

Skills to Drive a Productive Society

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We are very appreciative of the many comments we have had in developing our research and proposals. In particular we wish to acknowledge the contribution from the following:

Learning and Work Institute produced the analysis that underpins this report and also provided guidance and advice to NOCN in its production. It is recognised, however, that the final recommendations are those of NOCN and do not necessarily all reflect the views of L&W.



European Association of National Productivity Centres



Professor Ewart Keep
Oxford University, Department of Education

STATEMENTS

Chair of NOCN

One of the biggest challenges facing the UK's future prosperity is productivity and hence our ability to compete in the global market. Successfully addressing this will bring about the benefits for society and social mobility that we all so desperately seek.

Whilst recognising that there are many factors which affect productivity; we believe that raising skill levels in all of the UK's workforce, including the self-employed and atypical workers, is of critical importance. New skills are needed to implement productivity improvement, recognising we have to train personnel in new ways of working our new technology. However, as, if not more, important is the skill to identify the opportunities for productivity improvement and be able to develop the business cases and successfully implement the agreed changes. Management skills are crucial to this and we must establish a generation of managers who feel confident to bring about continuous productivity increases.

Without managers and personnel that have the skills to improve productivity we will not be able to maximise the opportunities for investment in new ways of working, technology, AI (Artificial Intelligence) and infrastructure. Raising the skill levels has to be one of the first investments we make.

We hope that the research we have carried out and the proposals we put forward will find a resonance across society and contribute to the debate on how we can achieve a major leap forward in our economic performance.

Gareth Jones,
Chair of NOCN



Chief Executive L&W

The UK's record on productivity, which measures what our economy produces, is fairly dismal. The average US, French and German worker produces in four days what would take the average British worker five days. After some catching up with other countries in recent decades, productivity growth has flatlined since 2008.

This is a key reason for poor growth in living standards over the last decade and also limits the amount of money available for public services. In the long-term, productivity is the ultimate driver of economic growth. So improving productivity is one of the challenges of our time.

Lots of things are important for productivity, but a central factor is learning and skills. Learning and Work Institute has therefore been delighted to work with our friends at NOCN on this publication.

Our contribution has been the analysis in the document. It shows that the UK's poor record on learning and skills holds us back. Some nine million adults have low literacy or numeracy, and compared to other countries we risk going backwards from a low base. We are in the lower half of the international league tables for

intermediate skills. Our record on high skills is better, but with too much emphasis on one particular model of higher education and a need to do better on fair access.

There are many reasons to be cheerful. The Government's focus on this challenge is welcome, and many of its changes, including on apprenticeships and technical education, are heading in the right direction. But we need to go further, faster and better.

This publication is full of ideas for how to do this. The recommendations are NOCN's rather than L&W's, but they all come from the starting point of how we can achieve a shared national mission of improved learning and skills.

I hope that this publication is a helpful contribution to the debate on how we take the next steps in meeting our skills and productivity challenges.

Stephen Evans,
Chief Executive L&W



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1 EXECUTIVE SUMMARY



- 1.1** Since the 2008 financial crisis the UK has experienced a slump in productivity growth which shows no indication of coming to an early end. This slowdown has been more pronounced than in most other advanced economies.

“In 2016 the average British worker produced 16% less on average than other members of the Group of Seven leading economies”

Source Office of National Statistics (ONS).

- 1.2** Annual growth in productivity has decreased in the UK from 2.3% before the financial crisis to 0.4% in the past decade. If the pre-crisis trend had continued, productivity in the UK would be 25% higher than it is today. Research indicates that in some sectors, such as construction, financial services, insurance, public services, real estate and utilities, productivity has actually declined¹. Whilst a recent ONS report² indicates that there is some limited improvement taking place, there is a very long way to go.
- 1.3** Statistics also show significant regional and local differences, with places such as East of England, East Midlands, North East, North West, South West, Yorkshire & Humber, and Wales having relatively low productivity.
- 1.4** This is against a back drop of the Digital and Artificial Intelligence (AI) Revolution which is going to have a profound impact. The UK Government’s industrial strategy notes that “within two decades, 90% of jobs will require some digital proficiency, yet 23% of adults lack basic digital skills.” Recently the Institute for Public

Policy Research (IPPR) reported that 10 to 35% of all UK jobs could be replaced or altered over the next two decades. Clearly the training a person receives at school and in their 20’s will not sustain them in employment until perhaps their 70’s. AI is a challenge and opportunity we cannot afford to ignore.

- 1.5** There are major implications for the UK. If productivity growth remains low it will negatively impact on living standards, social mobility and our ability to fund the public services people want. There is an urgent case for the country focusing its effort on tackling the ‘productivity problem’. It is in the interest of the whole of society.
- 1.6** There are many factors which contribute to productivity such as investment by employers, deployment of new technologies, process and methods changes, and Government infrastructure and public service investment. Under-pinning all of these are **skills**.
- 1.7** The areas where we need to achieve a step change in skills are:
- a) **Management skills** to identify, develop and implement productivity improvements;
 - b) **Employability skills** including basic literacy, numeracy, cognitive and digital skills; and
 - c) **Technical knowledge**, including the use of new material, methods and technologies.

¹ Source ESCOE

² ONS Labour productivity, UK: January to March 2018

- 1.8** An OECD study showed England had one of the largest proportions of low-skilled young workers among advanced economies in respect of literacy and numeracy. It also established that young workers were no more skilled than older employees, suggesting that we are not developing a cohort of highly effective and skilled young workers that will progressively contribute to improving overall productivity. The majority of our 'comparator' countries such as Canada, France, Germany, Japan, and South Korea have seen major improvements in the skills of 16-24 year olds compared to 55-65 year olds³.
- 1.9** With new entrants from the education system only representing around 2% of the workforce in any given year, we cannot wait for any eventual changes in education to work their way through. If we are to drive productivity improvement, we must invest in upskilling right from the beginning. This needs a clear National Skills Strategy with two key thrusts:
- a) **Programmes for young people** coming through the formal education system with a recognition that education is about giving young people the skills for the economy as well as enriching their lives as human beings. This has to address the fact that on average young workers are apparently as low skilled in respect of literacy and numeracy as the older ones.
 - b) **Programmes for adults** - lifelong learning needs to be re-invigorated. We no-longer live in a world where someone enters a 'trade' or job roles and this sustains them for their working life. We must support adults in the workforce to improve their skills, productivity and adapt, and adults to learn throughout their lives for all the wider benefits this can bring.

³ Source OECD Report 2016



- 1.10** We need a National Skill Strategy to support the needs of employers, young people and adults. In developing the skills strategy to achieve an increase in productivity we must also be cognisant of other structural factors such as the lengthening of the working life, the proportion of self-employed (15% of the workforce), atypical working and the needs of those out of work.
- 1.11** Current UK Government policy is making some progress on 'technical knowledge' through Apprenticeship Reform and for 16-19 year olds through the planned T-Levels, due to start in 2020. However, we need to go further and faster, with a central focus on the quality of learning and fair access to it.
- 1.12** Not all job roles or individuals need a full academic, technical education or apprenticeship route. Short courses and modules aimed at adults in the workforce, including the self-employed, atypical workers and those who are trying to gain employment can be crucial to support an ever changing environment.
- 1.13** To date Government policy has had limited focus on adult work force up-skilling through short courses and management training on productivity improvement practices. The figures on literacy and numeracy also indicate that despite considerable effort we are not making a dent into this particular problem.
- 1.14** There is an opportunity to utilise the National Retraining Scheme (NRS), announced in November 2017, to plug the gaps in current provision.
- 1.15** In coming to a conclusion on the potential way forward we recognise that there has been significant investment in workforce skills over the last decades, which has not resulted in productivity improvement. We do not think that workforce training alone will produce the results we are looking for. It needs to be one important part of reform, alongside investment, benefits of digital technologies, processes and systems, organisational design, fair reward structures and inclusive growth. Crucial to all these are improvements in the skills, capability and experience of managers at all levels in order to successfully manage a transformation in performance.
- 1.16** We consider that urgent progress is needed in order to measurably improve productivity growth in the decades ahead. In order to achieve this, we recommend:

National Awareness Campaign

- a) Drive an awareness campaign to win hearts and minds across all parts of the economy of the need to focus on increasing productivity including by boosting skills. This can build upon the work of the Productivity Council.

National and Sector Skills Strategies

- b) Establish a National Skills Strategy which embeds productivity improvement and social mobility, and is embedded with the Industrial Strategy and under-pinned by local and sector skills strategies and the principles set out in the graphic shown below.

The sector based skill strategies need to address the needs of the whole supply chain including the self-employed and atypical workers as well as those out of work. In the **National Skills Strategy**, the Government needs to set the direction for local strategies to support people out of work and those workers who do not readily fit into the sector strategies.

The **National Skills Strategy**, to achieve a highly productive and thriving economy for all, should be founded on the following key **Principles**:



The **National Skills Strategy** needs to differentiate the needs of:



NEW ENTRANTS TO THE WORKFORCE:

This for the young people that are coming through the formal educational system, including tertiary education.

UP-SKILLING OF THE EXISTING WORKFORCE:

We need to recognise that to keep up with an exploit the changes in technology, processes, materials, and methods we need to invest heavily in the existing workforce.



Technical Knowledge and Employability Skills - Young People

- c) Design skills and technical knowledge curriculum to embed the individual sectors' requirements for improving productivity; working with employers, training providers and awarding and assessment organisations.
- d) Finalise the way Technical Education will work for 16 – 19 year olds with progression from Level 1, through 2 on to Level 3. Ensure that at each Level the curriculum covers **employability skills** and **technical knowledge**, based upon the skills that will achieve an increase in productivity.
- e) Finalise Technical Education plans for Level 4 and 5. The curriculum should cover **employability skills, technical knowledge** and an introduction to **management for productivity** improvement.
- f) Finalise all the major career pathways (occupational maps) with easy to understand links between courses and qualifications at the various T-Levels and the new reformed apprenticeships. This mapping needs to include linkages to academic and general applied qualifications.
- g) Invest in schools and colleges to support the implementation of all the changes.
- h) Retain the ambition for all young people to have good literacy and numeracy. Review the best ways to do this, including an important role for functional skills qualifications and significantly increase the number of people being trained.
- i) Include cognitive and digital skills within all T-Levels, as relevant to the needs of the individual sector.
- j) In the future develop plans to extend Technical Education options to 14-16 year old young people.

Reformed Apprenticeships - Young People and Adults

- k) Establish the full list of Apprenticeship Standards needed across the economy and move forward urgent action to complete these so they are all 'approved for delivery'.
- l) Incorporate into the development of new Standards the relevant skills needed to make the apprentice more productive for the sector they will work in and ready for future careers, not just their current job role.
- m) Take the opportunity of the first review of existing Standards to incorporate the relevant skills needed to make the apprentice more productive for the sector they will work in. This should include revising the various management apprenticeships to ensure they include productive improvement practices.

Technical Knowledge and Employability Skills - Existing Workforce

- n) Under the National Retraining Scheme (NRS) develop or utilise sector-designed adult education and skills programmes to support upskilling, based upon local priorities. These would include employability skills as well as short courses for technical knowledge. The range of programmes should include skills for job roles that do not need an apprenticeship or a formal academic route.
- o) Prioritise the local Adult Education Budget (AEB) funding with the NRS to deliver programmes supporting productivity increases in the existing workforce through upskilling. This should include the supply chains, self-employed, atypical workers and those out of work.
- p) Utilise local AEB funding to improve local literacy and numeracy including utilising practical Functional Skills programmes.
- q) Utilise local funding to improve digital and cognitive skills matched to the needs of the relevant sectors.

Management for Productivity - Existing Workforce

- r) Improve the skills of managers at all levels in the understanding of how to design and implement productivity improvement programmes. We must be able to develop managers that demand highly skilled employees and know how to deploy their skills productively and embed this in models of work organisation and job design.



