education, like media professionals. The implications for the individual, and for anyone associated with promoting inclusive growth, are that technical education can move people up the earnings spectrum to levels normally associated with graduate positions. The ‘graduate premium’ is by no means guaranteed and it is clearly not the case that a degree is the only path to prosperity.

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**Chart 2: Technical and graduate occupation groups with average advertised salaries of £30,000–£40,000, UK, 2017**

<table>
<thead>
<tr>
<th>Technical occupations</th>
<th>Graduate occupations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chartered and certified accountants</td>
<td>£39,000</td>
</tr>
<tr>
<td>Conservation and environmental professionals</td>
<td>£38,900</td>
</tr>
<tr>
<td>Standards/regulation inspectors and health and safety officers</td>
<td>£38,300</td>
</tr>
<tr>
<td>Natural and social science professionals</td>
<td>£37,200</td>
</tr>
<tr>
<td>Nursing and midwifery professionals</td>
<td>£36,100</td>
</tr>
<tr>
<td>IT engineers and technicians</td>
<td>£35,500</td>
</tr>
<tr>
<td>Telecommunications and tv/audio engineers</td>
<td>£35,500</td>
</tr>
<tr>
<td>Protective services</td>
<td>£35,400</td>
</tr>
<tr>
<td>Counsellors</td>
<td>£35,300</td>
</tr>
<tr>
<td>Media professionals</td>
<td>£35,200</td>
</tr>
<tr>
<td>Therapy professionals</td>
<td>£35,100</td>
</tr>
<tr>
<td>Business and related associate professionals</td>
<td>£34,800</td>
</tr>
<tr>
<td>Bricklayers and masons</td>
<td>£34,200</td>
</tr>
<tr>
<td>Plumbers, pipe fitters and energy technicians</td>
<td>£33,800</td>
</tr>
<tr>
<td>Electricians and electronic trades/technicians/engineers</td>
<td>£33,700</td>
</tr>
<tr>
<td>Teaching and educational professionals</td>
<td>£33,600</td>
</tr>
<tr>
<td>Conservation and environmental associate professionals</td>
<td>£32,300</td>
</tr>
<tr>
<td>Vocational and industrial trainers and instructors</td>
<td>£32,300</td>
</tr>
<tr>
<td>Accountancy and finance technicians/analysts/advisors</td>
<td>£32,300</td>
</tr>
<tr>
<td>Rail and road construction and maintenance</td>
<td>£31,800</td>
</tr>
<tr>
<td>Engineering and planning/process/production technicians</td>
<td>£31,500</td>
</tr>
<tr>
<td>Air-conditioning and refrigeration engineers</td>
<td>£31,400</td>
</tr>
<tr>
<td>Other construction trades</td>
<td>£30,600</td>
</tr>
<tr>
<td>Carpenters, joiners and woodworkers</td>
<td>£30,500</td>
</tr>
<tr>
<td>Sales and retail</td>
<td>£30,300</td>
</tr>
</tbody>
</table>

---

39 Centre for Progressive Capitalism, Burning Glass job vacancy data. The graduate group data in Chart 2 is the average advertised salaries of jobs linked to higher education courses, meaning they are graduate in nature. This contrasts with Chart 1 where the advertised salaries are the weighted average for the jobs graduates are actually doing, both graduate and non-graduate in nature.

In summary

This report presents evidence which debunks the myth that higher education is the sole route to high earnings.

Analysis suggests that at least 75,400 higher education students who graduated in 2015/16 were in non-graduate roles six months later.

The average advertised salaries of these non-graduate roles done by graduates was £25,560 in 2017, lower than for more than two thirds of the 54 occupation groups identified by CPP as linked to technical education.

Adding in those who graduated in 2015/16 and were unemployed 6 months later, this suggests that every year at least 92,800 higher education graduates could have been better off choosing the technical route instead.
The potential for increasing incomes
A substantial section of the UK labour market is stuck in low skill, low wage jobs, with little hope of progression. For hundreds of thousands – potentially even millions – of people living in the UK, having a job is not enough to insulate them from a life of economic insecurity and poverty. For anyone concerned with building an inclusive economy, the statistics make for grim reading: 883,000 people are on zero hours contracts, 1.6 million jobs pay the National Living Wage, and so 60% of people living in poverty in the UK are in working households. Simply having a job is no longer a guarantee of a basic standard of living.

“Without radical reform, swathes of people face a future where they have skills mismatched for jobs, risking them being in low paid, insecure work, and reliant on benefits, at a huge cost to people’s lives and the local and national economy.”

Cllr Mark Hawthorne, Chairman of the Local Government Association’s People and Places Board

The skills system has an instrumental role to play in promoting a labour market with good work for all

It is in this context that the concept of ‘good work’ has emerged, with the Taylor Review providing a recent national platform. The skills system has an instrumental role to play in promoting a labour market with good work for all. Done well, it can equip people with the skills they need to access the highly paid technical roles that employers are currently unable to fill.

In 2017 there were 1.4 million postings across the whole of the UK for core technical roles, with an average advertised salary of £34,800. Centre analysis of the UKCES Employer Skills Survey 2015 estimates that 32% of these roles were difficult to fill due to skills shortages, which equates to 448,000 skills shortage core technical vacancies in 2017. The potential wage increases of moving people out of living wage roles into these core technical positions are considerable. Assuming a 35-hour working week, the premium is £21,150 per person. Even semi-technical roles had an average advertised salary of £27,600 in 2017, a premium of almost £14,000 per year over the National Living Wage. In the context of squeezed living standards and an increasingly precarious low-skill labour market, technical education offers an exciting and credible route into high paying careers.

In addition, the wage differentials data presented in Section 1 demonstrates that there is a cohort of graduates whose salaries could have been higher had they chosen the technical route instead. The average advertised salary offered for non-graduate jobs being done by graduates was £25,560 in 2017, £9,240 lower than for core technical roles, and £2,040 lower even than semi-technical roles. These are significant premiums, particularly when student debts are factored in.

