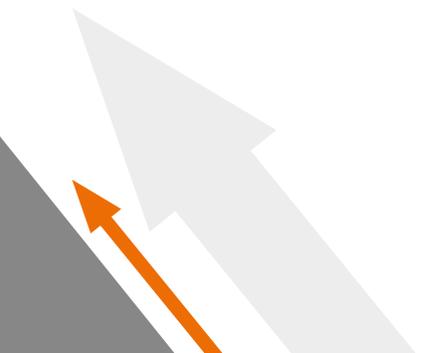


TIME FOR ACTION: Skills for economic growth and social justice

Stephen Evans and Corin Egglestone
March 2019



About us

Learning and Work Institute (L&W) is an independent policy and research organisation dedicated to promoting lifelong learning, full employment and inclusion. We research what works, develop new ways of thinking and implement new approaches.

We want everyone to have an opportunity to realise their ambitions and potential in learning, work and throughout life. We believe a better skilled workforce, in better paid jobs, is good for business, good for the economy, and good for society. We want learning and work to count.

Supported by



NOCN is a market-leading international awarding organisation and government-approved end point assessment organisation that has been creating opportunities for 30 years. At the forefront of vocational skills development and apprenticeships, including the introduction of the apprenticeship levy, NOCN is the only UK awarding body which specialises in productivity and is focussed on increasing the UK's competitiveness globally.

Contents

Executive summary	5
Introduction.....	7
1. Learning, skills and economic growth.....	8
2. Learning, skills and social justice.....	15
3. International skills comparisons.....	21
4. A higher 2030 ambition.....	30

Executive summary

Learning and skills play a central role in driving economic growth, promoting social justice and supporting inclusive communities.

Over the last decade, economic growth has been slower than in the preceding decades. Independent forecasts suggest this is a permanent fall in the UK economy's speed limit.

This is neither inevitable nor unavoidable. Seismic shifts in the global economy, driven by advances in technology, create huge opportunities. Making the most of them will require a world class skills base.

Learning and skills contribute to economic growth both directly, by improving the skills base available to employers, and indirectly, by underpinning the five foundations of productivity identified by the government: ideas, people, infrastructure, business environment, and places. This is the case for all levels of learning from basic skills to degree level – research clearly shows earnings, employment and productivity gains for each level of learning.

Skills also contribute to social justice, helping to improve social mobility (the extent to which an individual's life chances do or do not depend on their family background) and reduce inequality (the gap between rich and poor). Again, this is the case at all levels of learning. Gaining basic skills helps people access opportunities, and widening access to higher education also opens up new career opportunities.

However, the UK's skills base has long lagged that of comparator countries, holding back economic growth and social justice. Nine million people in England lack functional literacy and / or numeracy,

and a higher proportion of people have low skills compared to other countries, leaving the UK mid-table at best in the international rankings.

Over the last decade, the rate of improvement in the UK's skills base has slowed. This is the result of cuts in public funding for adult skills, alongside falling employer investment in skills. Consequently, participation in adult learning is at its lowest since Learning and Work Institute began conducting surveys twenty years ago and the number of adults improving their qualifications in further education has almost halved since 2010.

This report shows that the UK is on track to fall further back in the international league tables by 2030. Its qualification profile is projected to improve, but this would still fail to match other countries' rates of improvement. This could see the UK:

- Falling from 4th to 6th of the G7 countries for low skills;
- Remaining 5th for intermediate qualifications; and
- Remaining 4th for higher qualifications.

For literacy and numeracy, the report projects that by 2030 England could:

- **Literacy.** Increase the proportion of adults with at least Level 2 proficiency from 83% to 85%, but still fall from 10th to 14th of the 17 countries in the survey; and
- **Numeracy.** Increase the proportion of adults with at least Level 2 proficiency from 75% to 77%, but still fall from 11th to 14th out of 17 countries.

Executive summary

The status quo is not good enough and will hold back economic growth and social justice. Reforms such as the Apprenticeship Levy and T Levels are welcome, but will not be sufficient. This report analyses the potential impact for the UK of a higher ambition based on:

- Increasing the proportion of people with functional literacy and numeracy to 90% by 2030;
- Increasing the proportion of people with medium qualifications with a greater focus on Level 3 qualifications. This would mean by 2030 20% and 30% of people have Level 2 and 3 qualifications respectively; and
- Maintaining the expected rate of progress in high qualifications, so that by 2030 43% of people have Level 4 qualifications or higher.

Achieving this scenario would boost the UK economy by £20 billion per year and support an additional 200,000 people into work, along with significant taxpayer savings. It would also improve social justice by widening opportunity and making sure that more people have the fundamental skills and capabilities increasingly needed for economic and social inclusion, as well as bringing wider benefits to health, wellbeing and civic engagement.

Further improvements in education would contribute to improving the UK's skills base. However, three quarters of the UK's 2030 workforce has already left compulsory education, so a higher ambition will require significant increases in adult participation in learning. Skills policy is devolved and the changes needed will vary by country.

This scenario would require additional investment from individuals, employers and the government of up to £1.9 billion per year. It is realistic to deliver: it would involve increasing the number of adults improving their skills each year to 2010 levels, reversing the cuts seen since then. There would be a case for going further and faster to improve our relative international position, but the scenario in this report is based on realistic assumptions about available levels of investment and how quickly support could be scaled up to engage adults and to deliver learning.

Ultimately the UK's future prosperity and fairness relies on high quality learning and skills. On current trends, the UK will remain average at best on most measures. In a rapidly changing global economy this simply is not good enough. There is a clear prize for setting a higher ambition: increasing economic growth and improving social justice.

Introduction

The UK faces big choices about its future.

The great recession has been followed by great stagnations in economic growth and social justice. The UK is on track for its worst decade for growth in living standards since the Napoleonic Wars, and independent experts think that trend growth – the economy's speed limit – has fallen. An ageing population is increasing the pressure on public services, but weaker economic growth makes it harder to fund these services.

Yet this is not inevitable – the UK need not passively accept its fate. It is one of the largest economies in the world and has successfully adapted to many economic and social changes over the centuries.

In the run up to 2008, the UK narrowed its productivity gap with other countries. This, combined with the substantial gap that remains, suggests the scope to do better. The UK's employment rate is the highest on record. Yet stubborn inequalities in employment rates remain, meaning we can increase employment further as well as focusing on job quality.

Together these show that active policy choices can help drive economic growth and ensure its benefits are shared fairly.

In the decades before the financial crisis, improvements in learning and skills contributed one fifth of economic growth. Learning and skills have a direct and indirect impact on economic growth, helping to reduce demand for other public services and contributing to social justice. In public policy there is no such thing as a silver bullet, but learning and skills can be a golden thread running across policy areas.

However, this report shows that improvements in the UK's skills base have stalled and are set to slow further over the next decade, meaning the UK is poised to slip further down the international league tables. This is a simmering crisis that underpins many other challenges – including improving wellbeing, funding public services, raising living standards, and ensuring everyone has a fair chance in life.

In the future global economy, the UK's prosperity depends on the skills and ingenuity of its people. There need not be a trade-off between economic efficiency and social justice – the two can go hand in hand at all levels of learning and skills.

The case for a higher ambition is clear and unambiguous. The UK needs to focus on people-powered growth.

It is time now for action.



1. Learning, skills and economic growth

The rate at which our economy grows matters. Economic growth is a prerequisite for rising living standards and determines how much money can be raised for public services.

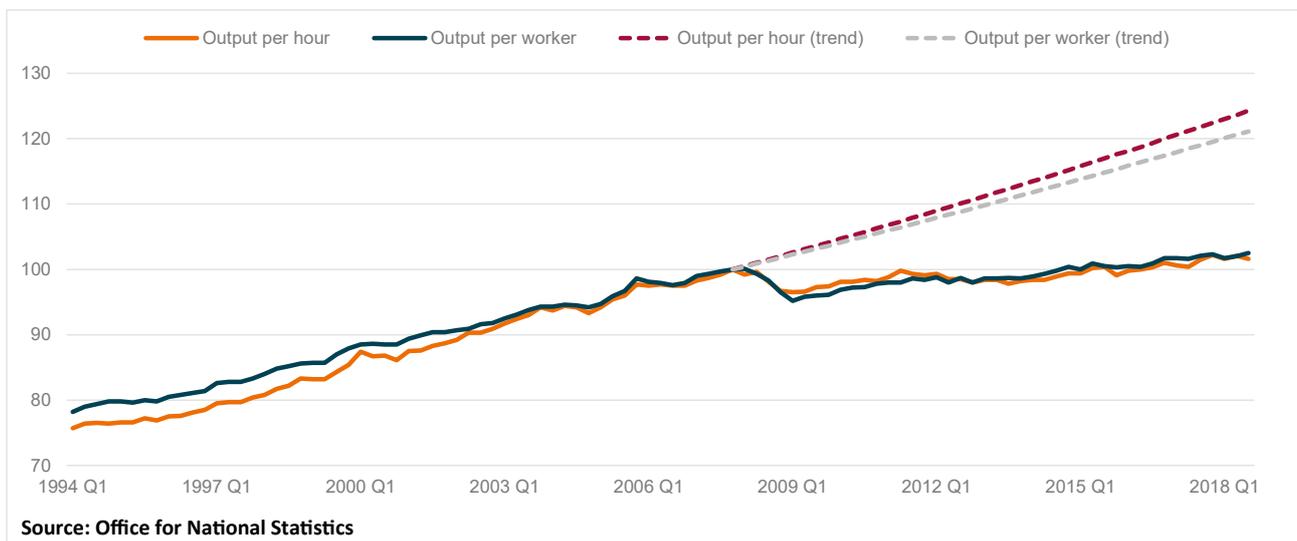
Economic growth is driven largely by:

- **Productivity.** The amount that each worker produces;
- **Employment.** The number of people in work and the hours they work; and
- **Population.** How fast the population is growing because of natural demographic change and net migration.