- s) **Apprenticeship Levy**
Review how the Levy is operating to identify areas of short term flexibility to specific skills programmes aimed at increasing productivity and high quality additional learning that benefits as wide a range of people as possible.
- t) The UK Government should re-invest all unspent Levy funding into skills, for productivity improvement skills, undertaken through agreed national or local funding programmes including the AEB. This would be in addition to the funding under the National Retraining Scheme.
- u) **Online**
Support the move to more online learning, assessment and certification and as part of this review the various regulations and funding rules to remove any barriers to the change.
- v) **Social Mobility**
Incorporate positive action on social mobility and FREDIE in all skills programmes, training, apprenticeships and qualifications. This should be a fundamental foundation to implementing the strategy and include the needs of self-employed, atypical workers, hard to reach communities and the unemployed. Integral to this are the principals of inclusive growth, job quality, fair rewards and sustainable models of employment.
- w) **Accountability**
The National Skills Strategy, embedding productivity and social mobility, needs to be driven by a single accountable organisation, at the national level, which is given the resources and authority to act. We believe this is not a new organisation, but a rationalisation and refocusing of the roles of existing Government funded bodies. It needs to have established links to the bodies responsible for the sector skills strategies and local accountable organisations. In order to support the delivery there needs to be in place across England coherent empowered organisations that have the similar ability to act as is now starting to happen with the Mayors of the Combined Authorities.

2 COMPETITIVE WORLD



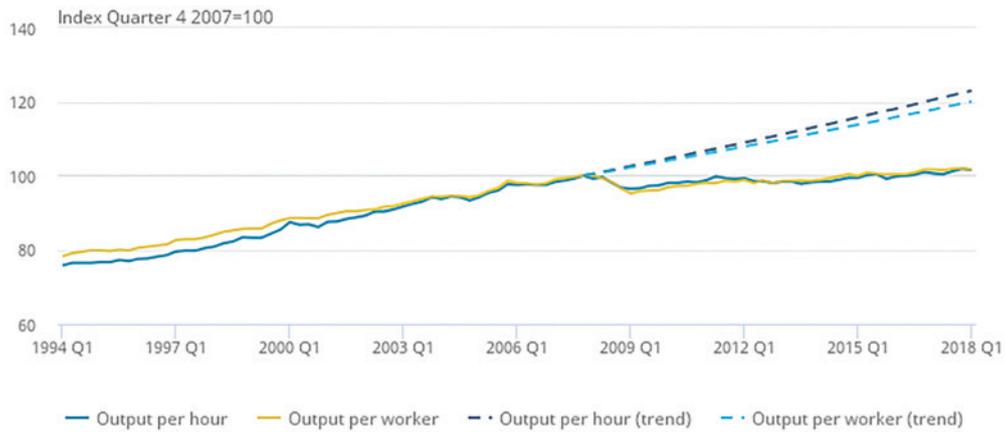
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UK's Productivity

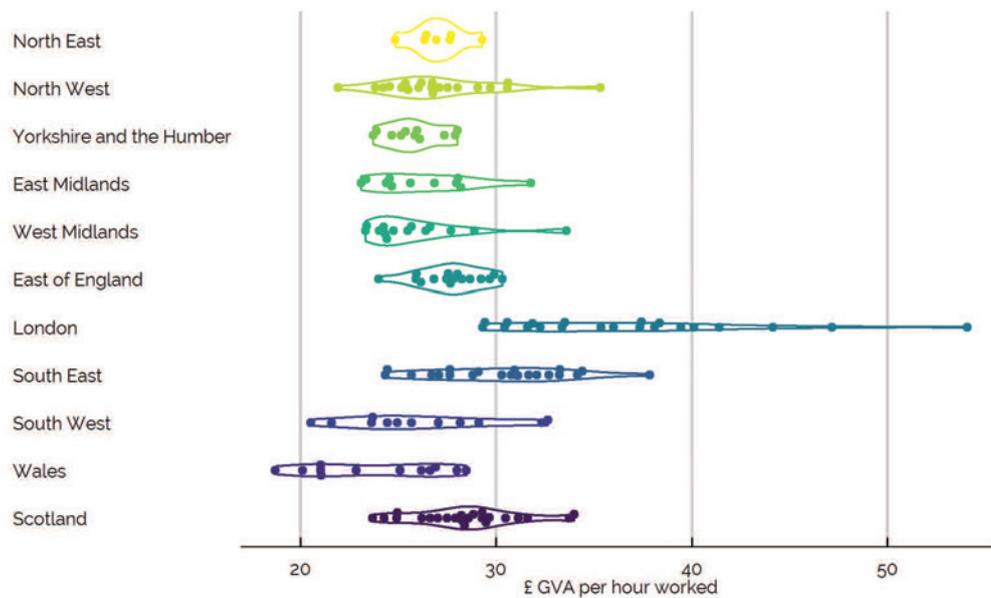
2.1 Productivity in the UK has stagnated since the recession. This is illustrated in Figure 2.1 below.

Figure 2.1: Productivity per hour worked in the UK



Source: Office for National Statistics

Figure 2.2: UK Regional Productivity



- 2.2** Annual growth in productivity has decreased in the UK from 2.3% before the financial crisis to 0.4% in the past decade. If the pre-crisis trend had continued, productivity in the UK would be 25% higher than it is today.
- 2.3** Of concern is that some research⁴ indicates that in some sectors, such as construction, financial services, insurance, public services, real estate and utilities, productivity has actually declined.
- 2.4** A recent ONS report⁵ states that labour productivity, as measured by output per hour, grew by 0.9% compared with the same quarter a year ago; this remains noticeably below the long-term trend observed before 2008 when productivity growth averaged nearly 2% per annum, and suggests the “productivity puzzle” remains unsolved, there is a very long way to go.
- 2.5** The UK has a wide dispersion of productivity between areas within the country. Figure 2.2 shows productivity (output in £ per hour worked) for each of 168 local areas within Great Britain, classified by their regions. The areas classified are “NUTS3” areas, a standard European classification. The highest figure shown is for Tower Hamlets, and the lowest is Powys.
- 2.6** UKCES research⁶ demonstrated that the UK has a ‘long tail’ of poorly managed businesses. When businesses’ management practices are assessed, the UK has a healthy proportion in the top quartile internationally. However, we also have many in the bottom quartile. By contrast, the US has many more in the top quartile than the bottom quartile, and Germany and France have many in the top quartile and in the middle of the range. The research indicated that those ‘top quartile’ UK employers with ambition and commitment to innovation are far more likely to invest in and adopt high performance working practices. Clearly many are not. This indicates a management skills gap on how to increase productivity.
- 2.7** Not only do we need to tackle the productivity challenge on a macro and sector level, but we must, with local authorities and other local organisations, address regional and local discrepancies.
- 2.8** There are 32.4 million people in work in the UK, as at June 2018⁷.
- 2.9** The number of young people entering the workforce from education is around 679,000 per annum, i.e. 2.1% of the total number of people employed, and will increase to around 722,000 in the next 5 years, see Figure 2.3. Over the last few years, a similar supply of new people into the workforce has derived from immigration. We recognise that this may change with Brexit and given the Government’s overall objectives for migration policy.
- 2.10** As this rate of ‘refresh’, improving productivity solely by new entrants through the education system is going to take a very long time to demonstrate any measurable impact.

⁴ Source ESCOE

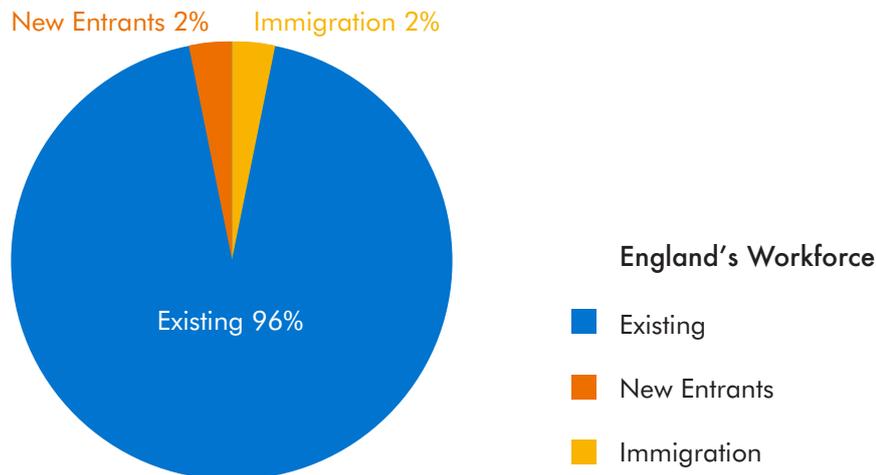
⁵ ONS Labour productivity, UK: January to March 2018

⁶ UKCES Growth Through People: Evidence and Analysis 2015

⁷ ONS UK labour market: August 2018

2.11 The message is clear that in any given year around 96% of the workforce is already in place. If the economy is to significantly increase productivity in the short and medium term, the priority has to be to up-skill the existing workforce. **This has a profound impact on the skills policies we need to adopt in order to increase productivity.**

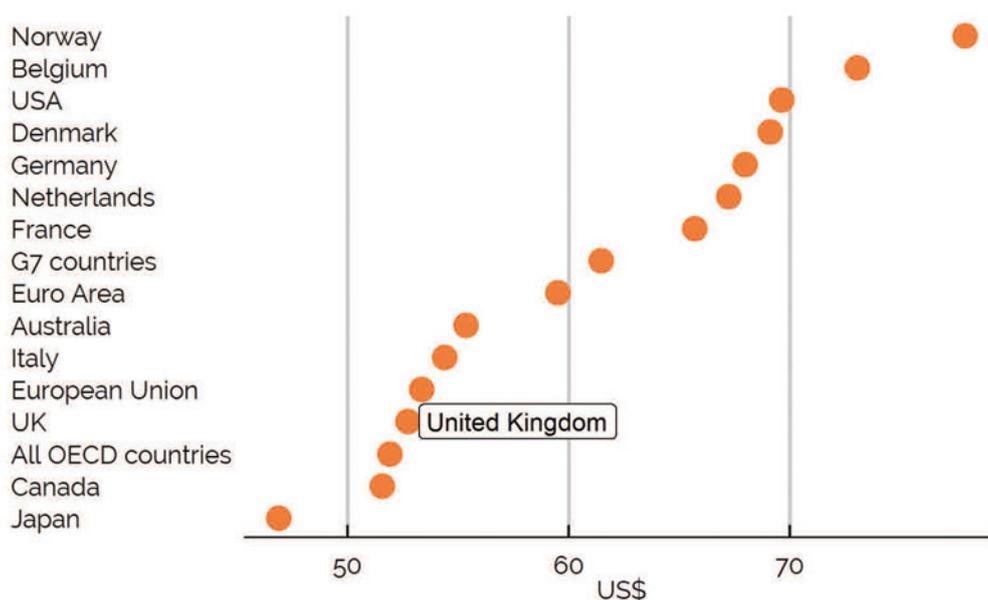
Figure 2.3: Inflows into the UK Workforce



Productivity Comparisons

2.12 The UK has overall lower productivity per hour worked than leading EU countries, G7 countries and other major competitors. This is illustrated in Figure 2.4 below.