883,000 people are on zero hours contracts and 1.6 million jobs pay the National Living Wage

In 2017 there were an estimated 448,000 core technical vacancies due to skills shortages

The potential wage increases of moving people out of living wage roles into these core technical positions are considerable

1.6m

£21,150

Office for National Statistics (2017) Contracts that do not guarantee a minimum number of hours: September 2017. Available at: https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/articles/contractsthatdonotguaran
t eeraminimumnumberofhours/september2017


In response to research by British Chambers of Commerce (January 2018). Available at: https://www.local.gov.uk/about/news/sga-british-

chambers-commerce-skills-research-shows-radical-reform-needed-tackle-crisis


Based on a living wage 35 hour a week job

Those linked to technical education with an average qualification of level 2 or below as identified by average highest qualification held in the Labour Force Survey

The Data Deficit: Why a lack of information undermines the UK skills system 19
Persistent technical skills shortages
Chart 3: Percentage of vacancies that were difficult to fill due to skills shortages, UK, 2011–2015

Occupations

Skilled trades roles have been considerably harder to fill than other occupation groups since 2005.49 As illustrated in Chart 3, skills shortage rates for skilled trade roles has consistently been between 10 and 15 percentage points higher than all other groups. This suggests that the productivity strategy of boosting number of graduates has been in one important sense misguided and has failed to get to grips with the highest rates of skills shortages (not least because the manufacturing sector consistently makes a higher contribution to national productivity than services).

48 Based on Employer Skills Surveys from 2005–2015. The 2005–2009 surveys are not comparable with subsequent surveys as the analysis switches from individual nations to the whole of the UK, yet the findings on skilled trades are consistent.

Sectors and pathways

While much of the language around skills shortages focuses on ‘sectors’, analysis at this level can sometimes be misleading for policymakers. The sector usually refers to the employer, rather than the actual job. For example, a skills shortage job maintaining a manufacturing company’s IT system will count as a skills shortage job in the manufacturing sector, rather than the IT sector. However, the logical policy response based on sectoral analysis would then be to boost manufacturing skills training, rather than digital skills training. It is therefore more effective to conduct analysis of groups of occupations, rather than specific sectors, as recognised in the Institute for Apprenticeships’ development of ‘occupational maps’ (see Box 1).

The analysis below is for groups of occupations related to the government’s new fifteen technical pathways and demonstrates significant variation between them in terms of salaries and skills shortage rates.50

Chart 4: The percentage of technical vacancies that were difficult to fill due to skills shortages by pathway, UK, 2015

<table>
<thead>
<tr>
<th>Pathway</th>
<th>Percentage</th>
<th>Average Advertised Salary (2017)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>36%</td>
<td>£34,800</td>
</tr>
<tr>
<td>Catering and hospitality</td>
<td>32%</td>
<td>£23,600</td>
</tr>
<tr>
<td>Engineering and manufacturing</td>
<td>30%</td>
<td>£29,100</td>
</tr>
<tr>
<td>Transport and logistics</td>
<td>29%</td>
<td>£27,300</td>
</tr>
<tr>
<td>Agriculture, environmental and animal care</td>
<td>27%</td>
<td>£22,700</td>
</tr>
<tr>
<td>Digital</td>
<td>24%</td>
<td>£35,500</td>
</tr>
<tr>
<td>Creative and design</td>
<td>22%</td>
<td>£34,600</td>
</tr>
<tr>
<td>Protective services</td>
<td>21%</td>
<td>£35,400</td>
</tr>
<tr>
<td>Sales, marketing and procurement</td>
<td>20%</td>
<td>£28,500</td>
</tr>
<tr>
<td>Hair and beauty</td>
<td>20%</td>
<td>£17,200</td>
</tr>
<tr>
<td>Health and science</td>
<td>20%</td>
<td>£25,800</td>
</tr>
<tr>
<td>Legal, finance and accounting</td>
<td>19%</td>
<td>£31,200</td>
</tr>
<tr>
<td>Business and administrative</td>
<td>19%</td>
<td>£26,800</td>
</tr>
<tr>
<td>Childcare and education</td>
<td>19%</td>
<td>£20,800</td>
</tr>
<tr>
<td>Social care</td>
<td>19%</td>
<td>£18,700</td>
</tr>
</tbody>
</table>

Box 1: Occupational Maps

The Sainsbury Review on Technical Education recommended a framework of 15 routes to skilled employment. Since then work has been underway to develop 15 occupational maps detailing the skilled occupations related to each route. In November 2017 the Institute for Apprenticeships took control of the development of the occupational maps and has opened up the process to a public consultation. Results are expected in spring 2018. Once complete, the occupational maps will form an important part of the information infrastructure for skills. By linking T-levels to groups of occupations, labour market analysis of the supply and demand for these skills groups will be made possible. The Centre’s development of occupation-based analysis pre-dates the government’s mapping process (potentially resulting in differences of categorisation). We welcome this approach.

50 The groupings were made based on the CPP’s Skills Mapping System
51 Centre for Progressive Capitalism’s analysis of: Burning Glass job vacancy data by 4 digit SOC code; UKCES Employer Skills Survey 2015
The government has prioritised the digital and construction pathways in developing the first of its new T-Levels (see page 31). Shortages of skilled construction workers have been increasingly documented, not least because the sector is particularly vulnerable to the effects of Brexit. Of the UK’s construction workforce, 9% were born in the EU, and just 7% of these workers would have been eligible to work here under the current non-EU migration rules. The industry last year warned of a ‘cliff edge’ skills gap if EU workers were not able to continue to come to the UK to live and work.  

“If access to skilled EU workers is cut off before the sector is able to train a domestic workforce, plans for the £500bn pipeline of new work including in excess of one million new homes by 2022, airport expansion and HS2 will not be deliverable.”

All Party Parliamentary Group for Excellence in the Built Environment

The Centre for Progressive Policy estimates that 24% of technical (i.e. non-professional) digital vacancies were difficult to fill due to skills shortages in 2015 (55,500). Whilst it does not have the highest skills shortage rate, the digital pathway had the highest average advertised non-graduate salaries in 2017 (£35,500).

Analysis of Labour Force Survey data estimates that 69% of these digital non-graduate vacancies are attainable with level 3 qualifications or below, leaving 38,300 digital skill shortage vacancies in the UK that FE could reasonably be expected to fill each year. Given an average advertised salary of £35,500, filling these 38,300 jobs – estimated to require Level 3 qualifications or below – could create a boost of up to £1,850 per head.

However, the data suggests more needs to be done to take advantage of these opportunities. For example, the chart below illustrates the scale of the shortfall in technical courses for IT engineers and technicians, with an average salary of £35,500.