Since the 2008 financial crisis, economic growth has been much slower than previously, and productivity growth has stalled. This has been the case in many countries, but particularly stark in the UK. The economy is around 16% smaller than if pre-2008 trends in growth had continued, equating to £5,900 less per person.¹

The UK's trend rate of growth – the 'speed limit' of the economy – is now estimated to be around 1.5-1.7% per year compared to 2.5% before 2008.² Over time these add up to enormous differences in household incomes and money raised for public services.

Figure 1: Productivity in the UK



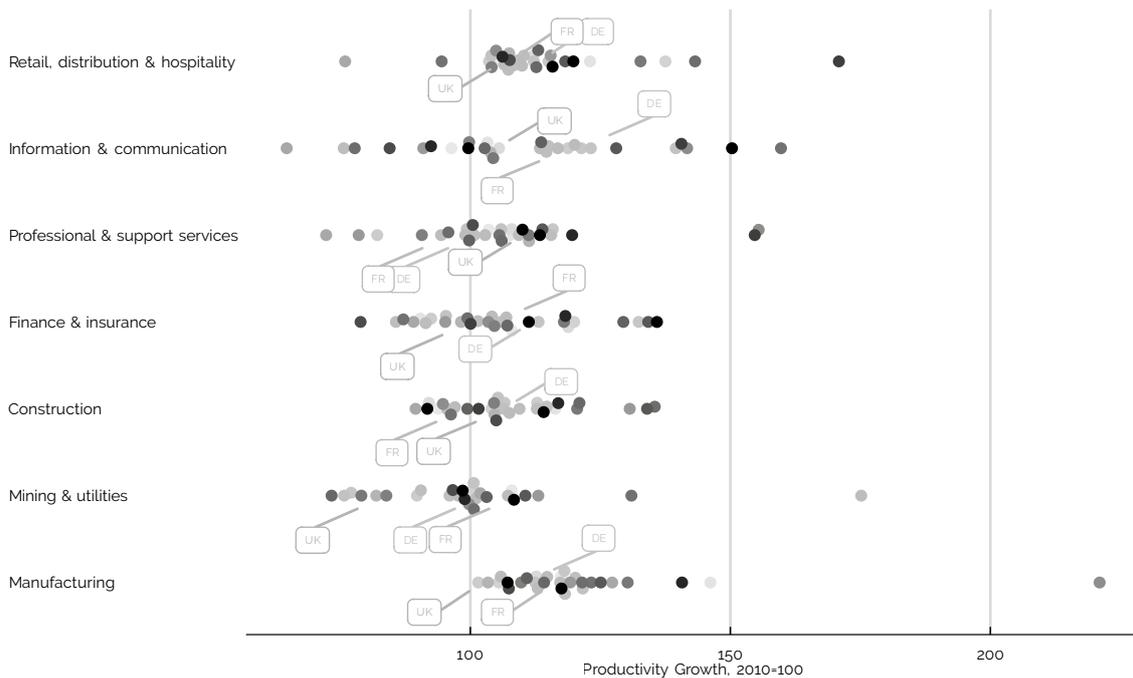
¹ Ten years on – have we recovered from the financial crisis, IFS, 2018.

² Economic and fiscal outlook, OBR, 2018; Inflation report, Bank of England, 2018.

Figure 2 shows how productivity growth has varied since 2010 by country in a number of sectors.³ The UK is in the middle of the pack for many sectors; the chart shows the levels of disparities between

countries and the size of potential improvement if the UK were able to narrow the gap with the best performing countries in each sector.

Figure 2: Productivity by sector



Skills and productivity

There are clear and proven links between skills at all levels and productivity. Growth accounting disaggregates economic growth into improvements in technology, skills and other variables. These approaches suggest that skills improvements have contributed around one fifth of UK economic growth over recent decades, largely driven by increases in the proportion of highly qualified people.⁴

Econometric analyses also show a strong

relationship between skills and economic growth. One study found that a one percentage point increase in the proportion of the workforce with higher education raises productivity levels by 0.2-0.5% in the long term, while other studies show that most types and levels of skills can impact on productivity.⁵ These impacts can vary by sector, for example upper-intermediate skills can be complementary to the use of information and communication technology, having a bigger impact in sectors where investment is higher.⁶

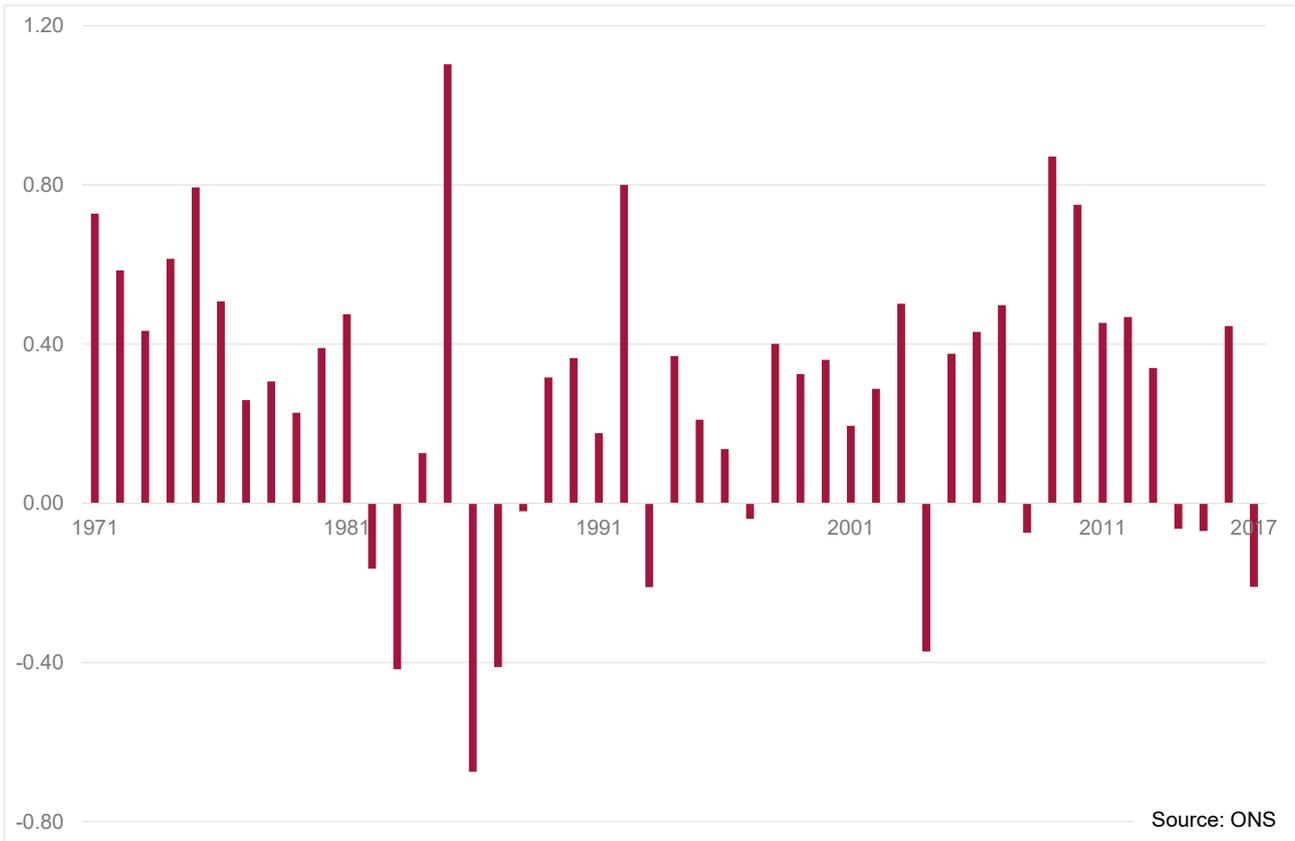
³ This data was calculated before international data revisions due to changes in methodology somewhat improved the UK's relative productivity position. Data is not yet available on the new basis by sector.

⁴ UK skills and productivity in an international context, BIS, 2015.

⁵ The relationship between graduates and economic performance across countries, Holland et al, BIS, 2013.

⁶ UK skills and productivity in an international context, BIS, 2015.

Figure 3: Percentage point contribution of labour quality to economic growth



How do learning and skills affect productivity? This depends on both the supply of skills and how well those skills are utilised by employers.

Learning and skills play a role in each of the five foundations of productivity identified in the government's Industrial Strategy.