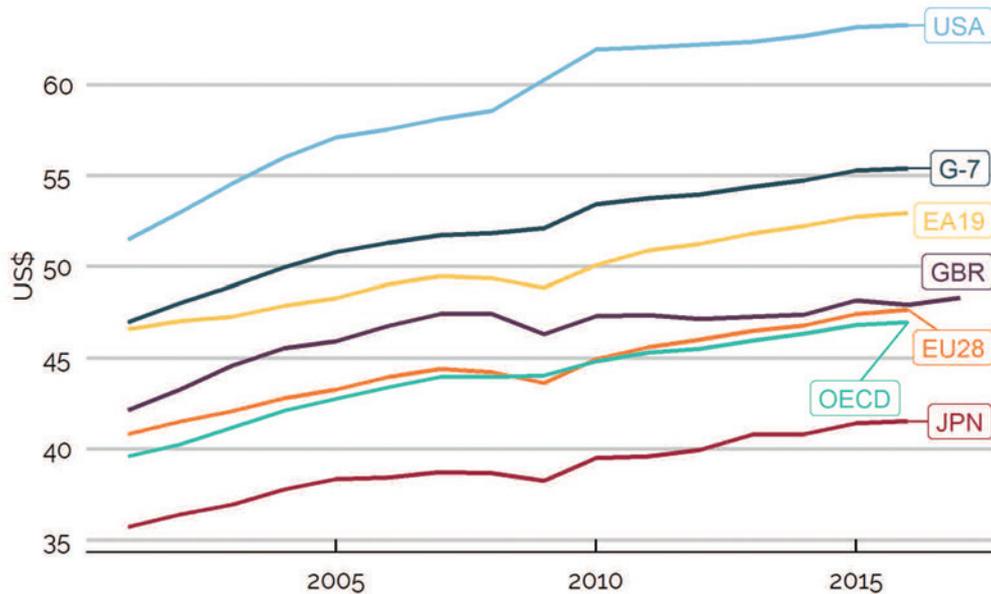
Figure 2.4: Productivity per hour in selected countries



2.13 The UK's productivity per hour worked was \$52.7⁸ in 2016. This was lower than that for the G7 countries as a whole (at \$61.5), for the EU as a whole (\$53.3) and the Euro Area (\$59.5). Among the G7 countries, the UK's productivity was only higher than that of Japan and Canada. While a slowdown in productivity growth has been common across OECD countries and international groupings, the slowdown in the UK has been greater than that in many other countries.

2.14 Figure 2.5 shows the UK (marked as GBR) against international groupings and major G7 economies over time. From this we can see that the UK has not recovered as other economies have after the financial crisis. Our productivity appears to be stagnating. The latest ONS data indicate that there may be some recent improvements. However, there is still a significant gap to fill and our international comparators are not standing still.

Figure 2.5: Productivity trends over time



⁸ The productivity figures are measured in US dollars, adjusted by the OECD to 'purchasing power parity'. Source OECD

2.15 Figures 2.6 show the UK's position in key sectors in Europe. In Figure 2.7 we show the same relative productivity measure in sectors where remuneration is traditionally seen as low.

Figure 2.6: Productivity within key sectors in Europe

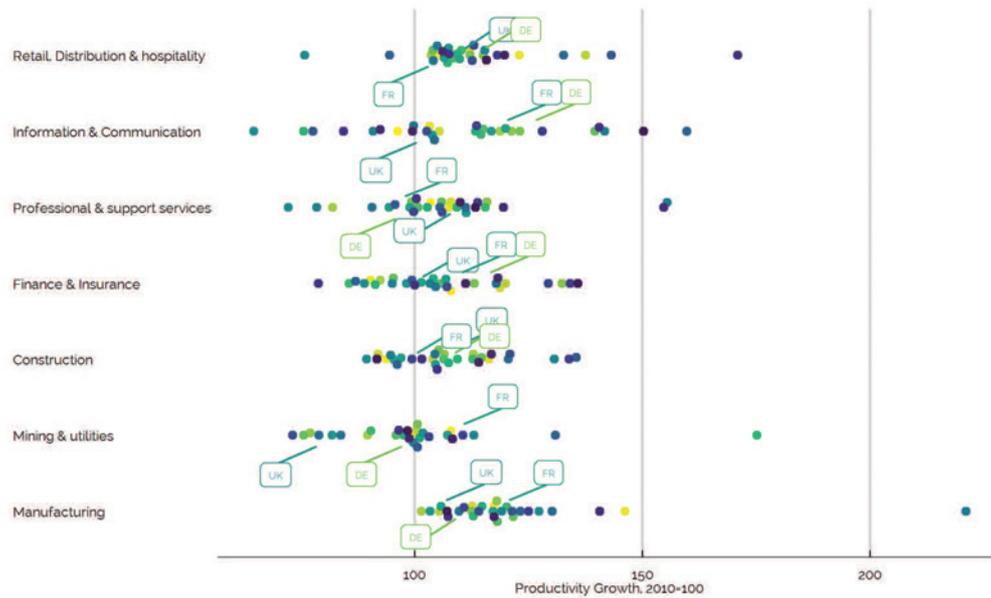
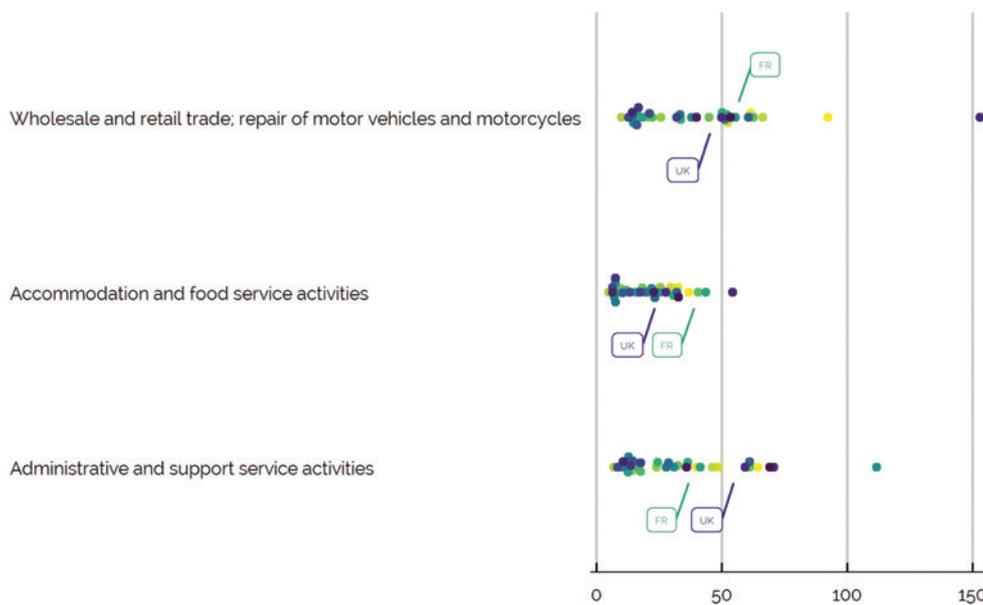


Figure 2.7: Productivity within sectors in Europe (low paying sectors)



2.16 From this we can see there is a potential economic benefit from increasing productivity and increasing our comparative position in retail, distribution, hospitality, information and communications (ICT), financial services, insurance, construction, mining, utilities and manufacturing.

Digital and AI Revolution

- 2.17** The UK's productivity challenge is set against a backdrop of the Digital and Artificial Intelligence (AI) Revolution which is going to have a profound impact.
- 2.18** Artificial intelligence (AI), sometimes called machine intelligence, is intelligence demonstrated by machines, in contrast to the natural intelligence displayed by humans and other animals. Commonly the term is applied when a machine mimics "cognitive" functions that humans associate with other human minds, such as "learning" and "problem solving".
- 2.19** The field was founded on the claim that human intelligence "can be so precisely described that a machine can be made to simulate it". This has raised the concern that AI will have fundamental implications for global and national societies and result in widespread reduction in many types of traditional jobs. Of course, new technologies will also create new jobs and opportunities.
- 2.20** AI is not something which is in the future; it is now and growing. It is breaking into the healthcare industry. Doctors are already being to help to find the better treatments for cancer as well as improve the calculation of dosage rates for very expensive drugs. In the automotive sector AI is helping the creation and evolution of self-driving vehicles. Where-as in the financial sector, banks use artificial intelligence systems to manage operations, accounting, invest in stocks, and manage properties. It is stated that AI has also reduced fraud and financial crimes. AI based

buying and selling platforms have changed the law of supply and demand in that it is now possible to easily estimate demand and supply curves and thus pricing.

- 2.21** Whether you see AI as a threat or an opportunity in some ways is academic. It is already happening and is going to develop. We need to find ways to prepare for a world with AI in a way that gives people the skills they need and ensures that society as a whole benefits from this 'revolution'.
- 2.22** The UK Government's industrial strategy notes that "within two decades, 90% of jobs will require some digital proficiency, yet 23% of adults lack basic digital skills." Recently the Institute for Public Policy Research (IPPR) reported that 10 to 35% of all UK jobs could be replaced or altered over the next two decades. Clearly the training a person gains at school and in their early career will not sustain them in employment until perhaps their 70's. These structural changes in employment presents a major challenge for the economy achieving improvements in productivity.

"Last year, 22,000 students told us they want staff to be better with digital, not to use more of it, and whilst 81.5% of university students feel that digital skills will be important in their chosen career, only half believe that their courses prepare them well for the digital workplace"

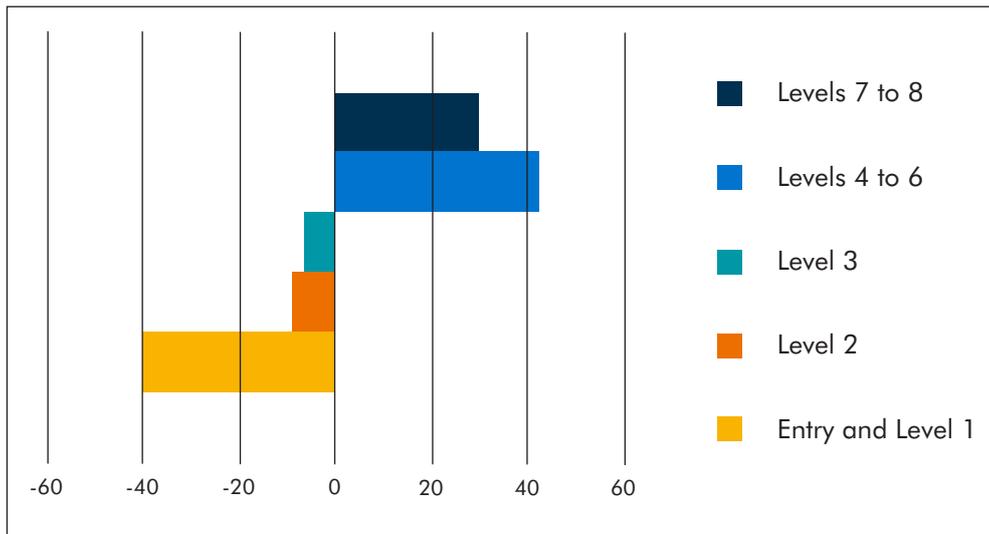
Paul Feldman, Chief Executive, JISC, Education Technology; 24th July 2018
source Office of National Statistics (ONS).

- 2.23** All sectors in the economy are affected by changes in technology. This is not solely an issue of insufficient experts, but most roles in the economy will be impacted by the increasing use of digital technologies and artificial intelligence. Both digital and cognitive skills will become increasingly more important.

Structural Shifts in Employment

2.24 Recognising these profound changes, the CBI and the former UK Commission for Employment and Skills have both forecast a structural shift in the nature of employment in the UK with an increasing proportion of jobs requiring people who are qualified at Level 4 and above.

Figure 2.8: Forecast changes in employment profile by qualification level



Source: UKCES, Working Futures 2014-24

World Productivity

2.25 In addition to AI what is happening in the World of 'productivity' around us?

2.26 Across the globe, there is an increasing focus on productivity development with an increasing number of countries creating development agencies and implementing productivity initiatives, national productivity campaigns and award schemes⁹. This, in part, is due to a growing realisation that productivity growth needs to accelerate if we are to address inter alia growing (and ageing) populations, increasing urbanisation (with less

of the world's surface being devoted to food production), growing aspirations, an increasingly aware and sophisticated consumer base wanting 'ethical' trade.