Chart 5: Estimated number of skills shortage vacancies, FE course completions and apprenticeships for IT engineers and technicians 2014/15

<table>
<thead>
<tr>
<th>Skills shortage vacancies</th>
<th>FE courses</th>
<th>Apprenticeships</th>
</tr>
</thead>
<tbody>
<tr>
<td>70,000</td>
<td>50,000</td>
<td>40,000</td>
</tr>
<tr>
<td>60,000</td>
<td>50,000</td>
<td>40,000</td>
</tr>
<tr>
<td>50,000</td>
<td>40,000</td>
<td>30,000</td>
</tr>
<tr>
<td>40,000</td>
<td>30,000</td>
<td>20,000</td>
</tr>
<tr>
<td>30,000</td>
<td>20,000</td>
<td>10,000</td>
</tr>
<tr>
<td>20,000</td>
<td>10,000</td>
<td>0</td>
</tr>
</tbody>
</table>

Estimated skills shortage vacancies

- Level 2
- Level 3
- Levels 4 & 5

55 Labour Force Survey, highest reported qualification by 4-digit SOC code occupation
56 Compared to a job paying National Living Wage 35 hour a week
57 Centre for Progressive Capitalism’s analysis of for a sample of 5 LEPs, scaled up to the UK level: Skills Funding Agency Data Cube; Burning Glass job vacancy data by 4-digit SOC code; Labour Force Survey UK data on highest qualification of workers by 4-digit SOC code; UKCES Employer Skills Survey 2015

The Data Deficit: Why a lack of information undermines the UK skills system

23
Construction

An estimated 36% of construction vacancies were difficult to fill due to skills shortages in the UK in 2015/16, significantly higher than any other pathway. This translated into more than 122,000 non-graduate skills shortage vacancies and it is likely that this number underestimates the true total, given that many construction vacancies are not advertised online.

An estimated 75% of these types of roles were done by people with Level 2 or 3 as their highest qualification, suggesting a strong role for FE in filling around 91,500 skills shortage construction roles. Given an average advertised salary of £34,800 in 2017, filling the 91,50 skills shortages vacancies would therefore provide an income boost of up to £21,150 per person. It is important to note that less-skilled construction jobs are underrepresented in online vacancy data, meaning salaries based on this data are slightly overestimated (for methodology, please see appendix).

However, comparison between pathways obscures variation within pathways, which can be significant. In construction, average advertised salaries were as high as £38,900 for certain occupation groups and as low as £23,200 for others.

The government’s recent Industrial Strategy white paper specified that local labour market analysis by new Skills Advisory Panels will be structured around the fifteen pathways. However, our evidence shows that knowledge of the value of different skills within pathways – both for individuals and the local economy – is vital. Such data, both at a sectoral and regional level, will be key in addressing the kinds of information gaps that, for decades, have prevented the skills system from working effectively.

Chart 6: Average advertised salary of occupations in the construction pathway, UK, 2016

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Average Advertised Salary (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical engineers</td>
<td>£38,900</td>
</tr>
<tr>
<td>Construction and building trades supervisors</td>
<td>£36,800</td>
</tr>
<tr>
<td>Skilled metal, electrical and electronic trades supervisors</td>
<td>£35,300</td>
</tr>
<tr>
<td>Scaffolders, stages and riggers</td>
<td>£34,300</td>
</tr>
<tr>
<td>Steel erectors</td>
<td>£33,400</td>
</tr>
<tr>
<td>Construction project managers and related professionals</td>
<td>£32,400</td>
</tr>
<tr>
<td>Plumbers and heating and ventilating engineers</td>
<td>£32,300</td>
</tr>
<tr>
<td>Electricians and electrical fitters</td>
<td>£31,000</td>
</tr>
<tr>
<td>Electrical and electronics technicians</td>
<td>£30,000</td>
</tr>
<tr>
<td>Carpenters and joiners</td>
<td>£29,800</td>
</tr>
<tr>
<td>Roofers, roof tilers and slaters</td>
<td>£29,500</td>
</tr>
<tr>
<td>Electrical and electronic trades n.e.c.</td>
<td>£29,400</td>
</tr>
<tr>
<td>Bricklayers and masons</td>
<td>£28,700</td>
</tr>
<tr>
<td>Floorers and wall tilers</td>
<td>£28,600</td>
</tr>
<tr>
<td>Glaziers, window fabricators and fitters</td>
<td>£28,000</td>
</tr>
<tr>
<td>Plasterers</td>
<td>£26,700</td>
</tr>
<tr>
<td>Construction operatives n.e.c.</td>
<td>£26,700</td>
</tr>
<tr>
<td>Rail construction and maintenance operatives</td>
<td>£25,400</td>
</tr>
<tr>
<td>Painters and decorators</td>
<td>£23,300</td>
</tr>
<tr>
<td>Furniture makers and other craft woodworkers</td>
<td>£23,200</td>
</tr>
<tr>
<td>Road construction operatives</td>
<td>£0</td>
</tr>
</tbody>
</table>

58 Labour Force Survey, highest reported qualification by 4 digit SOC code occupation
59 Compared to a job paying National Living Wage 35 hour a week
61 Centre for Progressive Capitalism analysis of Burning Glass job vacancy data
In summary

The steady march of higher education towards 50% participation has been matched by the growing proportion of graduates in non-graduate roles.

Both now sit at up to 49%.

At the same time, skills shortage rates for skilled trades roles have remained stubbornly 10–15 percentage points above those for all other occupation groups.

Supplying the skills for these types of roles continues to be a challenge.

The productivity strategy of successive governments of boosting the numbers of graduates has been misguided, failing to get to grips with the highest rates of skill shortages, particularly in manufacturing which makes the highest contribution to national productivity.
The importance of place-based policy for skills
Many local areas are experiencing strong growth in demand for certain technical skills that FE could – at least in theory – satisfy, for the benefit of the local economy and individual households. The evidence in this report shows that the salaries offered in some of these highly demanded skills shortage roles are usually well above those of elementary roles, and often are even comparable to many graduate salaries.

However, there is significant variation in skills shortage rates at the local level, as shown in Chart 8. For example, the skills shortage rates for skilled trades roles is as high as 73% in the Black Country Local Enterprise Partnership (LEP) and as low as 26% in Cheshire and Warrington LEP. The inevitable conclusion of this substantial variation between LEPs is that different local areas face different skills challenges, and so responses must be locally driven.