Figure 4: Skills and the foundations of productivity



The five foundations of productivity

Ideas. The UK's skills base affects its ability to both generate and implement new ideas and innovations. In this context, new ideas can mean the creation and implementation of new technologies or the adoption of different approaches to production.

There is a positive link between the number of high skilled workers in a country or area and both the generation of new ideas and the ability of firms to 'convert' new ideas into higher output and productivity.⁷ There are similar links between a firm's 'absorptive capacity' to make the most of innovations and the workforce's overall skills levels – for example, increasing the use of computer technology can only happen if the workers who will use it have a certain level of digital skills.

Many reviews have looked at how to increase the links between universities and businesses, to convert the UK's relatively strong track record in generating ideas into starting up new businesses and implementing these new ideas.⁸ There is also evidence of spillover effects, whereby an increase in innovation and / or the proportion of high skilled workers can improve productivity more broadly across a local or national economy and the wages of all workers (not just the highly skilled).⁹ High skills can help generate new ideas; a good overall skills base is needed to ensure these can be effectively implemented.

People. The extent to which an increased supply of skills leads to increased productivity depends on the other foundations of productivity (such as ideas

and investment). The UK's relatively low quality of leadership and management holds back productivity by limiting how firms can put together ideas, investment and skills to generate productivity.¹⁰

The productivity benefits of improvements in skills can be seen in the wage returns to different qualifications – the extra wages employers pay those with qualifications, all else equal. These wage returns vary by type of qualification, institution and demographics:

- Level 4+ (degree or above equivalent) has an average earnings return of around 20% but with significant variability by subject and institution;
- Level 3 (A Level equivalent) returns vary between 10% and 20%; and
- Level 2 (GCSE equivalent) returns vary between 1% and 14%.¹¹

Employers also benefit from improvements in skills above and beyond the extra wages individuals receive. This is partly because employers that invest in training would expect to gain some of the benefits; partly because improvements in the skills of some workers can have spillover benefits for other workers' productivity; and partly because firms can, with high quality leadership, management and capital investment, put together these skills with other investments – making the whole greater than the sum of the parts.¹²

One study suggested that a one percentage point rise in the proportion of workers being trained in an industry

⁷ Workforce skills at all levels boost innovation and productivity: evidence briefing, ESRC, 2018.

⁸ See e.g. Lambert review of university-business collaboration, HM Treasury, 2003.

⁹ Knowledge spillovers, innovation and growth, Aghion and Jaravel, Economic Journal, 2015.

¹⁰ The new empirical economics of management, van Reenen et al, Journal of the European Economic Association, 2014.

¹¹ Skills and poverty: building an anti-poverty skills system, Learning and Work Institute, 2016.

¹² Human capital spillovers: the importance of training, O'Mahoney and Riley, 2012.

increased output per hour by 0.6%, with only one half of this gain going to workers in increased wages.¹³ This would mean productivity benefits double that suggested by wage returns. The way the benefits of productivity improvements are shared by industry and country will depend on the policy framework, relative balance of power between employers and individuals, and strength of labour market institutions such as trades unions.

Infrastructure. A modern economy requires a good infrastructure of transport connections, energy, housing and information technology, including broadband.

An effective skills base is essential to building and maintaining this infrastructure. For example, it is estimated HS2 will require some 30,000 workers to design and build the railway across its lifetime, not including additional jobs created indirectly.¹⁴ These will be a mixture of highly skilled and specialist roles (for example in tunnelling), alongside a range of other engineering and other roles across the skills spectrum.

A good skills base is also central to making the most of this infrastructure: businesses will not fully realise the benefits of improved broadband unless their workforce and consumer base have basic digital skills.

Business environment. The UK ranks well on the ease of starting a business and business tax rates, coming 9th out of 190 countries overall on measures put together by the World Bank.¹⁵ The available skills base also affects the decision of foreign

firms to invest in the UK (and whereabouts in the UK) and the success of new UK firms. In turn, there is evidence that foreign direct investment (FDI) can have spillover effects on UK firms, increasing productivity and boosting workers' earnings.¹⁶

Enterprise skills can also help to increase the number of people starting a business and the likelihood of that business succeeding, though the evidence is relatively limited.¹⁷ These include skills such as creativity, innovation, flexibility and resilience, as well as specific skills relating to running a business (such as accounting and management and leadership) and increasing the visibility of enterprise and self-employment as an option.

Places. The UK has greater disparities in productivity between regions than many other countries.¹⁸ Increasing productivity in those areas where it is below the national average can help to increase national productivity, as well as cutting disparities in income. Achieving this would require a concerted effort on all five foundations of productivity.

Disparities in learning and skills between and within regions contribute to these inequalities in economic performance. That includes learning and skills directly, through the spillover effects of a skilled workforce cited above, and their indirect effects on the other foundations. Cutting inequalities in learning and skills between different parts of the UK can contribute to cutting regional disparities in productivity and incomes.

¹³ The impact of training on productivity and wages: evidence from British panel data, Dearden, Reed and van Reenen, Oxford bulletin of economics and statistics, 2006.

¹⁴ Skills, employment and education strategy, HS2, 2017.

¹⁵ Doing business 2018, World Bank, 2018.

¹⁶ FDI and the labour market: a review of the evidence and policy implications, Driffield and Taylor, Oxford Review of Economic Policy, 2000.

¹⁷ Enterprise education impact in higher education and further education, BIS, 2013.

¹⁸ Industrial strategy: the five foundations, BEIS, 2017.

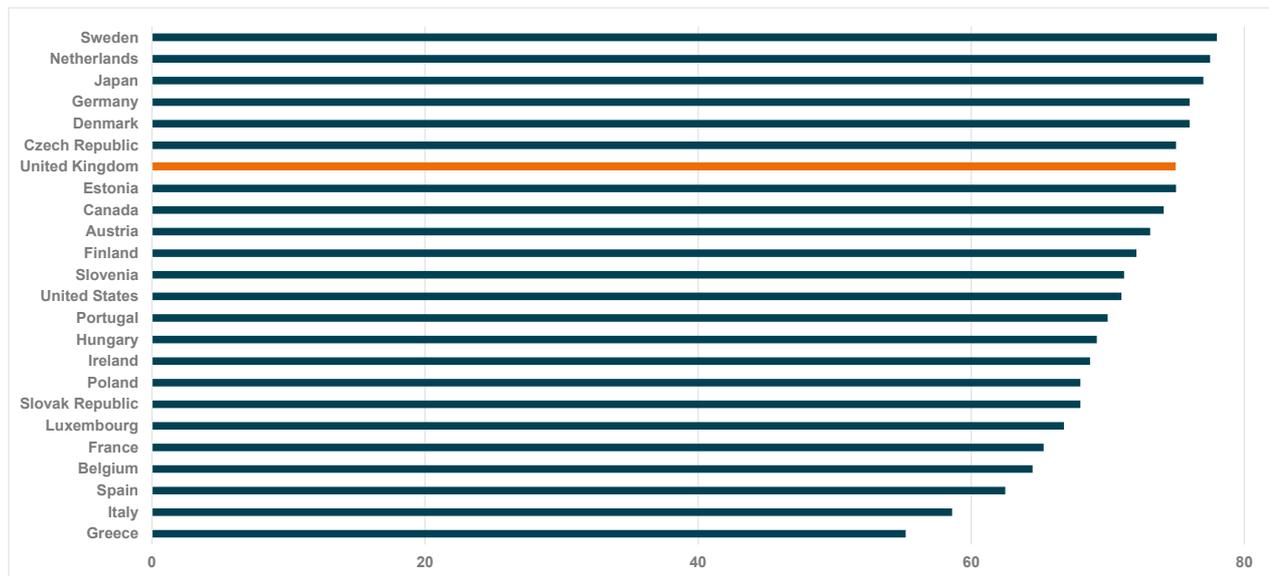
Skills and employment

The UK's employment rate is at a record high of more than 75%; the product of successful labour market and economic reforms over recent decades.¹⁹

However, other countries have higher employment rates. If the UK were to match the employment rate in Sweden, Netherlands and Japan, an additional 500,000 people would be in work.

The large and persistent disparities in employment rates between demographic groups and geographic areas across the UK suggest scope to do this by narrowing inequalities. For example, the employment rate of disabled people is around 30 percentage points below that of non-disabled people.

Figure 5: International employment rate comparisons



Source: OECD

¹⁹ Labour market statistics, ONS, 2019.

Learning, skills and economic growth

Learning and skills can help increase employment through:

Fundamental skills: Skills such as literacy, numeracy, team working, and digital are necessary to get into most jobs. Fewer than one in two people with no qualifications are in employment. Skills are rarely the only or major reason why some people are not in work, but they can be a reason – there are significant employment gains for people gaining these fundamental skills.²⁰ The bar of these fundamental skills is rising over time because of global economic change, increasing the level and breadth of skills required for work.

Specific skills: Specific skills and qualifications are required for some jobs, such as a food hygiene certificate or driving licence. Again, these will change over time because of changes in policy (for example, licensing requirements for some roles) and the economy (for example, changes in consumer preferences or the introduction of new technologies).