2.27 In the UK, we have some of the World's most productive companies. However, we have a large core of companies that are not particularly productive and there seems to be a lack of urgency to increase productivity. In the UK, we do not seem to have won the hearts and minds for change.

⁹ See www.wcps.info and www.eanpc.eu for more information.

2.28 Of course, the rate of productivity development and growth depends on the starting point of the journey but even allowing for this, a number of countries do seem to be able to grow their productivity more effectively than the UK. Many of the countries with good growth records over a number of years seem to have built that growth on successful infrastructure development of the underlying macroeconomic framework, of transport infrastructure, of technology infrastructure and (especially) of education, training and skills development. This builds a potential for higher productivity which entrepreneurs and business leaders can exploit - through innovation in products and services, manufacturing and delivery processes and through new business models.

2.29 Those countries which have followed this path now seem to have recovered from the global economic slump whilst others are still playing 'catch up'. The UK needs to learn the global lessons and needs to talk less about Productivity growth and do more to facilitate and support it.

2.30 One of the problems is that many of the infrastructure improvements take time to bear fruit. Governments, voters and business investors tend to work with short term horizons.

2.31 Skills development must be focused on tomorrow's skills gaps, not today's. Where these are yet to be uncovered, we need a focus on generic, transferrable, resilient skills and personal qualities which promote an acceptance of, and the skills to contribute to, positive performance and productivity improvement.



3 PRODUCTIVITY DRIVERS AND SKILLS

24



Drivers

3.1 The major factors or drivers which impact productivity are:

Government

- a) **Regulation:** Central and Local Government rules, regulations and support.
- b) **Innovation and competition:** Central and Local Government encouraging and supporting innovation and competition through relevant policies.
- c) **Infrastructure:** The levels of investment in the country's infrastructure in areas such as digital capacity, environment, transportation, power, public services and utilities.

Employers

- d) **Technical:** Innovation, design, location, layout and size of the plant, equipment and machinery, research and development, automation and use of digital technologies. As the exploitation of artificial intelligence (AI) increases this will also impact.
- e) **Processes and Planning:** Processes, systems, procedures, planning, co-ordination, process engineering, materials management, supply chain management and change as well as project management.
- f) **Organisational:** Structure, roles, responsibilities levels of delegation and industrial relations.
- g) **Finance and Risk:** Financial planning, capital investment, risk and issue management.

People

h) **Skills:** People and their skills drive productivity throughout an organisation - from top to bottom.

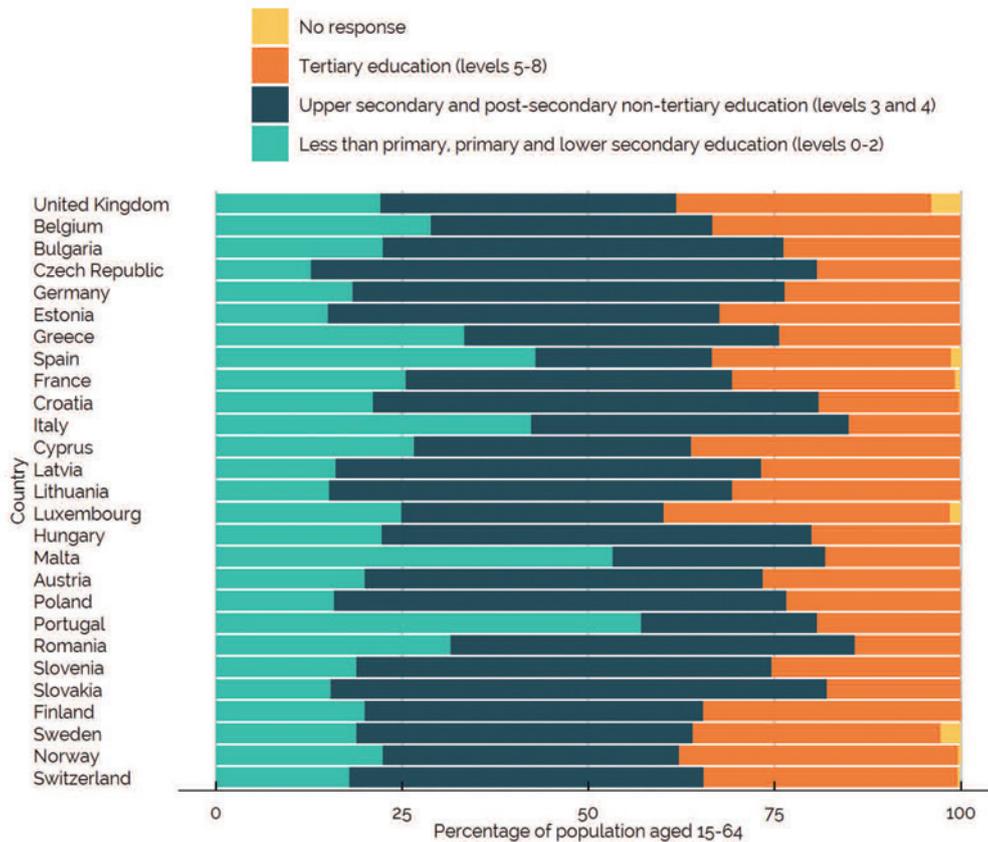
3.2 In this report we concentrate on skills; whilst also recognising the importance of the other factors.

UK Relative Position on Skills

3.3 Skills are connected to several of the drivers of productivity. The skill-related elements include both the skills available in the work force and also, the skills of management in utilising available skills and the capability of the workforce to innovate.

3.4 We will start with the UK's overall qualifications position compared to other OECD countries, looking at the proportion of the UK's population who have tertiary (levels 5-8), upper secondary (levels 3-4) and post-secondary and primary or lower secondary (levels 0-2) education.

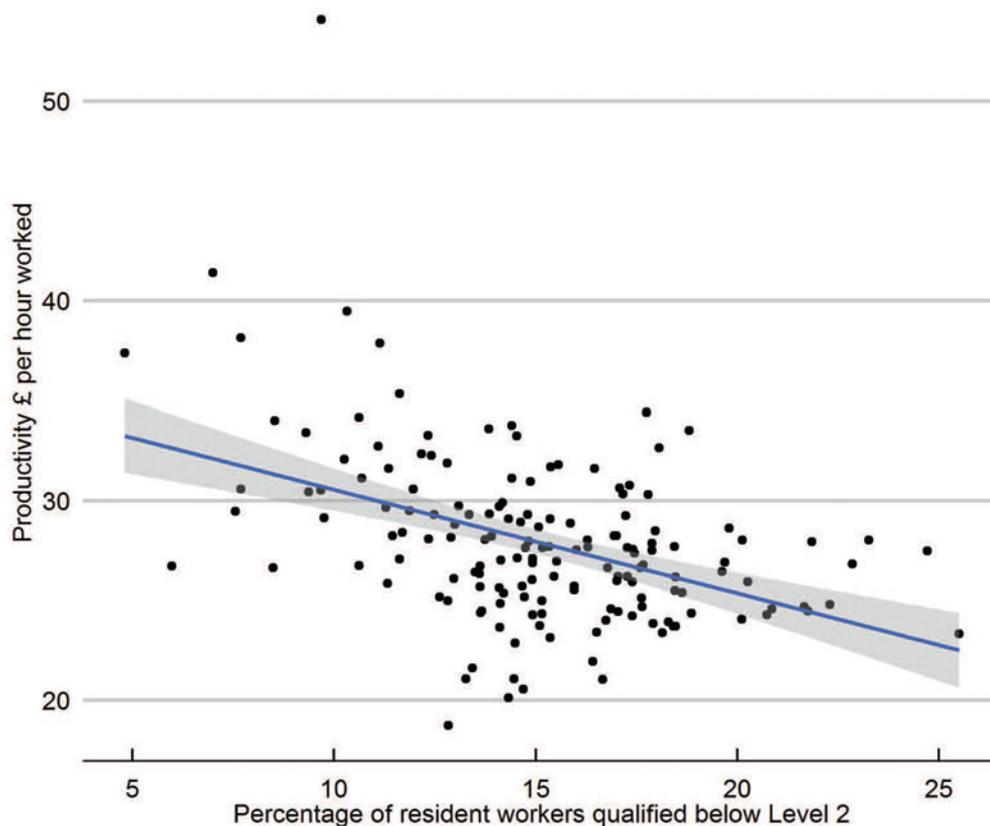
Figure 3.1: National position for levels of qualification achievement in the population



3.5 This gives us the comparison for qualifications, **not skill levels**. In this respect the UK is in a reasonable place compared to tertiary level attainment in other countries. However, the UK lags behind some leading countries such as Germany and those in Scandinavia and Eastern European. Particularly in terms of the proportion of people qualified to intermediate level.

3.6 The analysis given in Figure 3.2 demonstrates the correlation of qualifications to productivity looking at local areas within Great Britain (168 NUTS3 areas), and charts how productivity within the UK varies by workforce qualifications and by working age resident qualifications.

Figure 3.2: Relationship within UK areas between productivity and the proportion low skilled



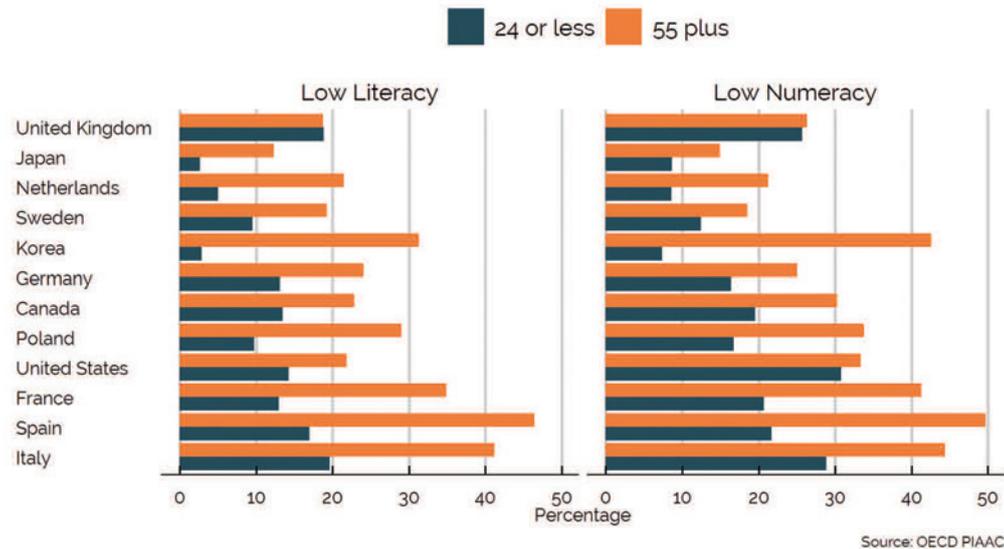
3.7 This shows the proportion of workers who are resident in each area compared with the productivity in each area. There is a correlation (shown by the line and its confidence interval) between the proportion of lower qualified workers living in the area and productivity. The correlation is negative, so the higher the proportion of low-qualified workers, the lower the productivity, and vice versa.

Literacy & Numeracy

3.8 OECD analysis shows England has a high proportion of workers with low literacy and/or numeracy skills compared to most of our competitor countries. In addition, the OCED data indicates that unlike other countries the proportion of 16-24 year olds in England with low literacy and/or numeracy skills is similar to the 55-65 age group. In most other countries the proportion of young people with low literacy or numeracy is lower than that of 55-65 year olds i.e. they are making progress at reducing literacy and/or numeracy problems in the workforce; whilst England is not. Conversely, it may be that although attainment of literacy and numeracy skills by young people is relatively poor, there is then 'catch up' in the workforce.