Both examples illustrate the importance of tackling information failures through data-driven, locally relevant careers advisory. It is essential that young people and adults are able to make informed choices based upon:

- **Local demand for occupations and skills**: indicating the likelihood of securing a job in the area
- **Career prospects**: including average advertised salaries, regionally and nationally
- **Course quality**: including quality and relevance of specific courses, by institution, and the extent to which learners progressed into employment using these skills

It might also be appropriate for local places to incentivise courses that correspond to existing and emerging need – particularly, for example, where there are persistent shortages or where major planning decisions or strategic economic development activities present significant opportunities for people within the region. The creation of colleges by Crossrail and HS2 points to significant potential in this area. The work the BBC has done with the University of Salford and the strong links between the Exeter College, Plymouth University and the University of Exeter are further examples of positive engagement between FE colleges, universities and employers at the local and regional level. However, these partnerships often occur only for Level 4 qualifications and above, principally due to the greater flexibility in funding. It is hoped that the Apprentice Levy will provide opportunities for more engagement at Level 3 as well.

To ensure local government is able to drive responses to local priorities new powers may be necessary. As one example of how this might be achieved, Core Cities has proposed the development of government backed all-age Skills Plans that have the flexibility to shape technical education in line with local priorities. The proposals argue for this to be supported by a Skills Fund made up of the Adult Education Budget, 16–19 technical education funding and any apprenticeship levy underspend linked to the local area.

The following two case studies examine the extent to which local technical skills provision, measured by FE and apprenticeship course completions, aligns with local labour market needs (as indicated by vacancies due to skills shortage).

### The range of skill shortage vacancies rates across all 38 LEPs for each major exportation group, 2015

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Managers</th>
<th>Professionals</th>
<th>Associate professionals</th>
<th>Administrative/clerical staff</th>
<th>Skilled trades occupations</th>
<th>Caring, leisure and other services staff</th>
<th>Sales and customer services staff</th>
<th>Machine operatives</th>
<th>Elementary staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage</td>
<td>80%</td>
<td>60%</td>
<td>40%</td>
<td>20%</td>
<td>0%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
</tr>
</tbody>
</table>

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62 The BBC is closely involved with the university’s THINKlab. For more, see [https://www.salford.ac.uk/thinklab/enterprise/case-studies/bbc](https://www.salford.ac.uk/thinklab/enterprise/case-studies/bbc).  
63 The relationship between Plymouth University and Exeter College seeks to “Get the best of both worlds – a supportive learning environment as part of a close-knit community, and a university-level qualification”. For more, see [https://www.plymouth.ac.uk/schools/exeter-college](https://www.plymouth.ac.uk/schools/exeter-college).  
65 Centre for Progressive Policy analysis of the UKCES Employer Skills Survey 2015. Please see appendix for data.
Chart 8: Varying skills shortage rates by LEP for skilled trades roles\(^{66}\)

1. Black Country
2. Buckinghamshire Thames Valley
3. Cheshire & Warrington
4. Coast to Capital
5. Cornwall & Isles of Scilly
6. Coventry & Warwickshire
7. Cumbria
8. Derby, Derbyshire, Nottingham & Nottinghamshire
9. Dorset
10. Enterprise M3
11. Gloucestershire
12. Greater Birmingham & Solihull
13. Greater Cambridge & Greater Peterborough
14. Greater Lincolnshire
15. Greater Manchester
16. Heart of the South West
17. Hertfordshire
18. Humber
19. Lancashire
20. Leeds City Region
21. Leicestershire & Leicestershire
22. Liverpool City Region
23. London
24. New Anglia
25. North East
26. Northamptonshire
27. Oxfordshire
28. Sheffield City Region
29. Solent
30. South East
31. South East Midlands
32. Stoke-on-Trent & Staffordshire
33. Swindon & Wiltshire
34. Tees Valley
35. Thames Valley Berkshire
36. The Marches
37. West of England
38. Worcestershire
39. York, North Yorkshire & East Riding

Skills shortage rates

- 73%
- 48%
- 42%
- 38%
- 26%

Case study: D2N2 LEP

In the D2N2 LEP area (Derby, Derbyshire, Nottingham and Nottinghamshire), engineering, IT, electronic trades are all in the top ten occupations with the most skills shortage vacancies (SSVs). In all three instances, course completions fall short of demand from local employers (see Chart 9).

The top three occupations in terms of number of FE courses and apprenticeships completed (2015/16) were care workers, contact centre and customer services occupations and sports and fitness instructors and assistants. Together they accounted for more than one in five of every publicly funded FE course and apprenticeships in the area, with each oversubscribed in terms of courses and skills shortage vacancies.

Chart 9: Total vacancies, skills shortage vacancies, FE course completions and apprenticeship completions by occupation group, Derby, Derbyshire, Nottingham and Nottinghamshire, 2015/16

Chart 10 (below) outlines three groups with low salaries and high course oversubscription. All three of the oversubscribed occupations feature among the 15 lowest salary technical groups, in part because self-employment levels in these occupations are relatively high. Recent Labour Force Survey data indicates there are over 2.5 times more self-employed fitness instructors (43,000) than employees in the industry (16,000). Estimated median annual earnings for all self-employed was £10,800 in 2013/14, compared to £20,000 for all employees.

However, these areas of the technical education system – such as hair and beauty and sports instructors – are less likely than others to offer a route out of low pay, even if learners manage to find relevant full-time employment. For example, the Low Pay Commission found Hair & Beauty to have the highest proportion of jobs paid at or below the National Living Wage.

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67 Skills shortage vacancies are those which employers struggle to fill due to skill shortages. For a detailed definition, see https://ukces.blog.gov.uk/2014/06/04/skills-shortage-vacancies-ukces-explains/

68 Centre for Progressive Capitalism’s analysis of: Skills Funding Agency Data Cube; Burning Glass job vacancy data by 4 digit SOC code; Labour Force Survey UK data on highest qualification of workers by 4 digit SOC code; UKCES Employer Skills Survey 2015


71 Centre for Progressive Capitalism’s analysis of: Skills Funding Agency Data Cube; Burning Glass job vacancy data by 4 digit SOC code; Labour Force Survey UK data on highest qualification of workers by 4 digit SOC code; UKCES Employer Skills Survey 2015
In the Thames Valley Berkshire (TVB) LEP area, the key technical groups of engineering, electricians and IT technicians are also undersupplied by the system, although to different extents than in D2N2. There are other technical groups for which more FE course completions are in need, again with impressive average advertised salaries.

One interesting area is skilled drivers, for which employers in TVB struggle to fill 64% of vacancies due to skills shortages, by far the highest rate of all occupation groups. Very little publicly funded training exists for skilled drivers, but it appears the private training system is not operating effectively.