Technical and higher level skills: Progress in work often requires the development or acquisition of a wider and deeper set of skills, a mix of technical skills that may be specific to a sector or occupation, and more advanced levels of transferable skills such as problem solving, team working and communication.

The evidence is clear. Improvements in skills across the board are essential for the UK to increase economic growth by raising productivity and employment. In turn, this can increase living standards and the resources available for public services. Skills on their own won't do this, but they are a foundation stone for meeting these core national goals.

²⁰ Skills and poverty: building an anti-poverty skills system, Learning and Work Institute, 2016.

2. Learning, skills and social justice

Social justice is as fundamental as economic growth: the UK aspires to be both prosperous and fair. This report considers social justice on three dimensions:

- **Inequality.** Differences in income and wealth across society;
- **Social mobility.** Differences in an individual's chances of achieving a higher income by parental background and income, as well as their chances of progressing from low income during adulthood; and
- **Inclusive communities.** Differences in other outcomes, such as health and wellbeing and civic participation.

Learning and skills are increasingly important to each of these dimensions of social justice. There is also likely to be an interaction between each of the three dimensions. For example, high levels of inequality can be associated with bigger inequalities in health outcomes between those with different income levels.

Countries perform better or worse on each of these dimensions: perhaps counter-intuitively, some countries with lower income inequality have lower intragenerational social mobility.²¹ It is not clear to what extent there is a trade-off between these measures of social justice, or whether it is possible to score strongly on all measures.

Inequality

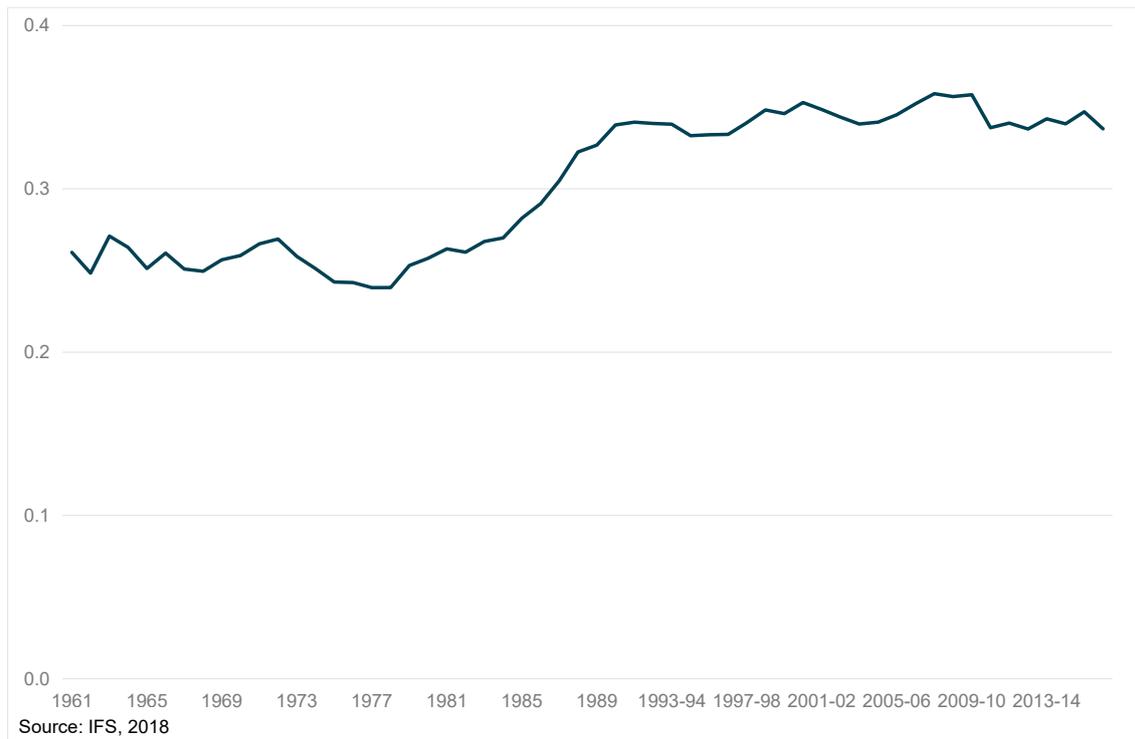
Inequality can be measured in a range of ways. Income inequality tends to be lower than wealth inequality, and both can be measured in different ways (for example, as ratios between the top 10% and bottom 10%, or top 1% versus the median, Gini coefficient, different measures of income and wealth etc).

On most measures, income inequality rose significantly during the 1980s and has remained relatively stable since, though with more substantial rises in the incomes of the top 1%.²² Figure 6 shows the UK Gini coefficient, which measures income inequality before housing costs with a score of zero representing full equality and a score of one representing full inequality.

²¹ A broken social elevator? How to promote social mobility, OECD, 2018.

²² Living standards, inequality and poverty spreadsheet, IFS, 2018.

Figure 6: UK income inequality - Gini coefficient



Relative poverty is most commonly measured by the proportion of people with disposable income less than 60% of the median. Around 17% of people are in relative poverty, around the EU average. Around 4.6 million people (7.3% of the population) are in **persistent poverty** (currently in relative poverty and have been for at least two of the last three years).²³ This is the fifth lowest rate in the EU, and in part reflects an increased level of income volatility. There are now more people in relative poverty who are in work, a result of both increases in the employment rate and the prevalence of low paid work.

One definition of **absolute poverty** is having income below 60% of the 2010-11

median income. On this measure, 8.9 million people (14% of the population) were in absolute poverty before housing costs and 12.4 million (19%) after housing costs.²⁴

Wealth inequality is much larger than income inequality: the top 10% hold 50% of total wealth, and this concentration may have grown since 2000.²⁵ Meanwhile 9% of households have no net wealth at all. This holds across age groups: it is not just younger people who have not yet had chance to save that are in this 9%, the bottom decile of each age cohort has zero net assets.²⁶ This may limit the ability of households to adapt to change and risk increasing insecurity.

²³ Persistent poverty in the UK and EU: 2015, ONS, 2017.

²⁴ Households below average income, DWP, 2018.

²⁵ The challenge of measuring UK wealth inequality in the 2000s, Alvaredo, Atkinson and Morelli, Fiscal Studies, 2016.

²⁶ Household Wealth in Great Britain: Distribution, Composition and Changes 2006-12, Crawford, Innes and O'Dea, Fiscal Studies, 2016.

Each measure provides insight into a different aspect of inequality and poverty. The overall picture is of broadly stable levels of inequality since the late 1990s, though at higher levels than other comparator countries following significant rises in inequality during the 1980s.

Skills and inequality

There are three main ways that learning and skills can affect inequality:

- 1. Income.** By boosting economic growth in a way that benefits those with lower incomes, enhancing their employment and earnings prospects;
- 2. Expenditure.** By helping those with lower incomes to gain better deals, for example on utilities, so reducing their cost of living; and
- 3. Savings.** By increasing incomes and supporting people to save, helping those with lower incomes to increase savings or reduce debt.

The previous chapter showed how learning and skills can increase people's incomes, including the positive wage returns associated with all levels of qualifications (though these vary by subject, form of delivery and institution). This shows there need not be a trade-off between economic growth and social justice: learning at all levels support economic growth; making sure everyone has a fair chance to get them boosts social justice.

Evidence set out in this report shows the benefits that learning can bring to financial capability and economic security. These

are perhaps particularly prevalent when it comes to essential skills, including functional literacy, numeracy and digital skills.

Social mobility

People's chances in life should be dependent on their talent and effort rather than their background. Social mobility provides measures of this and a test of fairness:

- **Intergenerational social mobility.** The extent to which a parent's job and level of income determines their children's job and income levels; and
- **Intragenerational social mobility.** The extent to which a person's income and occupation can change during their lifetime.

Both measures can be considered in absolute terms (an individual's chances of moving up or down the income and job scale) and in relative terms (an individual's chances of improving their income and job position compared to others).

There is evidence that intergenerational social mobility fell during the late 20th century but has since stabilised: those born in 1970 had lower intergenerational social mobility than those born in 1958, but there may not have been further falls for those born later.²⁷

Around 50% of an individual's income in the UK can be explained by that of their parents, higher than in countries such as Denmark, Australia and Canada.²⁸

²⁷ Recent changes in intergenerational mobility in Britain, Blanden and Machin, Sutton Trust, 2007.

²⁸ A family affair: intergenerational mobility across OECD countries, OECD, 2016.

There have long been concerns about low intragenerational social mobility in the UK, with evidence showing that only one in six low paid workers had permanently escaped low pay ten years later.²⁹ However, recent evidence suggests the UK has had relatively large rises in people progressing from low pay up the income scale.³⁰

Again, there may be trade-offs: high levels of income mobility may also mean greater volatility and reduced security. The Resolution Foundation found significant volatility in income for people on low incomes, with three quarters of those who stayed with the same employer during 2016-17 having notable changes in pay during at least one month that were not due to promotions or bonuses etc.³¹

Skills and social mobility

Learning and skills play an important role in each of the measures of social mobility. In large part, this impact comes from the importance of learning and skills in determining income, as described in Chapter One.