Figure 3.3: Literacy and numeracy by age and by country

The UK (England & Northern Ireland) has a high proportion of low-skilled young people



3.9 The OECD data states that literacy and numeracy rates in UK are significantly below the average of similar economies. Their separate report on England identified some nine million adults in England with low literacy and / or numeracy skills. This data was collected in 2012 as part of the OECD's Programme for the International Assessment of Adult Skills (PIAAC) and involved a set of tests which were designed to be internationally comparable with other nations who participated in the programme. Within the UK, only England and Northern Ireland participated. Northern Ireland, unlike England, showed an improvement.

3.10 The nine million figure covers those with either low literacy or low numeracy or both. The OECD state they "struggle with basic quantitative reasoning or have difficulty with simple written information". So this is a 'basic skills' measure that is well below the GCSE Grade A-C standard. Five million do poorly in both literacy and numeracy. It covers more than a quarter of adults in England.

3.11 On Figures 3.4. and 3.5, which have been recreated from OECD data, below Level 2 includes those in the yellow and orange bars, while Level 2 skills are coloured purple.

3.12 This definition of 'low skills' is those who are below Level 2 in the competences tested in the Survey of Adult Skills. Indeed, the OECD comment that some of the well-qualified are low skilled. This includes those with post-secondary and tertiary education, although the rates of being low-skilled are higher for those with lower education.

Figure 3.4: Adult literacy in OECD countries

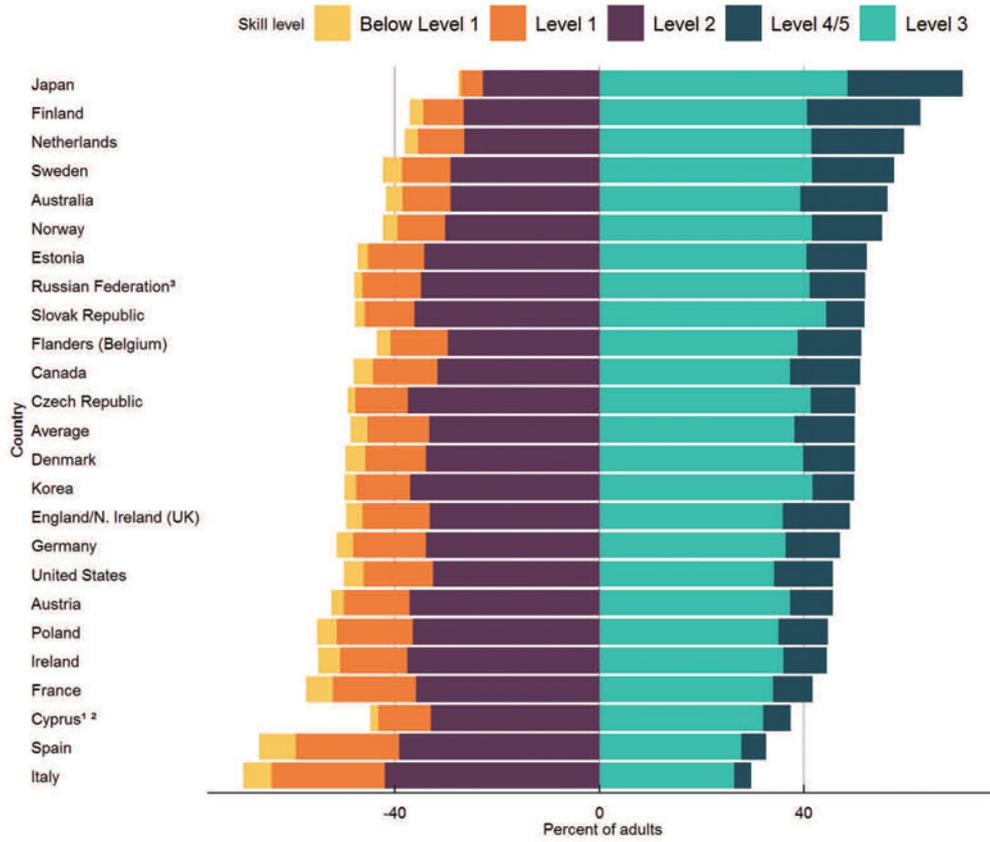
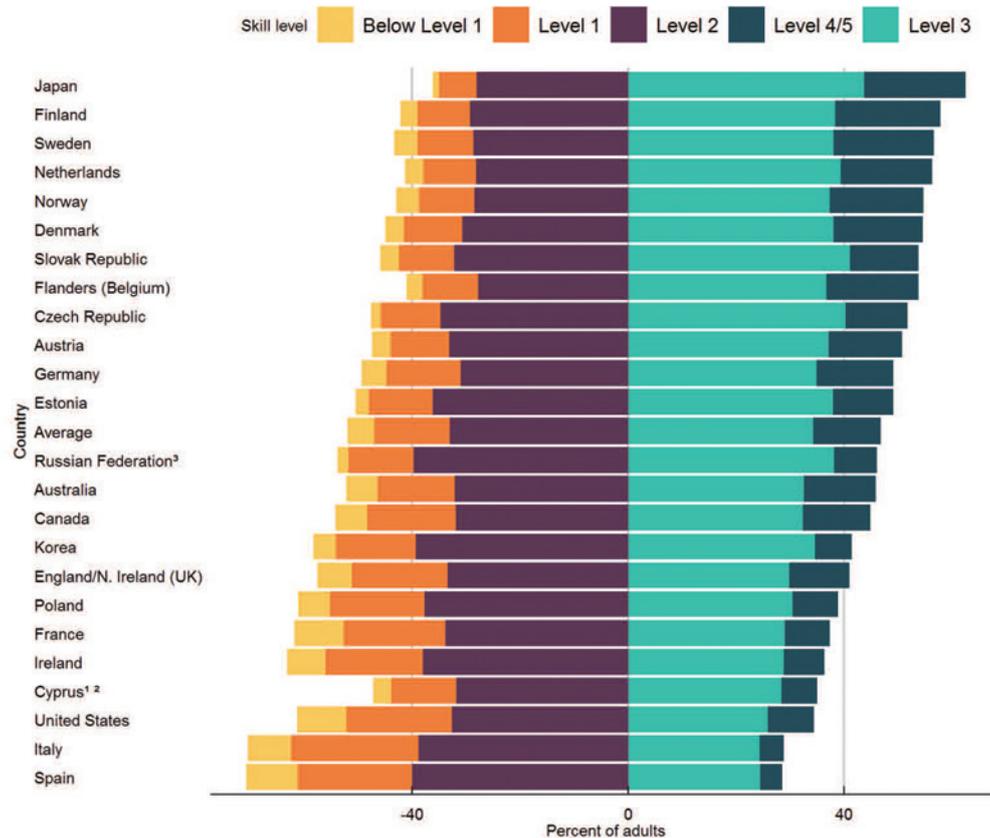
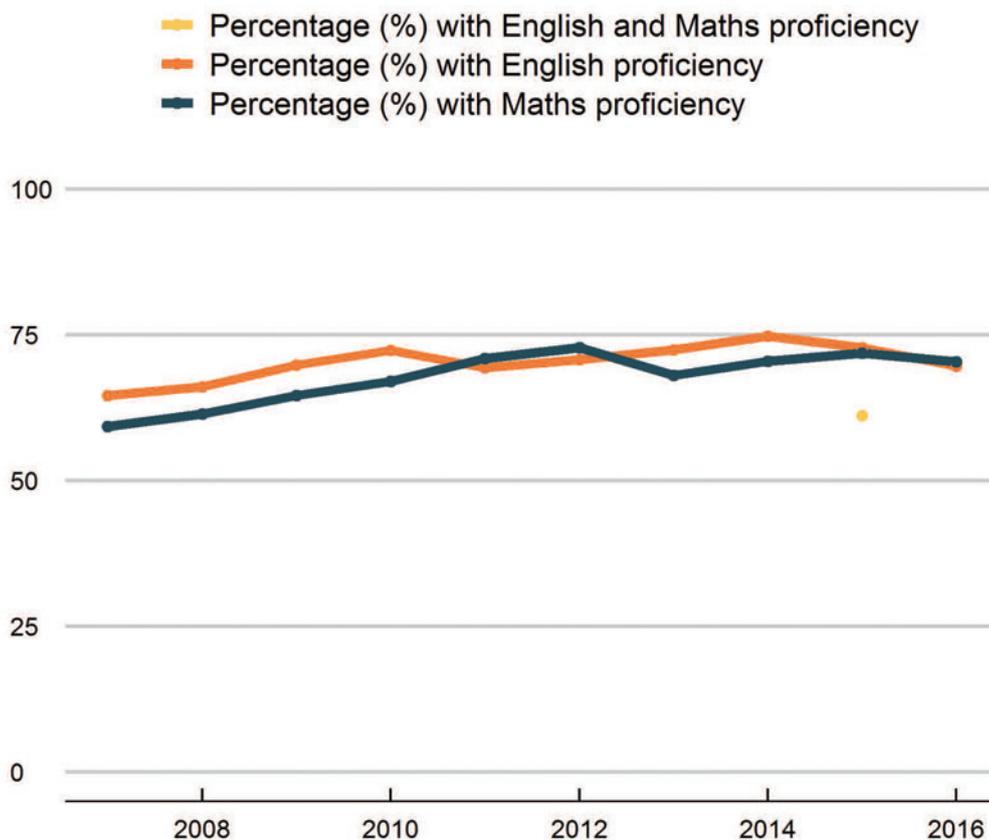


Figure 3.5: Adult numeracy in OECD countries



- 3.13** This OECD data shows that relative to many of our comparator countries we have a significant number of people at Level 2 and below.
- 3.14** DfE's publication on Level 2 and 3 attainment in England¹⁰ shows that in 2017 64.9% of young people at the age of 16 reached Level 2 qualifications in English and maths on a cohort of 616,941. This means that 216,546 did not reach Level 2. In the same year the proportion of 19 year olds that were achieving Level 2 was 85.3% i.e. 90,690 had not achieved Level 2 by this age.
- 3.15** There was an improvement in Level 2 achievement from 2004 to the high point in 2015 with 69.5% of 16 year olds at Level 2 and 87.5% of those aged 19. Since then there has been a slow decline.
- 3.16** Ofqual data for the period April 2017 to March 2018 shows that 103,825 Level 2 certificates were issued for English and 105,805 for maths. This is low compared to the number in the workforce with low literacy and numeracy skills.
- 3.17** Government statistics shows us that the percentage of young people at the end of Key Stage 4 achieving a pass grade at GCSE level in English and maths appears to have reached its high point.

Figure 3.6: England proportion of 16 year olds achieving English and maths at GCSE



¹⁰ DfE Level 2 and 3 attainments in England: Attainment by age 19 in 2017, May 2018

- 3.18** UN Sustainable Development Goals also enables us to examine OECD data on the skills from the PISA study of skill levels at age 15. This shows a similar picture, that the young people coming through the education system in the UK have relatively low skills in English and science and particularly low skills in maths compared to other countries.
- 3.19** The resulting message which we can conclude from the data on English and maths is that in overall terms we are just not making a dent into the literacy and numeracy problems in the UK workforce. Much more needs to be done. Policy makers need to give serious consideration to:
- a) Reducing the proportion of 16 year olds that are not achieving the Level 2 perhaps including by ensuring GCSE are sufficiently practically based and/or moving more people over to Functional Skills at an earlier age; and
 - b) Investing significantly in practically based literacy and numeracy for adults as a matter of urgency. This would require focusing on ways to engage adults and deliver learning relevant to their lives and careers.
- 3.20** The UK needs to improve attainment in English, maths and science. If we do not, then this will inhibit our ability to increase productivity.
- b) Physical Science;
 - c) Engineering;
 - d) Environmental science;
 - e) Financial services;
 - f) IT;
 - g) Health professionals, practitioners and technicians;
 - h) Creative, arts and design;
 - i) Teaching;
 - j) Social services;
 - k) Aircraft technicians; and
 - l) Chefs.
- 3.21** The Government's 'Shortage Occupation List' indicates skills gaps in areas such as:
- a) Production management in mining and energy;
- 3.22** The recently published bi-annual employer skills survey¹¹ states that the number of skill-shortage vacancies in 2017 was 226,000 having risen progressively from 91,000 in 2011. There was an 8% increase in skill-shortage vacancies between 2015 and 2017. Business services and construction were reported as being sectors with particular problems. Employers reported that skilled trades, such as chefs, electricians and vehicle technicians were job roles that were proving hard to fill. Skills employers were finding as lacking included digital skills, skills related to operational effectiveness, customer handling, analytical skills, self-management, management, leadership and sales. All of these affect productivity. Many of the hard to fill vacancies (67%) are reported to be caused, in part, by a lack of skills, qualifications and experience.