As with D2N2, there are a number of course types for which supply potentially outstrips demand, again with lower than average advertised salaries for other technical roles.

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**Chart 11: Total vacancies, skills shortage vacancies, FE course completions and apprenticeship completions by occupation group, Thames Valley Berkshire, 2015/16**

- **Accountancy and finance technicians/analysts/advisors**: 5,000 total vacancies, 3,000 skills shortage vacancies, £33,000 median advertised salary.
- **Skilled drivers**: 4,000 total vacancies, 2,000 skills shortage vacancies, £39,300 median advertised salary.
- **Business and related associate professionals**: 3,000 total vacancies, 1,500 skills shortage vacancies, £29,200 median advertised salary.
- **Mechanical technicians and maintenance**: 3,000 total vacancies, 1,500 skills shortage vacancies, £28,700 median advertised salary.

**Chart 12: Total vacancies, skills shortage vacancies, FE course completions and apprenticeship completions by occupation group, Thames Valley Berkshire, 2015/16**

- **Veterinary nurses and animal care**: 300 total vacancies, 150 skills shortage vacancies, £23,200 median advertised salary.
- **Beauticians and related occupations**: 240 total vacancies, 120 skills shortage vacancies, £20,400 median advertised salary.
- **Hairdressers and barbers**: 200 total vacancies, 100 skills shortage vacancies, £15,000 median advertised salary.

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72 Centre for Progressive Capitalism’s analysis of: Skills Funding Agency Data Cube; Burning Glass job vacancy data by 4 digit SOC code; Labour Force Survey UK data on highest qualification of workers by 4 digit SOC code; UKCES Employer Skills Survey 2015

73 Centre for Progressive Capitalism’s analysis of: Skills Funding Agency Data Cube; Burning Glass job vacancy data by 4 digit SOC code; Labour Force Survey UK data on highest qualification of workers by 4 digit SOC code; UKCES Employer Skills Survey 2015
The Data Deficit: Why a lack of information undermines the UK skills system

The latest policy offering

It has been clear for some time now that successive skills strategies and system changes have not delivered against their policy objectives, leaving firms without the workers they need to grow and expand, workers without the skills they need to progress and thrive, and the economy without the productivity gains needed to drive sustained growth in living standards.

The Centre for Progressive Policy has set out four key insights, which – when used as a basis to address key information failures in the system – will help to bring the supply of skills in line with demand from employers. In time, we believe this will benefit people (as they are better able to identify routes to higher earnings) and places (by strengthening their offer to investors, creating additional quality jobs and enabling more people to contribute and benefit from growth). At a national level, it will also help to drive productivity and shared prosperity, making good the faith that policy makers have in the role of skills to meet the challenges of the modern economy.

The expectation is for the majority of 16 to 19-year-olds to study for T-levels or A-levels, with all other Level 3 qualifications to be reviewed. This will provide two clear routes – academic and technical – from Level 3 onwards.

Against this framework, does the government’s latest policy offering measure up?

The current reform of post-16 education and skills in England is designed to encourage firms to invest more in training, create parity of esteem between academic and technical routes, and give young people clear and simple ways of progressing through secondary and into tertiary education. In its recent consultation the Department for Education announced its intention to simplify Level 3 provision. The expectation is for the majority of 16 to 19-year-olds to study for T-levels or A-levels, with all other Level 3 qualifications to be reviewed. This will provide two clear routes – academic and technical – from Level 3 onwards.

For young people choosing the technical route, there are two options:

1 *T-levels*: A study-based programme over two years, intended to be on par with academic A-levels, providing Level 3 technical qualifications. T-levels will become the primary study-based technical qualification and in so doing sweep away the confusing range of qualifications currently on offer. T-levels will be rolled out gradually, clustered around 11 of the 15 new ‘routes’ recommended in the Sainsbury Review of Technical Education.

T-levels linked with construction, digital and education and childcare will be introduced in 2020, with eight more routes operational by 2022. The remaining four routes will be delivered primarily via apprenticeships.

2 *Apprenticeships*: Work-based apprenticeships, the content of which are defined by ‘occupation-focussed’ standards rather than current ‘qualification-led’ frameworks, which are being phased out. The government has set a target of 3 million apprentice starts by 2020, funded largely through a 0.5% levy on employers with annual pay bill of over £3m. Levy-paying businesses will fund 90% of the cost of taking on an apprentice, compared to the previous system where government funded at least half. Smaller businesses exempt from the Levy will have to ‘co-invest’ 10% of the cost of apprenticeship training, with the government funding the remaining 90%.

Both technical options are developed with close engagement with employers in order to equip learners with the skills needed for successful transition into technical employment. The government has recognised the need for movement between the academic and technical options and is exploring additional ‘bridging’ content as the policy develops. Degree apprenticeships already span the two routes further along the system (post-18 years).

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75 Sainsbury (2016) op cit.


T-Levels are an attempt to create parity of esteem between the academic and vocational routes and the Apprenticeship Levy is a welcome attempt to get employers to invest more in training, but the latest changes have not been without criticism. In particular, the government seems not to have learned the lessons of the past as to the distortive impact of output targets – in this instance 3 million apprenticeship starts by 2020. Gaming in public services has been well documented in recent years, especially in education and skills. With reports of low quality apprenticeships such as some of those offered in call centres and sandwich shops emerging (accounting for more than 12% of total completions in one area), a focus on quantity calls into the question the system’s ability to deliver the quality of outcomes needed to drive regional and national productivity and prosperity.

For example, levy-paying firms simply rebadging their existing training programmes under the new regime will not increase levels of skills in the workplace or help people to progress in the labour market. As the CIPD notes, “Despite some recent improvements, on balance, apprenticeship provision in England is still very much weighted towards intermediate Level 2, with very few starts at higher level… Level 2 intermediate apprenticeships can play a role in supporting young people to develop their employability skills; however, there are concerns over the quality of many apprenticeships at this level and on the returns they provide to individuals.”

Beyond a target numbers of starts, broader measurements of success will need to ensure they monitor and incentivise the right behaviours amongst businesses and skills providers.

In any case, it seems likely the target will not be met. In the six months following the introduction of the Apprenticeship Levy in April 2017, the number of apprenticeship starts fell by 41% compared to the same period the year before. Is this because the new system is confusing and difficult for employers to navigate? Or are we seeing the beginnings of what would be a welcome trend towards employers – now that they feel they are spending their own money – choosing fewer higher level apprenticeships, rather than more, cheaper, low value ones?