In the UK there is a stronger relationship between a child's educational outcomes and that of their parents than in many countries (though lower than in France and the US). This explains around one half of the link between parents' income and that of their children.³² Breaking this link so that education outcomes are less related to their parents' attainment would help to increase intergenerational social mobility.

The same applies to intragenerational social mobility. In general, higher qualifications increase the chances of a higher-income job. An individual has an increased chance of increasing their income if they start their working life with higher qualifications or gain them during their life. However, the number of adults improving their qualifications has fallen (see Chapter Three for a fuller analysis). Inequalities in initial educational attainment and relatively low levels of learning among adults hold back intragenerational social mobility.

²⁹ The great escape? Low pay and progression in the UK's labour market, Social Mobility Commission, 2017.

³⁰ A broken social elevator? How to promote social mobility, OECD, 2018.

³¹ Irregular payments: assessing the breadth and depth of month to month earnings volatility, Resolution Foundation, 2018.

³² A family affair: intergenerational mobility across OECD countries, OECD, 2016.

Inclusive communities

Life expectancy has risen significantly over recent decades, but with large inequalities. In 2014-16 men living in more deprived areas could expect to live 9.3 years less than men living in less deprived areas.³³ For women the gap was 7.4 years. Healthy life expectancy (the number of years that people can expect to live and be healthy) varies by up to 18 years across local authority areas.³⁴

Increases in life expectancy and an aging population bring long-term public spending pressures for health and social care and pensions. The proportion of the population aged 65 and over is projected to rise from 16% today to 25% by 2065. The Office for Budget Responsibility estimates this will require additional age-related spending on pensions and health care of 2.3% of GDP, assuming levels of services and pensions remain the same.³⁵

Longer life expectancy also increases the importance of financial capability. Surveys show four in ten people do not manage their money as well as they might and only one quarter have a savings buffer of three months' income.³⁶ Many of the best deals (for example, for energy) must be accessed online, and many public services (such as Universal Credit) are also 'digital by default'.

This, along with other factors (such as use of higher cost credit and pre-payment meters), has led to a 'poverty premium' of £490 per year.³⁷

Finally, civic participation and social capital underpin a cohesive society. Civic participation can cover a range of activities, including voting, being a school governor, contacting a councillor and volunteering. One measure of social capital looks at whether people trust others: overall this has not fallen over time, though some measures (such as participation in voluntary associations) have declined.³⁸

Skills and inclusive communities

Learning and skills are associated with improved health and wellbeing, through:

- **Information.** Providing information on healthy living and behaviours, for example awareness of screening programmes and their benefits; and
- **Income.** Increased incomes associated with learning and skills can enable people to live more healthily. Being in work, which is more likely for those with higher qualifications, is also associated with improved health and wellbeing (though perhaps varying by the quality and security of work).³⁹

³³ What is happening to life expectancy in the UK, King's Fund, 2018.

³⁴ Healthy state life expectancies: UK 2014-16, ONS, 2017.

³⁵ Fiscal sustainability report, Office for Budget Responsibility, 2015.

³⁶ Financial capability in the UK, Money Advice Service, 2015.

³⁷ The poverty premium: when low income households pay more for essential goods and services, University of Bristol, 2016.

³⁸ The uneven distribution and decline of social capital in Britain, Nuffield College, 2017.

³⁹ Skills and poverty: building an anti-poverty skills system, Learning and Work Institute, 2016.

Learning and Work Institute research has made the case for increased social prescribing (encouraging patients to attend adult education and other community activities) and participation in learning and skills more generally to promote greater health and wellbeing.⁴⁰ The UK will still need to further increase investment in health and social care as its population ages – learning and skills should form part of this investment and can help to ease public spending pressures by improving health and wellbeing.

Learning and skills can improve financial resilience both by improving financial capability (through improving numeracy and educating about different financial options and ways of managing money) and income (by opening more and better paid job opportunities). Higher levels of financial capability are associated with improved life satisfaction, higher rates of saving and higher income of around £120 per month.⁴¹

Estimates suggest around 9.5 million people lack basic digital skills.⁴² Along with the nine million adults lacking functional literacy and/or numeracy, this will leave many people locked out of the best deals as consumers and limit their ability to access public services and financial support such as Universal Credit.

Lastly, participating in learning and skills is associated with greater civic participation. Festival of Learning's 2018 President's Award winner, Equal Voices, based in east London, supports those from migrant backgrounds to improve their English and use this to engage, for example through asking questions at local mayoral hustings.⁴³

Learning and skills can help boost social mobility, tackle inequalities of opportunity, increase people's resilience and ability to adapt to the digital revolution, and support a range of different public services to limit their costs and deliver their goals.

Taken collectively, the evidence makes a clear case for investment in learning and skills to benefit society, achieve wider public policy objectives, and to reduce pressures on other public service budgets.

⁴⁰ Learning, work and health: the next 70 years, Learning and Work Institute, 2018.

⁴¹ The long-term impacts of financial capability: evidence from the BHPS, CfEB, 2011.

⁴² Make or break: the UK's digital future, House of Lords, 2015

⁴³ <https://www.festivaloflearning.org.uk/award-winners/equal-voices/>

3. International skills comparisons

There are many ways to gain learning, skills and capabilities. Qualifications are a common measure, though (like all measures) imperfect and incomplete. This report focuses most on qualifications and measures of literacy and numeracy as these are the most widely available and comparable. However, this is not to the exclusion of other forms of learning.

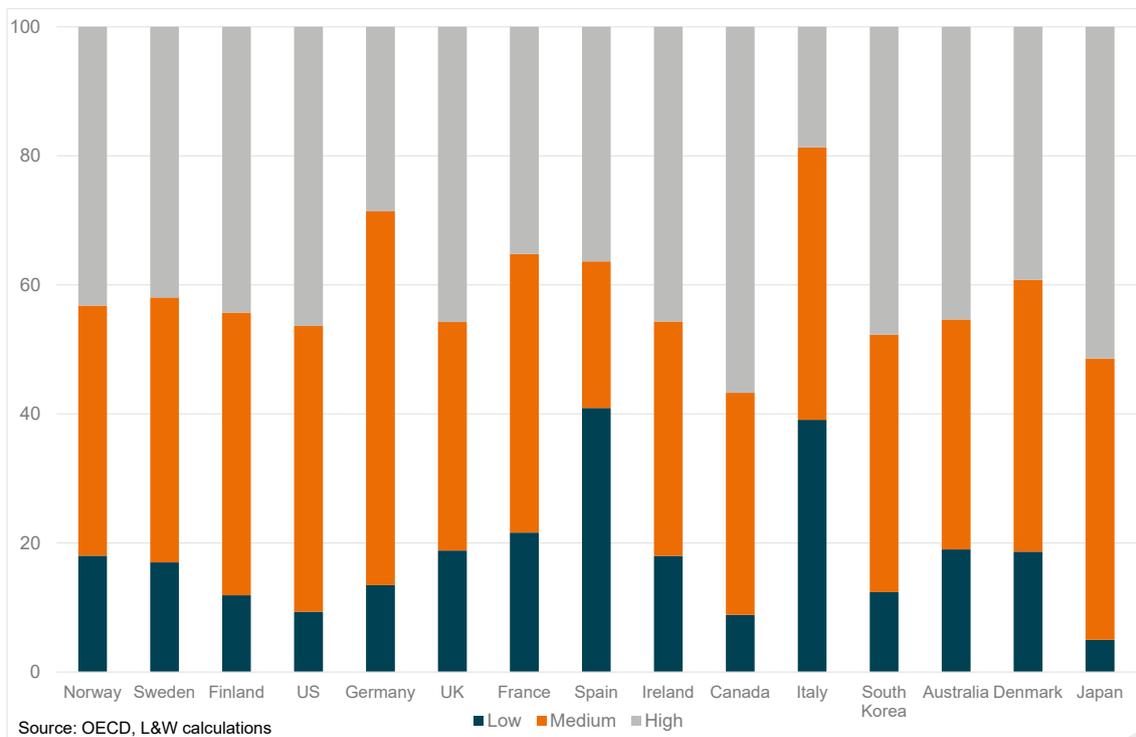
Learning and skills in the UK

The UK's qualifications profile has improved over time, but its relative position has not – other countries started ahead and many have improved faster. One in five UK adults have low (below Level 2) or no qualifications, compared to one in ten in Canada, Finland and South Korea.