Skill Gaps in UK

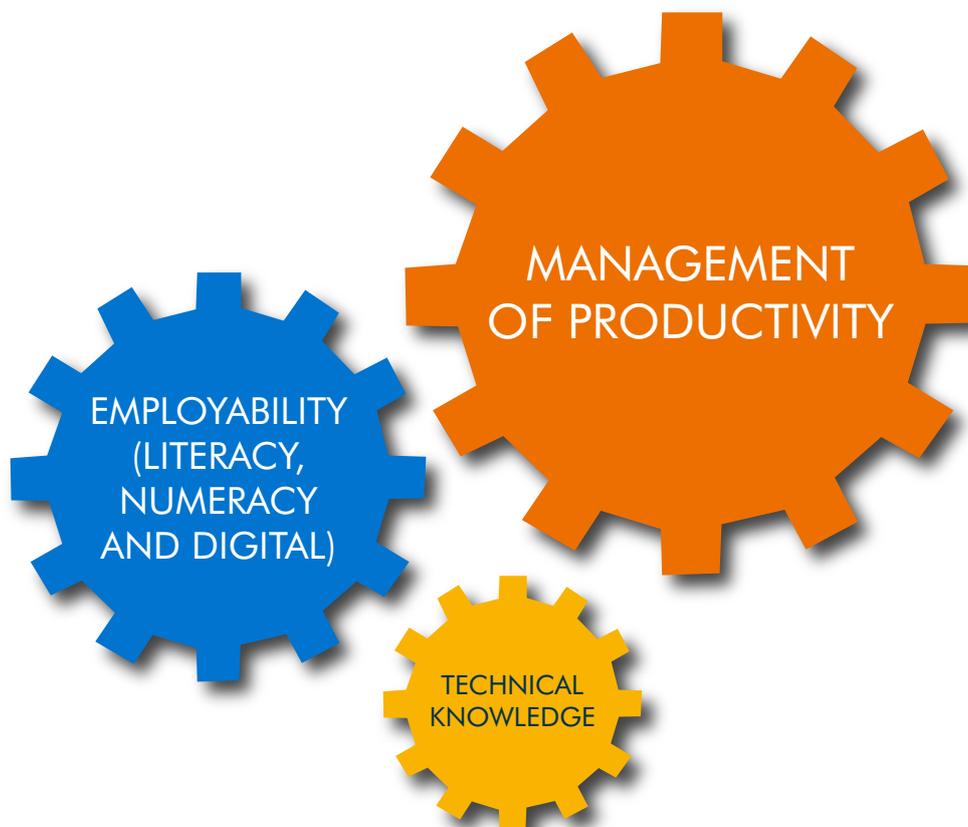
- 3.21** The Government's 'Shortage Occupation List' indicates skills gaps in areas such as:
- a) Production management in mining and energy;

¹¹ DfE Employer Skills Survey 2017, August 2018

Skills for Productivity

3.23 We have mentioned that workforce and management skills are crucial in terms of increasing productivity. To develop a plan for tackling low skills levels in the report we categorise the skills needed or drive productivity into three key areas:

- a) **Management for Productivity:** Skills such as leadership, visioning, creativity, strategic planning, productivity improvement practices, personnel development, quality control, customer focus, marketing, digital exploitation, judgement and risk appetite.
- b) **Employability Skills:** Skills such as cognitive skills, self-management, teamwork, business and customer awareness, problem solving, communication and literacy, application of numeracy application of information technology (digital productivity skills), learning to learn and entrepreneurship.
- c) **Technical Knowledge:** Skills such as the technical knowledge and common core for the sector and specific jobs, but as the generic skills to diversify into other areas. As well as understanding and adapting to new methods, technologies and materials.



4 CURRENT SKILLS POLICY



Current UK Government Skills Reforms

4.1 The major policy changes to skills development in England has been shaped by the Wolf Report in 2011, the Richard Review in 2012 and Report of the Independent Panel on Technical Education in 2016. They are:

- a) **Reform of Apprenticeships:** The former Specification of Apprenticeship Standards for England (SASE) apprenticeships frameworks are being progressively replaced by the new Apprenticeship Standards being designed through the Trailblazer process.
- b) **Apprenticeship Levy:** This was introduced in May 2017 and provides a new mechanism for Government funding of apprenticeships.
- c) **Technical Education:** These are at Level 3 for 16-19 years, to be fully introduced by 2024. They are intended to improve the wide range of Level 3 vocational and technical qualifications, presently available.
- d) **Functional Skills:** This reform is intended to strengthen the quality of the qualifications. It is important that qualifications give people the skills they need along with an understanding of how to apply these in their life and work.
- e) **Devolution:** The Government is planning to progressively delegate the Adult Education Budget (AEB) and the management of local skills priorities to the London Mayor, new Combined Authorities and Local Government/Local Enterprise Partnerships. As part of these changes the Government is forming Regional

Apprenticeship & Technical Education Taskforces, Local Industrial Strategies, Institutes of Technology and Local Digital Skills Partnerships. The first skills deal has been agreed with the West Midlands Combined Authority. It is aimed to boost digital and technical skills, job opportunities and productivity across the region.

- f) **Productivity Council:** In November 2016 the Government announced it was setting up a UK Productivity Council to improve management skills and business productivity. Backed by £13m worth of Government seed funding, phased over three years, the new council was proposed following discussions among UK business leaders, the Confederation of British Industry (CBI) and the Institute of Directors (IoD). **Be the Business** was established in 2017 to address the underperformance of UK productivity. Chaired by Sir Charlie Mayfield, Be the Business is spearheading a business-led drive to help companies across the UK improve their performance.
- g) **National Retraining Scheme (NRS):** This was included in the Government's Industrial Strategy published in November 2017, with an aim of driving up adult learning and retraining. The first meeting of the National Retraining Partnership was hosted by the chancellor Philip Hammond and included the CBI, TUC and Secretary of State for Education. The Scheme is to contribute to boosting productivity and tackle skills shortages in sectors identified as areas of growth, including in construction and digital industries. The Government is planning to begin this with an investment of £64 million for digital and construction training, up to 2020.

- 4.2** There are also established funding schemes which are continuing such as advanced learner loans and Jobcentre Plus' employment and skills programmes for those out of work.
- 4.3** The Government is also reviewing the requirements for technical education at Level 4 and 5 as well as considering in certain sectors Level 2.
- 4.4** The fact that people are trained does not of itself deliver a productivity benefit. This will only happen if the training is on a new method or skills, which will produce higher productivity, and if that training is applied in practice once complete. We need to be assured that curriculum for Apprenticeship Standards and T-Levels supports productivity improvement.
- 4.5** In respect of driving up productivity, there are gaps in the current skills reform programme, including:
- a) **Defined technical skills curriculum for productivity:** Aspects of curriculum that would directly result in a more productive 'person' in the workforce, in many cases, are not in the Apprenticeship Standard, nor the initial draft curriculum for T-Levels at Level 3. If we do not positively specify skills development which will increase productivity, we run the risk of producing a 'technician' in 2025 who has the skills the economy needed in 1995;
 - b) **Training managers to improve productivity:** Traditionally management training has not specifically focused on productivity improvement;
 - c) **Upskilling:** Upskilling of the existing workforce has taken a back-seat in some areas;
 - d) **Technical Education 14 to 16 years:** The present reforms for Technical Education only concentrate on those aged 16 to 19 years old, in part a response to the increase in school leaving age. We need to consider the best route-ways for younger age groups too;
 - e) **Technical Education Level 1 and 2:** Current Technical Education reform is at Level 3 and it has not, yet, set out the approach to Level 2, nor how a progression for Level 1 might work;
 - f) **Technical Education Level 4 and 5:** The UK Government's current Technical Education reforms are Level 3 and it has not, yet, set out its approach to Level 4 and 5. These Levels that are one of the highest priority in respect of growth in demand in the economy and increase in productivity;
 - g) **Apprenticeship Standards:** As at the end of August 2018 there were a total of 558 Standards either approved or in development. There is concern that not all standards are sufficiently focused on driving productivity gains;
 - h) **Apprenticeships Level 4 and 5:** Of the total of 558 Standards there are 66 in total at Level 4 and 5 approved for delivery. Take up on these and degree apprenticeships is currently low, but growing rapidly;

- i) **English and maths:** There has insignificant progress on improving overall literacy and numeracy levels. We still have some 9 million adults¹² in the England with inadequate skills in these areas. As evidenced previously, the number of learners getting Level 2 in English and maths through Functional Skills is less than the numbers of learners not achieving this Level in the education system by the age of 16. There has been insufficient investment in tackling the literacy and numeracy gaps in the workforce. In addition to the changes in Functional Skills the Smith review of post-16 mathematics¹³ made a wide range of recommendations for DfE, Ofqual and IfA. These need to be considered and decisions made;
- j) **Employability Skills:** There has not been a significant focus on employability skills, other than English and maths. Cognitive skills within this is also a gap;
- k) **Social Mobility/Inclusion:** Additional action and effort is needed to achieve social mobility and inclusion; and
- l) **National Retraining Scheme:** Discussion has only just commenced on this. It needs to be integrated into a single national skills strategy so that we have a coherent approach. It could be used to fill some of the gaps identified above.

Changes in the eco-system

- 4.6** Alongside the reform programme there have been significant changes in organisational infrastructure in the skills eco-system (the 'delivery' capacity) such as:
- a) Creation of Career Colleges;
 - b) Creation of UTCs;
 - c) Demise of several Sector Skills Council (SSCs);
 - d) Mergers of various FE Colleges across England;
 - e) National academies for certain sectors or sub-sectors such as High Speed Rail and Nuclear Colleges;
 - f) Institutes of Technology; and
 - g) Creation of the Institute of Apprenticeships¹⁴ (IfA) as well as end-point assessment organisation (EPAOs) and external quality assurance organisations (EQAOs).
- 4.7** Major structural change in terms of mergers, acquisitions and closures have also been taking place for independent training providers (ITPs).
- 4.8** This follows a pattern of near constant reform over recent decades. We need to make improvements and fix problems where we find them. But we also need a period of stability so the current reforms bed in.

¹² OECD "Building Skills for all: A Review in England", 2016

¹³ Report of Professor Sir Adrian Smith's review of post-16 mathematics, July 2017

¹⁴ Being renamed Institute of Apprenticeships and Technical Education

Changes in Learning, Assessment and Certification

4.9 New digital technologies have opened up opportunities to change the way people learn, are assessed, examined and certificate. The UK needs to continue to embrace and extend online learning, assessment and certification. This will be particularly beneficial to adults in the workforce as it will reduce the time away from work as well as the need to travel.

4.10 Our education delivery, skills regulatory framework and funding rules are still strongly embedded in 'classroom' techniques. If we are to capture the benefits of the new ways of learning we will need to update our delivery, regulations and funding rules.

Policy Changes in Northern Ireland, Scotland and Wales

4.11 The administrations in the other nations of the UK have devolved responsibility for skills and are taking different approaches. This is a natural consequence of devolution. It is important to maintain consistency where appropriate, but also learn from where different approaches are working in other UK nations.