Finally, to what extent will learners be able to distinguish between higher and lower value training options? Careers guidance is part of the government’s wider package of reform, and a new strategy paper was published at the end of 2017 with supplementary guidance for schools released in January 2018. Here the government has expanded the roles of the National Careers Service and the Careers and Enterprise Company. But plans for a new website raise questions as to the role of central, sub-regional or local government, agencies, schools or other third-party providers in effectively communicating and disseminating information. Is it the role of central government to do this? How will analysis on skills shortages to be done by Skills Advisory Panels be integrated within local industrial strategies? Will employers be expected to engage in this part of the system? If so, how?

The government is right to raise the profile of careers advisory. The Careers and Enterprise Company is working to build connections between employers and schools to give young people meaningful ‘encounters’ with the world of work. Structural changes in careers guidance certainly can be effective, but for initiatives to succeed the Centre for Progressive Policy argues that tackling the data deficiencies outlined in this report will be critical – both for policymakers (national and local) and for learners.

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80 FE Week (2018) BREAKING: Apprenticeship starts continue to fall sharply six months after introduction of the levy. Available at: https://feweek.co.uk/2018/01/25/apprenticeship--starts-jan-2018/
81 The government’s Careers Strategy outlines plans for schools to offer every young person seven encounters with employers, with support from the Careers and Enterprise Company
In summary

National skills shortage analysis does not tell the full story, with significant skills shortage rate variation at the Local Enterprise Partnership (LEP) level.

The skills shortage rates for skilled trades roles, for example, is as low as 26% in Cheshire and Warrington LEP, and as high as 73% in the Black Country LEP.

Case studies of the supply and demand of technical skills in D2N2 and Thames Valley Berkshire LEPs show that in some instances provision could be better aligned, both with the needs of local businesses and with the opportunities for high wages that technical education can offer.

This can be done through regional skills commissioning, with local areas able to incentivise courses in particularly high demand among employers through adjustments to funding tariffs.
Policy recommendations and conclusions
The data described here represent a powerful means to inform choice, funding decisions, regulation and government intervention. But breaking down established myths, norms and cultures will take time.

Choice is complex, grounded in the social and emotional, as much as the rational and data-driven. For maximum impact, we must improve our understanding of how data influences not just prospective learners, but teachers, lecturers, parents, careers advisers and businesses, as well as how data and information interact with key processes and timelines.

Nevertheless, the analysis of this report, the first from the Centre for Progressive Policy, firmly suggests that sustainable system improvements will not be achieved unless pervasive information failures are addressed. While only one step of many, improving the quality and quantity of available data will provide the strong foundation for an effective and inclusive skills system.

A host of information failures described in this report prevent the skills 'market' from working effectively, creating mismatches locally and nationally between the demand and supply for skills. This is particularly the case with regards to technical, non-graduate skills. But the numbers of graduates in non-graduate roles also indicates that the market is not working across the spectrum.

Successive attempts at structural reform have not been accompanied by the necessary levels of information for them to work successfully. Efforts to simplify the system and make qualifications more robust are welcome, but there has not been enough focus on helping people to make informed decisions. While there are problems with the skills system, there are plenty of examples of excellent courses and qualifications. The challenge is then to give learners and policymakers the information they need to access and promote these. Doing so will, in time, root out poor provision and finally enable the skills system to work effectively.

It is essential that individual young people and adults are able to make informed choices based upon readily accessible information on:

- **Local/regional demand for occupations and skills:** indicating the likelihood of securing a job in the area
- **Career prospects:** including average advertised salaries, regionally and nationally
- **Course and institution quality:** including quality and relevance of specific courses, by institution, and the extent to which learners progressed into employment using these skills

It is also essential that local, regional and national policymakers – including regulators and funders – have access to sufficiently granular information. Skills, labour market conditions and characteristics cut across a whole range of interconnected economic and social policy agendas – inclusive growth, national and regional industrial strategies, post-Brexit trade, investment and productivity.

Data of this sort is beginning to emerge, but the Centre for Progressive Policy recommends:
Data gap

Local demand

Key questions

**Prospective learners**
Which occupations are in high or growing demand, where and what level of skills are needed for me to access these opportunities?

**Regulators, funders and policymakers**
Where are there imbalances in local, regional and national supply/demand for skills? To what extent does current provision respond to local, regional and national demand? What are the barriers to people accessing high quality learning and skills training? Does existing and emerging provision align with wider policy developments (e.g. major investment) and objectives (e.g. inclusive growth)?

**Employers**
How can I work with schools, FE colleges, HE institutions and other training providers to ensure skills provision meets my needs? How can I make the most of new qualifications and funding arrangements (e.g. Apprenticeship Levy) and how can this complement internal training?

Policy recommendations

**Access to the ESFA Localities Data Cube to be simplified and streamlined so that local and sub-regional policy makers (as well as third parties) can assess demand for skills, informing a range of cross-cutting policy and investment decisions**
Data sharing across local authority/LEP boundaries is particularly important where they are not yet coterminous and/or LEPs have limited analytical capacity.

**Data-driven, place-based co-commissioning of post-16 skills provision through devolved skills funds**
This would build on regional strategic skills planning in combined authorities and align skills to a range of cross-cutting policy and investment decisions (e.g. welfare, employment support, health). Devolved skills funds – as recommended by the Core Cities – would comprise Adult Education Budget, 16–19 technical education funding and any apprenticeship levy underspend in the area.82

Data gap

Career prospects

Key questions

Prospective learners
How much might I expect to earn upon entry into the occupation/sector (given my skills/qualifications) and what are my prospects for career development and salary progression?

Regulators, funders and policymakers
To what extent are local labour markets characterised by low wage, low value-added occupations and sectors, and what are the barriers to enabling people to access – and progress within – quality jobs? How can we address these barriers through the skills system, employer engagement and business support?

Employers
What more can I do to enhance the skills of my workforce to increase productivity and growth? How can I work with the skills and careers advisory systems to better align my firm’s demands for labour with the supply of suitably trained individuals?

Policy recommendations

Publish FE and HE destinations data in open format at five-digit SOC code level to give sufficient granularity to existing destinations data
Currently the Department for Education (DfE) publish ‘sustained employment’ outcomes by qualification level, subject area and provider, but this is not sufficiently detailed to understand the jobs that people are doing after completing their FE or HE course or apprenticeship. The DfE is beginning to produce data for average salaries post-apprenticeship or FE course by sector subject area. This is a start, but more is needed to show – for example – whether people are earning low wages because the jobs related to their subject of study are poorly paid or because they are doing unskilled work unrelated to their course.