The UK compares better on the proportion with high qualifications (Level 4+), though with a high prevalence of full-time undergraduate degrees for 18 year olds.⁴⁴

The UK's rate of improvement in its qualifications base has slowed over the last decade. This reflects a slower growth in the number of young people entering higher education (which now stands at around 50%), reductions in participation in learning associated with cuts in the Adult Education Budget, and a stalling of progress in young people's qualifications attainment. For example, the proportion of 19 year olds with a Level 3 qualification rose from 40% in 2004 to 60% in 2013 but has been little changed since.⁴⁵

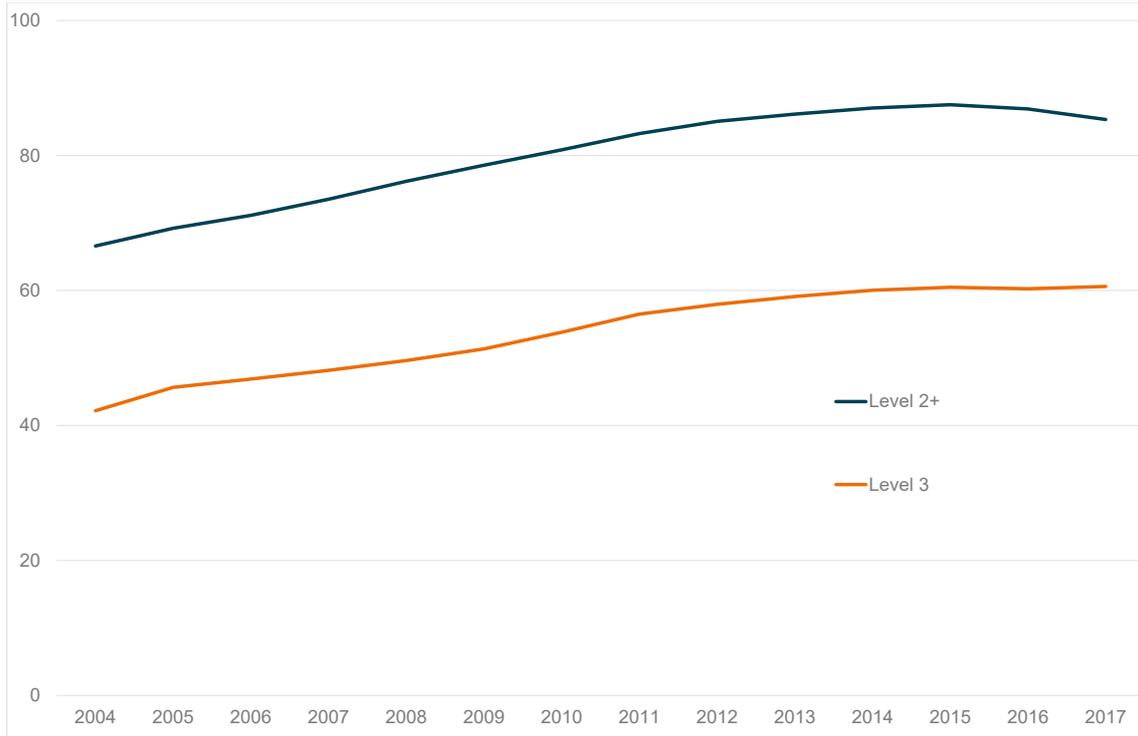
Figure 7: International qualifications profiles, 2018



⁴⁴ Opportunity knocks: first report of the Youth Commission, Learning and Work Institute, 2018.

⁴⁵ Level 2 and level 3 attainment by young people aged 19 in 2017, Department for Education, 2018.

Figure 8: Highest qualification by age 19

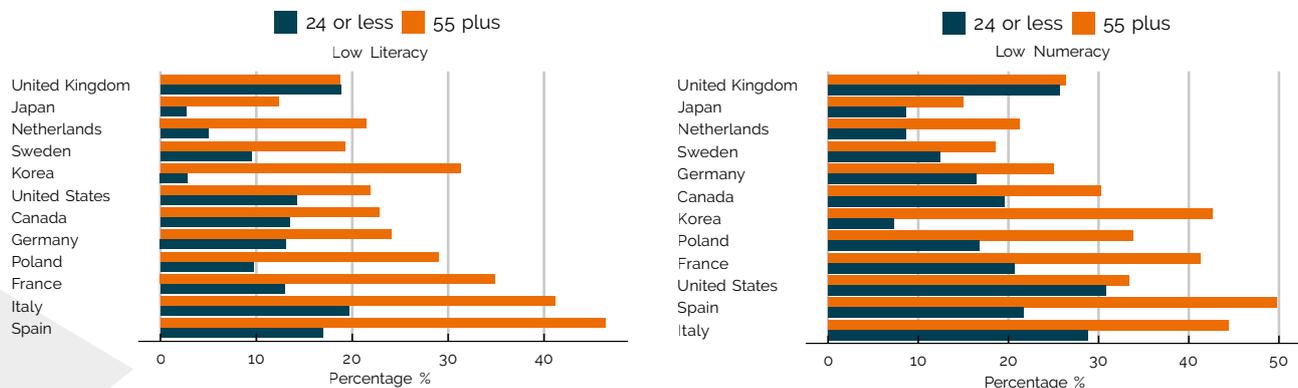


Qualifications are just one (imperfect) measure of skills. The OECD's Survey of Adult Skills measures literacy, numeracy and other skills by testing a representative sample of adults and so does not rely on qualifications which may or may not reflect people's skills.

The latest results for England (Scotland

and Wales did not take part in the survey) show that one in five adults, some nine million people, lack either functional literacy or numeracy.⁴⁶ Five million lack both functional literacy and numeracy. These are fundamental skills, such as understanding the dosage instructions on an aspirin packet.

Figure 9: Literacy and numeracy by age



⁴⁶ Building skills for all: a review of England, OECD, 2016.

These figures compare poorly to other countries and are little changed from the previous survey in 2012. Indeed the 1999 Moser Report found that five million adults did not have functional literacy or numeracy and identified ways to tackle this.⁴⁷ England and the US are the only countries in the survey where young people score lower on some of these skills than older age groups, suggesting they could fall even further behind other countries.

Participation and investment in learning and skills

Over the last decade investment and participation in learning and skills has fallen on most measures.

Government funding has fallen: Public spending on education rose in real terms from the late 1990s to the late 2000s, but has fallen in real terms since 2010.⁴⁸ Within this, further education and skills have missed out most. As a result, spending per 16-18 year old student is now £700 lower in further education and sixth form colleges than in schools.

Total funding for adult learning has been cut in real terms since 2009-10, with a larger proportion of the remaining budget now focused on apprenticeships. The number of adult learners has almost halved

from four million in 2005 to 2.2 million today, driven largely by falls in the number of people learning below GCSE-equivalent level. Extra investment in apprenticeships and T Levels will help, but will not be sufficient to redress this decline.

Employment investment has fallen:

Employer investment in learning has fallen:⁴⁹

- Employer investment per worker is half (£6 billion less per year) the EU average; and
- Employers are spending £5.1 billion less in real terms on training than ten years ago.

Employers report a range of skills gaps and shortages, with around 200,000 vacancies unable to be filled due to skills shortages and employers reporting that 5% of their workforce are not fully proficient for the job.⁵⁰

Individual participation has fallen:

Learning and Work Institute surveys adults to ask them if they are participating in learning. The latest survey showed 36% of adults said they were learning or had participated in learning in the last three years, the lowest participation rate in the survey's 20-year history.⁵¹

⁴⁷ A fresh start: improving literacy and numeracy, Moser, 1999.

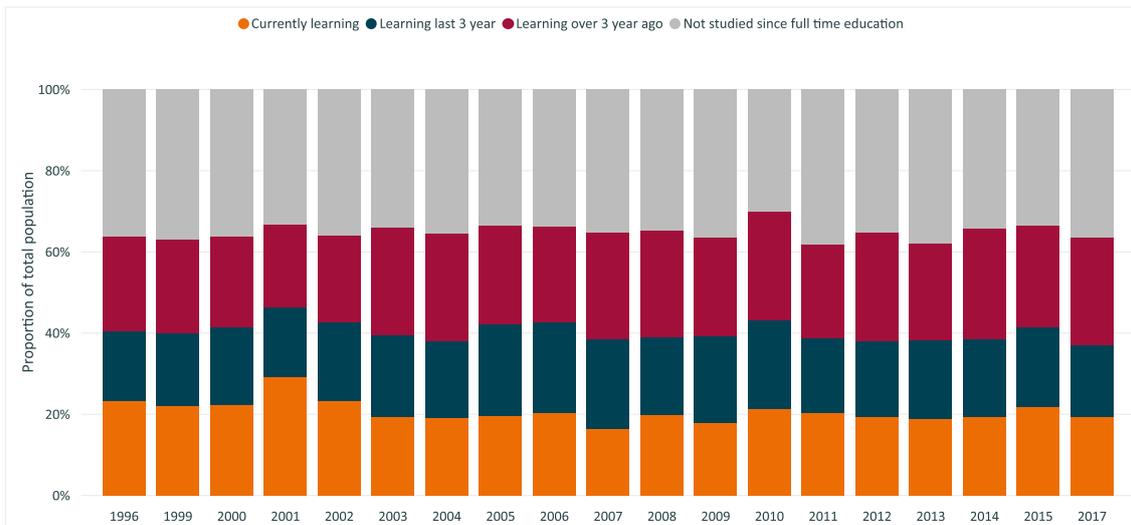
⁴⁸ 2018 annual report on education spending in England, Institute for Fiscal Studies, 2018.

⁴⁹ Skills 2030: why the adult skills system is failing to build an economy that works for everyone, IPPR, 2017.

⁵⁰ Employer skills survey 2015, UK Commission for Employment and Skills, 2016.

⁵¹ Adult participation in learning survey, Learning and Work Institute, 2018.