5 SECTOR DIFFERENCES

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Introduction

- 5.1** The UK Government published its UK wide Industrial Strategy on 28 November 2017. Since then it has been working with a number of major sectors to establish Industrial Strategies, e.g. automotive, bio-pharmaceutical construction, construction and nuclear science. In addition to the Industrial Strategy the Government has also published the Digital Skills Strategy¹⁵ which identifies the need to increase the level of digital skills in the economy. From this we can see different challenges and demands emerging. Accordingly, we have taken a sample of sectors to give an idea as to the range of requirements there might be for skill development programmes to improve productivity.
- 5.2** Many policy organisations and commentators are forecasting significant impact on jobs from the Digital and Artificial Intelligence (AI) Revolution over the next two decades. Some have commented that this will great a change greater that the industrial, computerisation and the internet revolutions. Clearly this will impact all sectors of the economy, perhaps in very different ways.
- 5.3** The UK's automotive industry is the third largest European car producer and has a very good productive record. It employs 159,000 people directly in manufacturing and 238,000 in the supply chain. Many are high skilled and well paid jobs.
- 5.4** The Sector Deal¹⁶ demonstrates how the automotive sector can play an important part in investing in the development of the next generation of vehicles. It also envisages major changes to the manufacturing process, utilising increased automation and AI.
- 5.5** Growth of the UK automotive sector and the transition to the next generation of vehicles will require people with new skills and a substantial upskilling of the existing workforce. This requires a coordinated national and local approach apprenticeships and technical qualifications. In response to this the industry has established the Automotive Industrial Partnership for Skills (AIP). This has developed a skills roadmap for the sector, which is guiding steps to tackle critical skills shortages as the sector grows and evolves. A key element is to boost apprenticeships.
- 5.6** The industry's roadmap needs to be supported by our education and skills development eco-system. Skills development in a complex supply chain will be a particular feature of this sector.

Automotive

- 5.3** The UK's automotive industry is the third largest European car producer and has a very good productive record. It employs 159,000 people directly in manufacturing and 238,000 in the supply chain. Many are high skilled and well paid jobs.

¹⁵ HM Government "UK Digital Strategy" March 2017

¹⁶ HM Government "Industrial Strategy Automotive Sector Deal", Jan 2018

Construction

5.7 Construction underpins the UK's economic performance, providing all the buildings and infrastructure to power our modern society. The Government's Industrial Strategy for the sector¹⁷ reports that there is more than £600 billion to be invested in infrastructure over the next decade, including at least £44 billion on housing.

5.8 The Government's Industrial Strategy states that the sector is one of our major employers, with around 3.1 million people, many of whom are outside London and the South East. In 2016 the turnover of the sector was £370 billion, adding £138 billion in value to the UK economy, this represents 9 percent of the total. It has also a long history of export, contributing to our overseas earnings.

5.9 There are on-going changes happening in the industry such as new materials, energy saving devices, greater use of CAD (Computer Aided Design) for design and computer aided operations on site. These will also be used by other countries so cannot be relied upon to stem the productivity decline and close the gap. In order to achieve significant improvement in productivity we need to implement the proposals set out in the Farmer Review, "Modernise or Die"¹⁸ and now embedded in the Industrial Strategy for the sector.

5.10 Improvement in the sector is expected to be achieved through:

a) **Digital techniques** deployed through-out all the phases for building and infrastructure from client commissioning, design and construction. Over the coming decade this will include artificial intelligence (AI):

b) **Offsite manufacturing techniques** which will not only fundamentally change the way buildings and infrastructure assets are construction, but as fundamental how they are planned, commissioned and designed. Northern Europe has been successfully using these types of techniques for over four decades. The UK needs to adopt similar approaches; and

c) **Whole life asset performance** that will broaden the focus from just construction costs to the building or infrastructure assets across its life and operation, including the minimisation of energy use.

5.11 Increasing employability skills, including digital skills, cognitive skills and educational attainment levels, particularly at Level 2 is a priority. As is the shift to offsite manufacturing techniques, which will mean a re-engineering of the industry's skills from top to bottom. We will need to skill the industry's leadership, managers, planners, regulators, clients, designers, site supervisors and the workforce. In fact, the re-skilling of the client commissioners, industry leadership and new 'technician level' are crucial first priorities in order to have the skills to drive the changes.

5.12 Achieving skills improvements in the sector's supply chain, sub-contracts and self-employed workforce will be a challenge.

¹⁷ HM Government Industrial Strategy "Construction Sector Deal", 2018

¹⁸ The Farmer Review of the UK Construction Labour Model, "Modernise or Die, Time to decide the industry's future, October 2016

Financial Services

- 5.13** The UK is a world leader in banking and finance, “with employees in the finance related professional services contributing 1.5 times more to the economy than the average UK employee”. The industry employs 7.3 per cent of the UK’s working population, totalling more than 2.2 million people¹⁹.
- 5.14** The UK’s financial services sector contributes the eight highest proportion of economic output in the OECD countries. The number of jobs in the financial services sector has remained broadly steady over the past few decades, but the proportion of jobs in this industry has fallen as the number of jobs in the whole economy has grown²⁰.
- 5.15** However, productivity within the financial services sector continues to fluctuate, in the last decade the banking and financial services sector has seen both an influx of computerisation and financial technologies (FinTech). Digital skills are clearly crucial in this sector.
- 5.16** There has also been an on-going programme of strict regulation reforms. The impact of independent regulation has required employers in the sector to “re-think” both their recruitment and in-house training, to meet both their organisational and Financial Conduct Authority, regulatory requirements. A high-level competence requirement, regulated by the FCA (the competent employees rule) ensures that employees working within the sector and engaged in the regulated activity, in all UK authorised firms, must ensure a competence and development framework is met, including the need to attain a qualification where relevant.
- 5.17** The move to FinTechs and computerisation within the sector in the late 1990’s, as well as the move away from face to face banking, has seen the financial services industry require an evolution in its leadership and management. Some have indicated that the link between leadership, management and the recent stagnant growth in productivity, is attributed to a lack of adequate leadership skills. The move away from the management of people and the control over their decisions, has been in some parts been replaced by the management of process and the human interactions within the process.
- 5.18** These human interactions are possibly the cause for the lack of comparative productivity, whilst the addition of FinTech and the automation of banking has de-skilled the effectiveness and productivity of workers. Traditional entry routes into the sector have also played a part in the productivity puzzle. Graduates have for decades been the main source of an organisation recruitment pool. The effect of this recruitment strategy, has been that upskilling and training once in a post, has been one of maintaining competence to ensure compliance is achieved, rather than a process of recruiting with the intention of skill development against the specific role.

¹⁹ Turvill, W. (2017). Financial and professional services industry contributions. City AM

²⁰ 2018 Banking Outlook - The Deloitte Centre for Financial Solutions

5.19 The apprenticeship reform has seen a shift in the recruitment and training of employees, with a focus from the sector on the next generation of financial decision makers. In small pockets, the apprenticeship standards have made an impact. However early signs of skill development and a perceived return on investment, have shown that developing an organisation's future workforce from the ground up, can imbed productivity and effective behaviour.

5.20 In this sector we can see that management, leadership and digital skills are key to increasing productivity.

Life Sciences

5.21 Life Sciences is one of the important economic sectors for the future of the UK's economy. It includes areas such as biology and technology for health improvement, biopharmaceuticals, drug manufacture, medical technology, genomics, diagnostics and digital health. It generates some £64 billion of turnover and employs more than 233,00 scientists and staff²¹. Globally this market is expected to reach £2 trillion, presenting a major opportunity for the UK sector, provided it can access the skills it needs.

5.22 It is very productive compared to other sectors²². Despite this the sector's industry strategy report to Government²³ indicates a series of major challenges under five themes:

- a) **Science:** continued support for the science base, maintaining strength and international competitiveness;
- b) **Growth:** an environment that encourages companies to start and grow, including expansion of advanced manufacturing;
- c) **NHS:** NHS and industry collaboration, facilitating better care through innovative treatments and technologies;
- d) **Data:** making best use of data and digital tools to support research and better patient care; and
- e) **Skills:** ensuring that the sector has access to a pool of talented people to support its aims through a strong skills strategy.

5.23 The Skills Action Plan identified by the sector aims to develop and deliver reinforced skills across the NHS, commercial and third sector to match identified skills gaps. This includes an apprenticeship scheme for data science, technologists and scientists, Institutes of Technology, entrepreneurship training, convergence training and STEM.

²¹ HM Government, "Strengthen and Opportunity 2016"

²² ONS data 2016

²³ Life Sciences Industrial Strategy Board, "Life Sciences Industrial Strategy" August 2017

Social Care Services

5.24 Adult social care sector employs over 1.8 million dedicated and committed people. These are mostly employed by private and voluntary sector organisations, including more than 21,000 privately run social care services. This excludes the large number of people who volunteer who are also working in social care.

5.25 With an aging population we can see the demand for these services rising significantly. This challenge is recognised by the Government and will be publishing in the social care green paper later in 2018.

5.26 This sector has an established sector skills council which has identified key skills for the workforce. Being able to access and explain, i.e. have good standard of English, information on advocacy, brokerage, advice and a wide range of guidance, are seen as crucial. People working in the sector need a good understanding of care pathways, physical and mental health issues. They need to see safeguarding and a high quality of personal service as central to their role. Specifically, in terms of increasing productivity the

workforce and their management need to be able to find more effective ways of working, with new roles, use for digital technologies and more data driven analysis and decision making.

5.27 These skills demands are significantly different from those we see in some of the other sectors.

Conclusion

5.28 From these various strategies, we can identify that skills programmes aimed at achieving productivity gains must be designed for the specific sector. The needs and demands will vary considerably by sector and 'one size will not fit all'.

5.29 Each sector needs to be able to deal with the actual structure of its workforce and supply chain, including the complexities of sub-contracting, self-employment and atypical working patterns.



6 SOCIAL MOBILITY AND FREDIE



- 6.1** It is crucially important that everyone has the same access to develop their skills and careers. This is why social mobility and fairness, respect, equality, diversity, inclusion and engagement (FREDIE) need to be embraced and integral to any skills strategy. The National Centre for Diversity defines FREDIE as:
- a) **Fairness:** Being reasonable, right, and just;
 - b) **Respect:** Having due regard for the feelings, wishes and rights of others;
 - c) **Equality:** Where every person has equal rights and every person has a fair chance;
 - d) **Diversity:** Diverse means different. We are all different so diversity includes us all. The concept of diversity encompasses understanding, acceptance and respect;
 - e) **Inclusion:** Where every person feels respected, valued and that they fit in with the organisational culture;
 - f) **Engagement:** Two-way commitment and communication between an organisation and its employees
- 6.2** There are two reasons why FREDIE are important to organisations and the economy as a whole, these are the social case and the business case.
- 6.3** With low unemployment and significant skills gaps there is a real business case for opening up access to skilling and hence employment across the whole of our society. There are talented people everywhere, we need to support them to achieve.
- 6.4** As the commercial world becomes ever more complex, competitive and driven by technological advances, it is all too easy for organisations to lose sight of the importance of engaging on the human level and simply treating individuals fairly. However, people will always be vital to businesses. Without employees and customers, businesses cannot exist.
- 6.5** To be successful, an enterprise must be staffed with motivated, fulfilled workers who are engaged and empowered and loyal clients who return again and again - these principles must be ingrained across every part of the organisation. Put simply, social justice must run through an organisation's objectives and workforce development plan like a stick of rock.
- 6.6** Research carried out by Deloitte, suggests that 'if just 10% more employees feel included, the company will increase work attendance by almost one day per year (6.5 hours) per employee'²⁵. Using the figure previously given from ONS UK labour market research; regarding the number of people in work in the UK, this increase of 10% would result in 208 million additional hours of productivity in the UK.
- 6.7** For the same reasons the Government must enshrine FREDIE in all education and skills policies and strategies. To help achieve this we need easy to understand career pathways that are accessible and known by all parts of our community. We need to support this with an openness and passion to help everyone to achieve to their best. Government must ensure it does not create inadvertent barriers, such as funding rules or eligible criteria which discourages sectors for society from engaging with the development of skills.