Publish destinations data at local and regional level, as part of – or in addition to – the ESFA Localities Data Cube
Five-digit SOC code level data on salaries, for example, is particularly important to understand outcomes for courses that are typically oversubscribed relative to local demand (e.g. sport, leisure and recreation). To inform people fully, career prospects data must also be made available at the local level.

Put comparable information at the heart of careers guidance (see below)
Working across all aspects of the current and emerging careers advisory system, especially the National Careers Service, Careers and Enterprise Company and place-based initiatives to improve the quality and comprehensiveness of careers guidance and access to work experience (e.g. Bristol City Office’s ‘The Works’ programme). 83

83 WORKS builds partnerships between employers, learning providers, and local communities to develop skills in Bristol. For more, see https://www.bristol.works/
### Key questions

**Prospective learners**
Will this course equip me with high quality skills that employers want? How does this institution compare to others in terms of (e.g.) quality of teaching, learning, careers advisory and destinations?

**Regulators, funders and policymakers**
Does this course and institution consistently meet the standards we expect from high quality education and skills training?

**Employers**
Does this course provide consistently high quality transferrable and/or specific skills that will be of value to my firm?

### Policy recommendations

**Make comparable measures of FE and apprenticeship course quality readily available and easily accessible, by qualification type and institution**
This exists for HE and includes both teaching and research quality, although it would be best to disaggregate the two for any FE rankings.

**Put comparable information at the heart of careers guidance (including course and institutional quality, career prospects and local demand), targeted at key decision-making junctures (e.g. subject choices at GCSE) with scope for local/sub-regional and national level comparison**
An API of all ESFA Localities Data Cube data (and local/national destinations data – see above) could enable innovative, locally tailored information, advice and guidance.
### Data gap

#### Productivity impact

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<td><strong>Regulators, funders and policymakers</strong>&lt;br&gt;What is the marginal productivity impact of higher HE participation, increased uptake of A-level maths or BTEC science? Are we seeing additional training within firms, and to what effect? How do these trends vary regionally and nationally?</td>
<td><strong>Invest in the national evidence base on how different education and training inputs lead to productivity and competitiveness outcomes</strong>&lt;br&gt;Inevitably complex, but it is important to understand how best to devise effective policy and resource allocation (e.g. National Productivity Investment Fund). This work should engage (and feed into the refinement of) Office for National Statistics and Office for Budgetary Responsibility data. Other key stakeholders might include the National Audit Office and What Works Centre for Local Growth.</td>
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<td><strong>Employers</strong>&lt;br&gt;Am I a high performing company, operating at the ‘frontier’ of the industry’s productivity potential? Or am I one of the two thirds of employers in my industry where productivity is below average? How can I make affordable, sustainable business changes that get results?</td>
<td><strong>Invest in the regional evidence base</strong>&lt;br&gt;Analysis needs to be place-specific, as the efficacy of sectoral industrial strategies (e.g) will depend on local skills, clusters of existing activity and other place-based assets and opportunities. Investment in building local analytical capacity, such as the Manchester Growth Company and new West Midlands Office for Data Analytics, are two examples of how places can support data-driven policy and investment decision making.</td>
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<td><strong>National and local government to work with business-led initiatives designed to promote productivity enhancing behaviour</strong>&lt;br&gt;For example, creating regional ‘Be the Business’ campaigns to disseminate information, enhance local business support and connect with combined authorities, Local Enterprise Partnerships, chambers of commerce and other business umbrella organisations. This approach would act as a supplementary conduit for employer engagement – for large and smaller firms – with place-based policymakers.</td>
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Data literature review

The current literature presenting data on the returns to FE is patchy, but growing, with new sources of data beginning to emerge. Analysis traditionally made use of data from the Labour Force Survey and cohort studies. These early attempts to quantify the returns to further education typically considered individuals with a specific highest qualification compared to a counterfactual group of individuals with level immediately below in the regulated qualifications framework. The returns found were usually positive for higher and intermediate level qualifications, with less clear results at lower levels. However, while the sample size is large, LFS data lacks detailed information on early attainment and personal characteristics and socio-economic circumstances. Cohort studies, on the other hand, were rich in personal and family information, but used small samples.

Perhaps the most recent example of LFS data being used can be seen in a 2016 study by the Centre for Vocational Education Research (CVER) at the LSE. The results broadly corroborate the vacancy data presented in this report, with the highest returns for engineering, construction and business qualifications and the lowest for caring, childcare and catering.

An important recent advance is the availability of matched administrative data, allowing for deeper analysis of the relationship between education and training and employment and earnings. Early studies of this sort used administrative FE data from the Individualised Learner Record (ILR) matched to employment and earnings date from HMRC and benefits dependency data from the Department for Work and Pensions (DWP). These mostly found positive returns to vocational qualifications, including at lower levels for which previous studies had failed to identify a positive effect. However, these studies suffered from a key shortcoming: because other educational data was not available, only people that had had some interaction with the FE system were available for analysis. This means the counterfactual group was usually learners who had enrolled in the qualification aim at the same level but failed or dropped out, or people who achieved a vocational qualification immediately below, with obvious implications for the reliability of the studies.

The latest Longitudinal Education Outcomes (LEO) dataset fixes this problem. Available data now includes detailed education data for individuals when they were at primary and secondary schools and FE, HE records (HESA data), matched HMRC and DWP administrative data on earnings, employment and benefit data. This includes information on gender, ethnicity, special educational needs and eligibility for free school meals. A 2017 study by the CVER employs this data to find that the “Association between vocational qualification achievement and labour market outcomes is positive and significant for most qualification aims at the different levels – for both males and females”.

In terms of higher education, a 2016 study by the IFS used anonymised tax data and student loan records for 260,000 students up to ten years after graduation to estimate the difference in earnings for graduates of different subjects. The authors found that median earnings could vary by up to £24,000 between subjects.

It is important to note that these studies do not attempt to directly compare outcomes from both further and higher education. One notable attempt by the Sutton Trust compared the salaries of people who had done apprenticeships against those of people who had done degrees. Based on a statistical model built by Boston Consulting Group, the study found that on average a Level 5 apprenticeship results in greater lifetime earnings (£1.5m) than a degree from a non-Russell Group university (£1.4m), when student debt repayments are considered. It is data such as this that is beginning to chip away at the consensus that university is the sole route to high earnings.