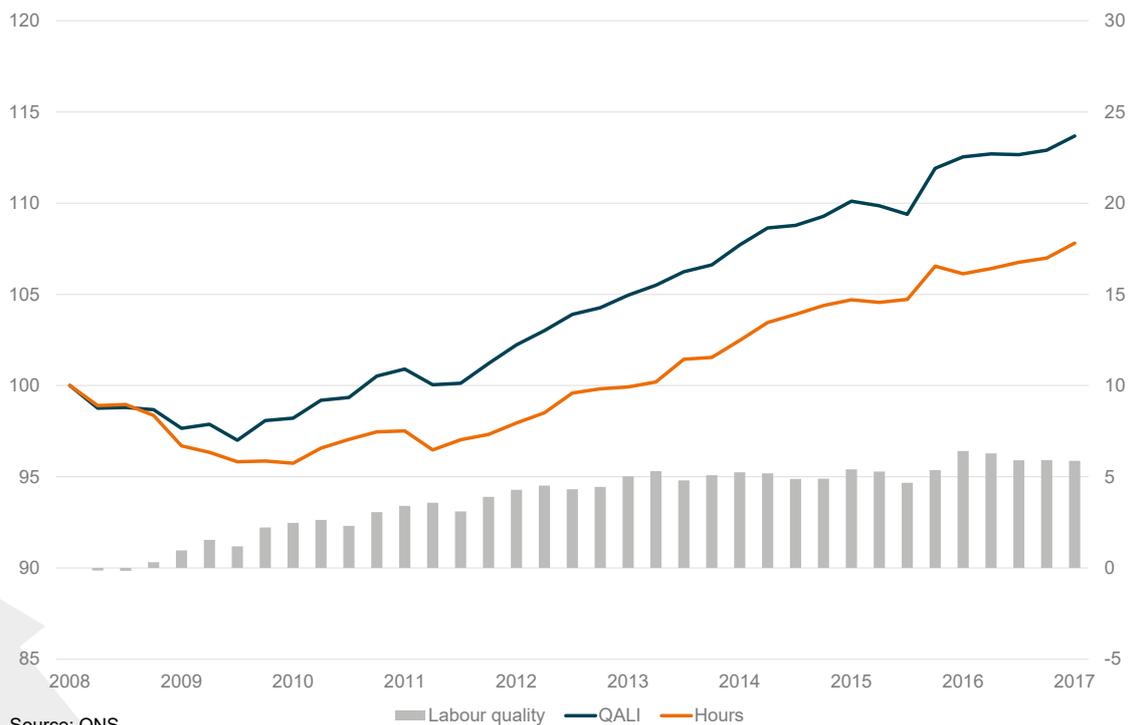
Figure 10: Adult participation in learning



The net result is that improvements in the UK's skills base have slowed. The Office for National Statistics measures this through a quality adjusted labour input (QALI) index, combining qualifications, hours worked and earnings. The QALI has risen since 2008, showing improvements in labour quality have contributed to economic growth.

However, this has virtually all been due to increases in hours worked, as employment has risen. The labour quality element of the QALI has barely risen and, in fact, fell in recent quarters. This suggests that changes in the UK's skills profile are no longer driving growth.

Figure 11: Quality Adjusted Labour Input index



Source: ONS

On almost every measure, improvements in the UK's skills base are stalling and participation and investment in learning are falling. This is despite the UK starting from a lower skills base than other countries on many measures.

Looking ahead to 2030

This report has developed projections of the UK's and other countries skills bases. The methodology used is described below.

2030 skills projections methodology

UK projections. Projections for the UK's qualifications profile were based on Labour Force Survey data on highest qualification by age. Data for 2018 were used as a baseline. Those who would be aged over state pension age in 2030 were removed. Young people entering the labour force were assumed to have the same qualification levels as young people today; a reasonable assumption given the stability in their qualification attainment by in recent years. Estimates of upskilling among adults were based on differences seen in qualification profiles of each age group over time (i.e. 25-29 year olds in 2008 compared to 35-39 year olds in 2018). These qualification profiles for each age group were then applied to the ONS's mid-year population projections for the size of each age group in 2030.

International qualifications projections. OECD Education at a Glance data for 25-64 year olds were used. These classify qualifications by level by country, though differences in education systems by country make this challenging. It was assumed that rates of change for 2007-17 for low, intermediate and high qualifications for each country would continue until 2030. A ceiling of 60% with high qualifications and floor of 5% with low qualifications was set for each country to reflect potential natural limits to improvements in qualification attainment.

The same process was followed using rates of change during 2012-17 as sensitivity analysis, but made little difference. This gives an indicative picture but does not take account of potential policy and demographic change by country. For the UK, OECD data was used as a baseline and the rates of change calculated for each relevant age group in the UK projections applied to these.

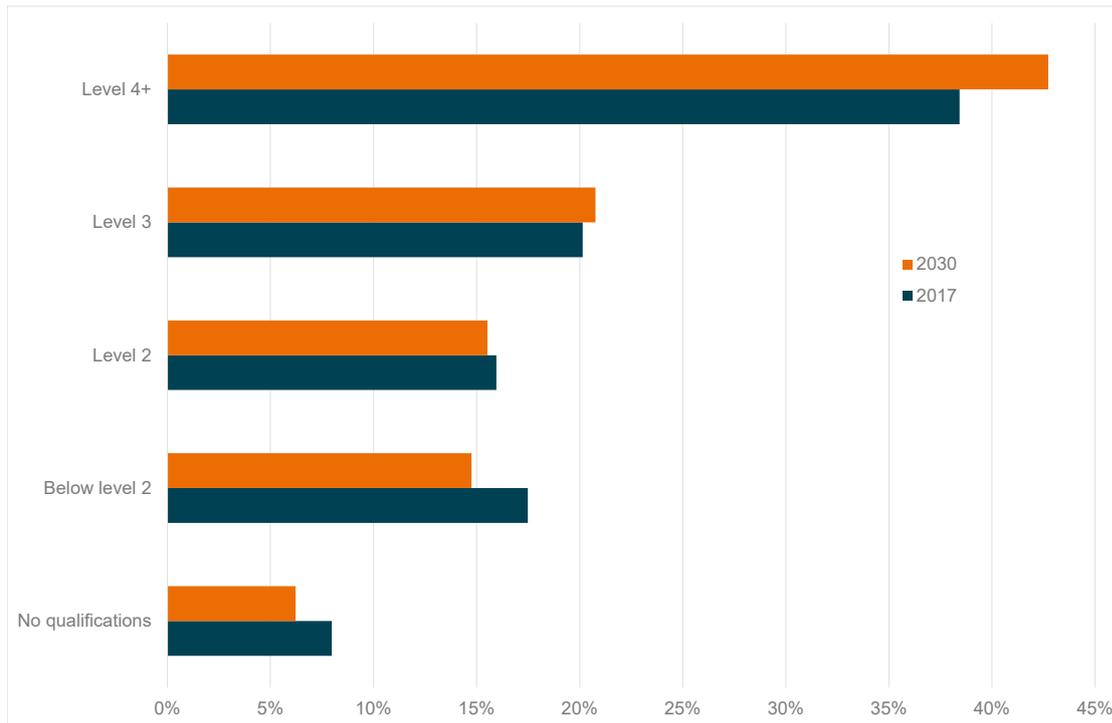
Literacy, numeracy and problem solving. Rates of change seen for each age group between the 2012 and 2015 OECD PIAAC survey were applied forward to 2030, based on UN projections for population change by country by age group. Caution needs to be applied to these results due to differences in methodology between surveys, but they give indicative results and a picture of trends.

The UK's 2030 qualifications and skills profile

The UK's qualifications profile is set to improve by 2030. The proportion of people aged 16-64 with either no qualifications or

qualifications below Level 2 will fall from 26% to 21%; the proportion qualified at Levels 2 and 3 will remain stable at 36%; and the proportion qualified at Level 4 and above will increase from 38% to 43%.