²⁵ Deloitte, "Waiter, is that inclusion in my soup?" May 2013

7 NATIONAL SKILLS STRATEGY FOR PRODUCTIVE ECONOMY

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- 7.1** We propose that the Government needs to publish an over-arching National Skills Strategy, under-pinned by the various sector strategies with their differing requirements. The **National Skills Strategy**, to achieve a highly productive and thriving economy for all, should be founded on the following key **Principles**:
- a) **Continuous Productivity Improvement:** In a world of constant change we must be able to easily and rapidly adapt and constantly strive to improve productivity. As the UK improves productivity other countries will also improve - standing still is not an option;
 - b) **Social mobility/FREDIE:** All skills development is underpinned with Fairness, Respect, Equality, Diversity, Inclusion and Engagement which will facilitate social mobility;
 - c) **National Standards:** National standards that are recognised by all employers, reflecting the changing needs of the economy and matching the best of international standards;
 - d) **Transferability:** Young people and the workforce receive accreditation and qualifications that means they can readily move between different jobs both in the UK and internationally;
 - e) **Career pathways:** Career pathways that are clear and easy to understand, with well-known routes young people and adults in the workforce can take to developing their skills and income. For the economy to satisfy the increasing demand for people to fill the new Level 4 and Level 5 jobs that will be created people must be able to readily progress from Level 2 and Level 3;
 - f) **Health:** People who are physically and mentally healthy are likely to be more productive;
 - g) **Safety:** Safe working environments are likely to provide a basis for high productivity; and
 - h) **Fair remuneration:** People must receive fair remuneration and conditions of work for their skills and be able to earn more by developing themselves.
- 7.2** The National Skill Strategy needs to differentiate the needs of:
- a) **New entrants to the workforce:** This for the young people that are coming through the formal educational system, including tertiary education; and
 - b) **Upskilling of the existing workforce:** We need to recognise that to keep up with an exploit the changes in technology, processes, materials, and methods we need to invest heavily in the existing workforce.
- 7.3** For new entrants coming through the education system the priority is **employability skills** and **technical knowledge**, sufficient to start on an apprenticeship or a job at the first rung of the career ladder. There will need to be a progressive move to increase the proportion of people taking Level 4 and 5 qualifications and/or entering Level 4 and 5 apprenticeships. Employability skills includes digital and cognitive skills.
- 7.4** With a flow rate of around 2 percent per annum into the workforce, programmes for new entrants are clearly a long-term strategic action and will take decades to demonstrate significant improvement to productivity.

- 7.5** To make a real impact on productivity requires priority to be given to up-skilling the existing workforce; focusing on **management for productivity, employability skills** and **technical knowledge**. We need to refocus adult and lifelong learning.
- 7.6** The National Skills Strategy needs to be driven by employers as well as national and local government through skill development programmes aim specifically at productivity improvement.
- 7.7** This can be achieved through:
- a) **Management for productivity** short training programmes that move away from the traditional approach of teaching management techniques towards giving managers the skills and confidence to develop and implement programmes, which improve productivity in their companies;
 - b) Programmes to increase **employability skills**, including literacy, numeracy, such as practical, not academic, Functional Skills and well as programmes for increasing cognitive and digital skills;
 - c) Apprenticeships, including intermediary, advanced and higher for adults which will address both **employability skills** and **technical knowledge**; and
 - d) Short training courses, adult apprenticeships and qualifications that update **technical knowledge** with new technology, AI, new materials, equipment and methods.
- 7.8** The training and apprenticeships for the existing workforce should also support people developing their careers for Level 2 or 3 into Level 4 and 5.

8 DRIVING IMPROVEMENT



National Role

8.1 The national role needs to focus on:

- a) **National Awareness Campaign:** This to win hearts and minds for the need to increase productivity including by improving skills across the economy;
- b) **National Industrial Strategies for Major Sectors:** Establishing the areas that will drive productivity improvement and hence the skills development needed to match these;
- c) **National Skills Policies:** Developing and managing policies on technical education, Apprenticeships, employability, social mobility and national Government funding priorities;
- d) **National Funding Programmes:** Managing national funding programmes such as the Levy, T-Level funding and the National Retraining Scheme;
- e) **National Standards:** Setting, updating and managing national standards for qualifications and apprenticeships, which match the best of international standards; and
- f) **Quality Oversight:** Auditing quality across the whole eco-system including schools, colleges, universities, independent training providers, employers, awarding and assessment organisations. Taking action as necessary.

8.2 This is not something the UK Government can do on its own. It must be done with employers and their national bodies as well as training, awarding and assessment organisations and their relevant national bodies.

8.3 Currently, within the UK Government, responsibility for skills and productivity is divided between a wide range of Government Departments and their various funded agencies such as the Education Skills Funding Agency (ESFA), Institute for Apprenticeships (IfA), Ofqual, a number of External Quality Assurance (EQA) organisations and the Productivity Council [Be the Business]. If we are to succeed in closing a very significant productivity gap of some 30% we believe will require a single accountable organisation, at the national level, to drive the skills improvements required for productivity increases. We do not believe this needs to be a new organisation, instead there should be a rationalisation and refocusing of existing national responsibilities, building upon what we have in place.

Local Role

8.4 As well as the national role we must appreciate the importance of local organisations in driving the delivery and achievement on the ground. The local role needs to be focused on:

- a) **Local Leadership:** Bringing together all the employers, training organisations and agencies and providing the local drive to increase productivity and economic performance;
- b) **Local Industrial Strategies and Priorities:** Establishing, thorough agreed Industrial Strategies the local skills development priorities and programmes, which will support an increase in productivity in the local/sub-regional workforce. This needs to focus on the sectors critical to the local economy as well as common priorities such as employability skills and management development;

- c) **Local training capacity and programmes:** Ensuring that their adequate and experienced resources in the local FE Colleges, independent training providers to support skills programmes for productivity improvement;
 - d) **Local funding:** Managing the local funding streams, such as Local Government funds, grants and the devolved Adult Education Budget (AEB); and
 - e) **Local investment:** Investing to ensure that the eco-system infrastructure is in place to support the skills development for productivity improvement.
- 8.5** At the local level in England, this will involve London Mayor, Local Government, including the new Combined Authorities, Local Enterprise Partnerships (LEPs), local employers and their representative bodies as well as local training providers.

Employers

- 8.6** Employers at the national and local level need to have clear internal plans and programmes setting out how they are going to increase the productivity in their business and the skills development necessary to implement change.

Supporting Delivery

- 8.7** Schools, colleges, universities, independent training providers, employers, awarding and assessment organisations need to understand how they can contribute to skills development that results in productivity increase.



9 RECOMMENDATIONS

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9.1 We consider that urgent progress is needed in order to measurably improve productivity growth in the coming decades. In terms of the skills development needed for productivity we recommend:

National Awareness Campaign

- a) Drive an awareness campaign to win the hearts and minds across all parts of the economy of the need to focus on increasing productivity including by boosting skills. This can build upon the work of the Productivity Council.

National and Sector Skills Strategies

- b) Establish a National Skills Strategy which embeds productivity improvement and social mobility, and is embedded with the Industrial Strategy and under-pinned by local and sector skills strategies and the principles set out in Section 7. The sector based skills strategies need to address the needs of the whole supply chain including the self-employed and atypical workers as well as those out of work. In the National Skills Strategy, the Government needs to set the direction for local strategies to support people out of work and those workers who do not readily fit into the sector strategies.

Technical Knowledge and Employability Skills - Young People

- c) Design skills and technical knowledge curriculum to embed the individual sectors' requirements for improving productivity; working with employers, training providers and awarding and assessment organisations.

- d) Finalise the way Technical Education will work for 16 – 19 year olds with progression from Level 1, through 2 on to Level 3. Ensure that at each Level the curriculum covers **employability skills** and **technical knowledge**, based upon the skills that will achieve an increase in productivity.
- e) Finalise Technical Education plans for Level 4 and 5. The curriculum should cover **employability skills, technical knowledge** and an introduction to **management for productivity** improvement.
- f) Finalise all the major career pathways (occupational maps) with easy to understand links between courses and qualifications at the various T-Levels and the new reformed apprenticeships. This mapping needs to include linkages to academic and general applied qualifications.
- g) Invest in schools and colleges to support the implementation of all the changes.
- h) Retain the ambition for all young people to have good literacy and numeracy. Review the best ways to do this, including an important role for functional skills qualifications and significantly increase the number of people being trained.
- i) Include cognitive and digital skills, within all T-Levels, as relevant to the needs of the individual sector.
- j) In the future to develop plans to extend Technical Education options to 14-16 year old young people.

Reformed Apprenticeships - Young People and Adults

- k) Establish the full list of Apprenticeship Standards needed across the economy and move forward urgent action to complete these so they are all 'approved for delivery'.
- l) Incorporate into the development of new Standards the relevant skills needed to make the apprentice more productive for the sector they will work in and ready for future careers, not just their current job role.
- m) Take the opportunity of the first review of existing Standards to incorporate the relevant skills needed to make the apprentice more productive for the sector they will work in. This should include revising the various management apprenticeships to ensure they include productive improvement practices.

Technical Knowledge and Employability Skills - Existing Workforce

- n) Under the National Retraining Scheme (NRS,) develop or utilise sector-designed adult education and skills programmes to support upskilling, based upon local priorities. These would include employability skills as well as short courses for technical knowledge. The range of programmes should include skills for job roles that do not need an apprenticeship or a formal academic route.
- o) Prioritise the local AEB funding with the NRS, to deliver programmes supporting productivity increases in the existing workforce through upskilling. This should include the supply chains, self-employed, atypical workers and those out of work.

- p) Utilise local AEB funding to improve local literacy and numeracy utilising practical Functional Skills programmes.
- q) Utilise local funding to improve digital and cognitive skills matched to the needs of the relevant sectors.

Management for Productivity - Existing Workforce

- r) Improve the skills of managers at all levels in the understanding of how to design and implement productivity improvement programmes. We must be able to develop managers that demand highly skilled employees and know how to deploy their skills productively and embed this in models of work organisation and job design.

Apprenticeship Levy

- s) Review how the Levy is operating to identify areas of short term flexibility to specific skills programmes aimed at increasing productivity and high quality additional learning that benefits as wide a range of people as possible.
- t) The UK Government should re-invest all unspent Levy funding into skills for productivity improvement skills undertaken through agreed national or local funding programmes including the AEB. This would be in addition to the funding under the National Retraining Scheme.

Online

- u) Support the move to more online learning, assessment and certification and as part of this review the various regulations and funding rules to remove any barriers to the change.

Social Mobility

- v) Incorporate positive action on social mobility and FREDIE in all skills programmes, training, apprenticeships and qualifications. This should be a fundamental foundation to implementing the strategy and include the needs of self-employed, atypical workers, hard to reach communities and the unemployed. Integral to this are the principals of inclusive growth, job quality, fair rewards and sustainable models of employment.

Accountability

- w) The National Skills Strategy, embedding productivity and social mobility, needs to be driven by a single accountable organisation, at the national level, which is given the resources and authority to act. We believe this is not a new organisation, but a rationalisation and refocusing of the roles of existing Government funded bodies. It needs to have established links to the bodies responsible for the sector skills strategies and local accountable organisations. In order to support the delivery there needs to be in place across the UK coherent empowered organisations that have the similar ability to act as is now starting to happen with the Mayors of the Combined Authorities





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