These are all important advances, they build the evidence from which effective policy and good practise can flow. But there remains much to do. Detailed data must be made available at the local level to allow for meaningful comparison of all educational routes. In addition, there is a clear need to compare earnings prospects of HE and FE in a clear and engaging manner. Academic studies are important but we cannot expect prospective learners to read 50+ page reports and consider the implications of every earnings specification and counterfactual. Data is only useful if it reaches those that need it most.

The analysis presented in this report takes a different approach to the earnings studies, looking at advertised salaries for related jobs, rather than actual physical earnings a set amount of time after the course has finished. There are a number of reasons for this, principally that it is easy to understand and present and these are actual jobs with actual salaries in local areas. Salary and vacancy data provides evidence of the kinds of salaries learners can obtain if they transition into a related job once having finished their course.

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Methodology of the mismatch analysis

Supply vs demand

The central component of Centre for Progressive Capitalism’s skills mismatch reports is the Skills Mapping System (SMS). The system acts as a bridge between the supply side and demand side skills data, to allow for meaningful comparison.

Demand and supply side datasets are mapped to common groups, of which there are 98 in total.

Demand side data

The demand side data is obtained using Burning Glass software, which scrapes vacancy data from job posting websites. This occupational data is given at the four digit Standard Occupational Classification (SOC) code level. There are 368 different occupations at the four digit SOC code level and each of these is mapped into one of the 98 secondary occupation groups.

Data on typical education level is also added to the mapping system at the four digit SOC code level. The source for this is the Labour Force Survey.

Supply side data

The supply side of the system maps college based technical courses and apprenticeships into the secondary occupation groups. Clearly there are a number of occupations for which this type of training is irrelevant; health professionals, for example. For the purpose of these reports, therefore, technical occupations are defined as any that on average is done by less than 30% graduates (as indicated by the highest level of education identified in the labour force survey) and can be linked to relevant FE courses or apprenticeships. As such, the technical courses and apprenticeships are mapped into 59 of the 98 secondary occupation groups for which technical training is relevant.

The data sources used were:

- College-based technical courses: Education and Skills Funding Agency’s LEP Data Cube data on the number of completions by individual learning aim (based on all skills providers within the LEP).
- Apprenticeships: Skills Funding Agency’s LEP Data Cube data on the number of completions by pathway chosen for each apprenticeship framework (based on all skills providers within the LEP).

For the number of completions of college-based courses, only ‘education and training’, ‘traineeships’ and ‘community learning’ funded courses were included. The small number of courses funded via ‘workplace learning’ (which has largely been phased out in favour of apprenticeships) were excluded since trainees on this route are in employment.

Only technical courses with a significant time commitment required for completion were included. This was defined as certificates (130 to 260 hours of learning) and diplomas (370 or more hours of learning). Awards, which can require as little as 10 hours of learning, were not included. AS and A-levels were also excluded given the report’s focus on technical education and training.

Analysis of apprenticeships is done by the pathway chosen by each apprentice, rather than the wider framework. For example, an apprenticeship in the Engineering Manufacture framework has 11 diverse pathways, including aerospace; fabrication and welding; and electrical and electronic engineering.

Salary data

Data on average advertised salaries is also analysed. The figures presented use Burning Glass estimates of the mean salaries of occupations posted on job websites.

Feedback from various stakeholders suggests that the mean salaries appear to be slightly higher than those reported for existing employees. Analysis of the ONS’s Annual Survey of Hours and Earnings (ASHE) suggests that the average advertised salaries from vacancies picked up by Burning Glass is indeed higher than the average salaries presented in the ASHE data. The Centre has sought clarification on this issue, with Burning Glass analysts identifying three principal reasons:

1. The ASHE data does not take into account certain types of contractors and self-employed people, and these vacancies often command significantly higher point-in-time salaries than longer-term postings.
2. Advertised salaries are not always the salaries that are actually paid once the position is filled. If an employer cannot get the exact skill set the role requires, for example, they may still hire for the position, but with a decreased salary.
3. Online postings in general are somewhat skewed towards more highly skilled positions and away from entry-level, manual labour openings which may be advertised more locally.
Graduates in non-graduate roles

The ONS calculates – using Labour Force Survey (LFS) data – that 49% of recent graduates who were in work were in non-graduate roles in Q3 2017.\(^9\) The analysis in this report of graduate groups, however, uses data from the Destination of Leavers from Higher Education (DLHE) Survey 2015/16 from the Higher Education Statistic Authority. This looks at the destinations of those who graduated in 2015/16 six months later.

Using the same classifications of graduate and non-graduate four-digit SOC code occupations as the LFS figure,\(^9\) 33% of graduates in employment were in non-graduate roles six months after graduating.\(^9\) To translate this into the number of graduates in non-graduate roles, we multiplied the total number of 2015/16 graduates in work by 33%. According to the same survey, there were 228,550 graduates in 2015/16 in work in the UK or combining work and further study.\(^9\) This then translates into 75,400 graduates in non-graduate roles. Adding to this figure the number of 2015/16 graduates that were unemployed (17,400) gives 92,800 graduates who may well have been better off choosing the technical route instead.

Note, there will also be graduates in some graduate jobs that could have been better off had they gone through the technical system. The 92,800 figure, however, only includes graduates in non-graduate roles and those who are unemployed, as it is safe to assume that these were not their intended outcomes.

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\(^9\) ONS (2017) Graduates in the UK labour market: 2017. Available at: https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/graduatesintheuklabourmarket/2017 Please see the User guidance section for the types of higher education that lead to a person being classified as a graduate.


\(^9\) For details on the survey’s coverage, please see: https://www.hesa.ac.uk/support/definitions/destinations#destinations-coverage

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About the Centre for Progressive Policy

The Centre for Progressive Policy is a new think tank committed to making inclusive economic growth a reality. By working with national and local partners, our aim is to devise effective, pragmatic policy solutions to drive productivity and shared prosperity in the UK.

Inclusive growth is one of the most urgent questions facing advanced economies where stagnant real wages are squeezing living standards and wealth is increasingly concentrated. The Centre believes that a new approach to growth is needed, harnessing the best of central and local government to shape the national economic environment and build on the assets and opportunities of place.

Centre for Progressive Policy
27 Great Peter Street
London SW1P 3LN

+44 (0)20 7070 3360
www.progressive-policy.net