Figure 12: The UK's 2030 qualification profile



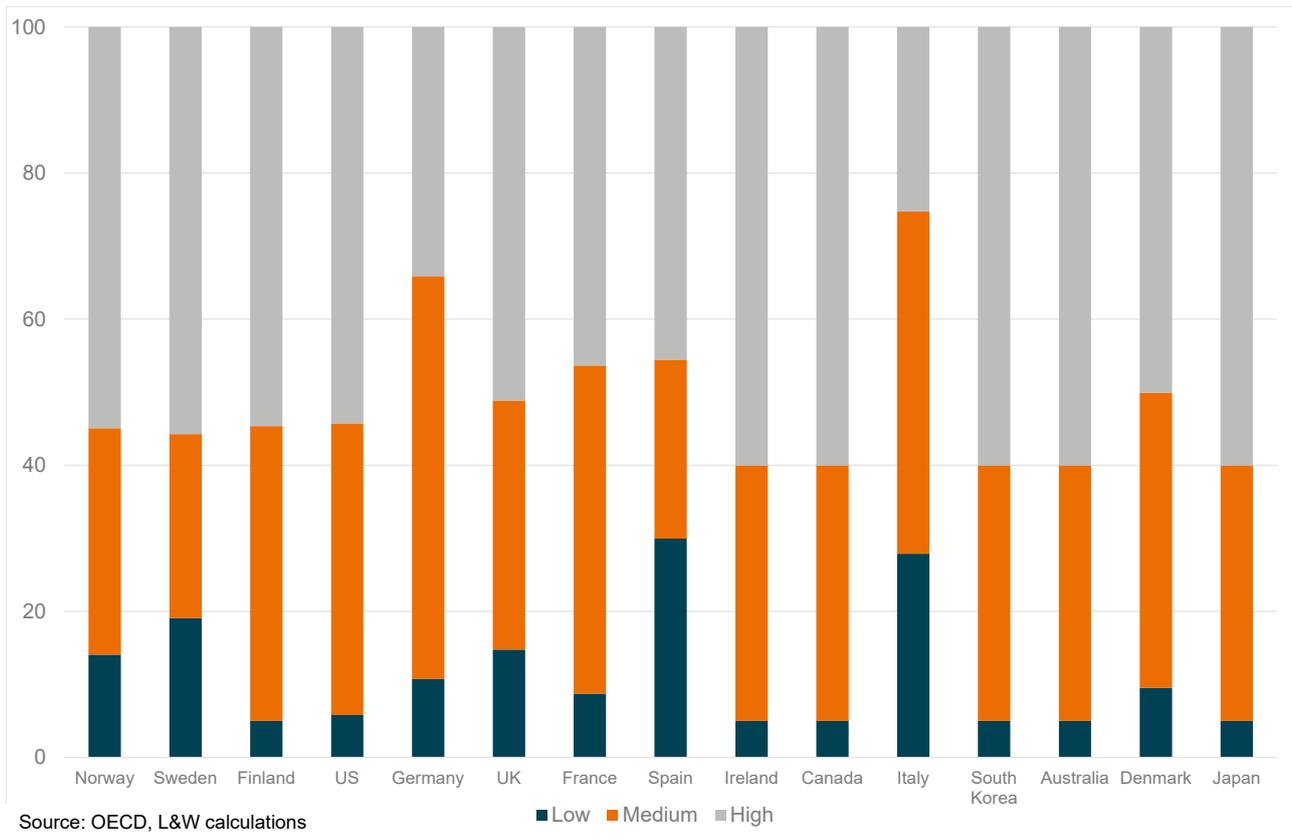
These are substantive improvements, the result of natural trends (like better qualified young people replacing generally less qualified older people) and upskilling by adults. However, even the UK's likely 2030 qualifications profile will still not compare favourably to those of many other countries today, particularly for intermediate qualifications.

International comparisons of qualifications and skills

The international projections calculated for this report are indicative: actual outcomes for each country will depend on their policies and demographics. However, they give a picture and context for the UK. The projections suggest that improvements in the UK's qualification profile would not be enough to improve our relative international position because many other countries are improving faster and from a higher base.⁵²

⁵² The UK figures here differ slightly to those in the previous section due to small differences in measurement, typology and age range (25-64 here compared to 16-64 in the previous section).

Figure 13: Indicative international qualification profiles, 2030



Among the seven G7 nations, the UK is poised to:

- Fall from 4th to 6th for low qualifications;
- Remain 5th for medium qualifications; and
- Remain 4th for higher qualifications.

For literacy and numeracy, recognising the caveats to the use and interpretation of this data set out on page 25, by 2030 England could:⁵³

- **Literacy.** Increase the proportion of adults with at least Level 2 proficiency from 83% to 85%, but fall from 10th to 14th of the 17 countries in the survey; and
- **Numeracy.** Increase the proportion of adults with at least Level 2 proficiency from 75% to 77%, but fall from 11th to 14th out of 17 countries.

⁵³ England and Northern Ireland took part in the PIAAC survey; Wales and Scotland did not.

Figure 14: Indicative 2030 literacy profiles

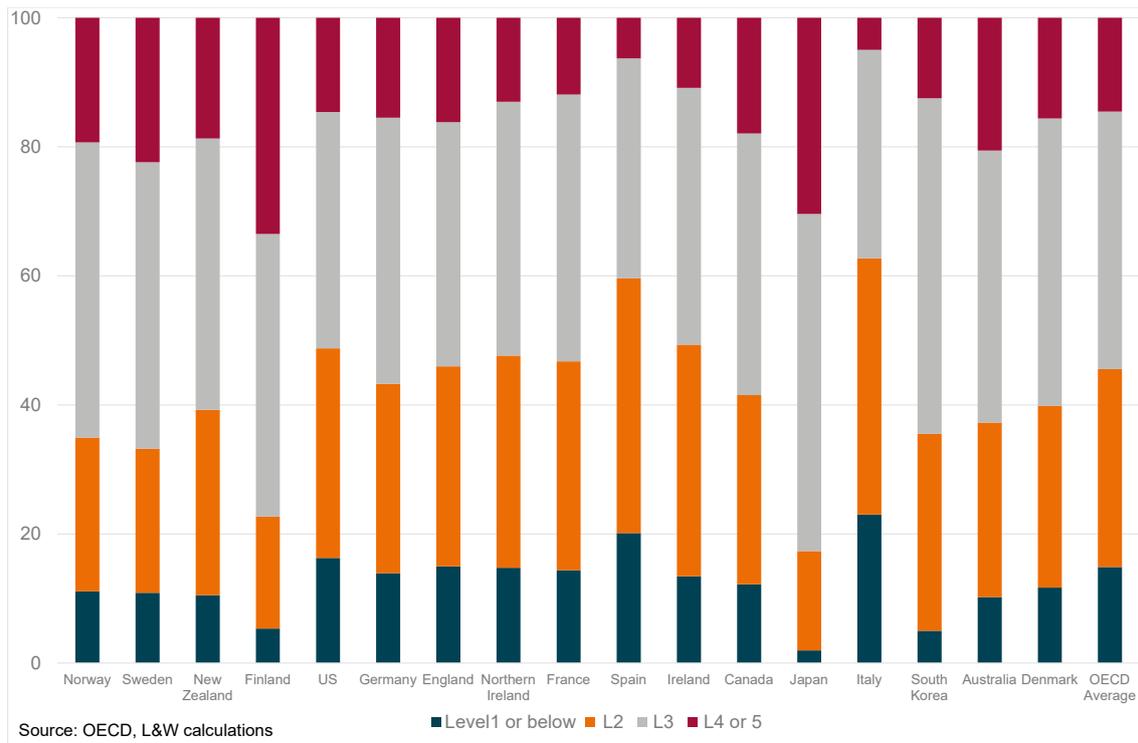
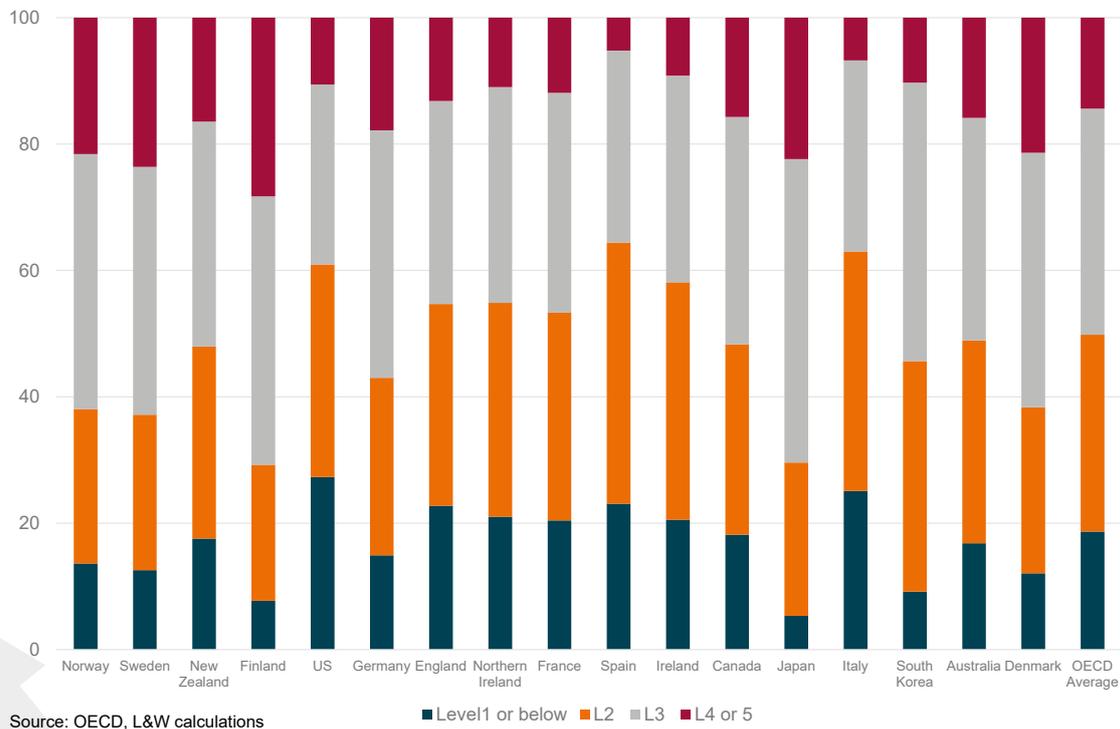


Figure 15: Indicative 2030 numeracy profiles

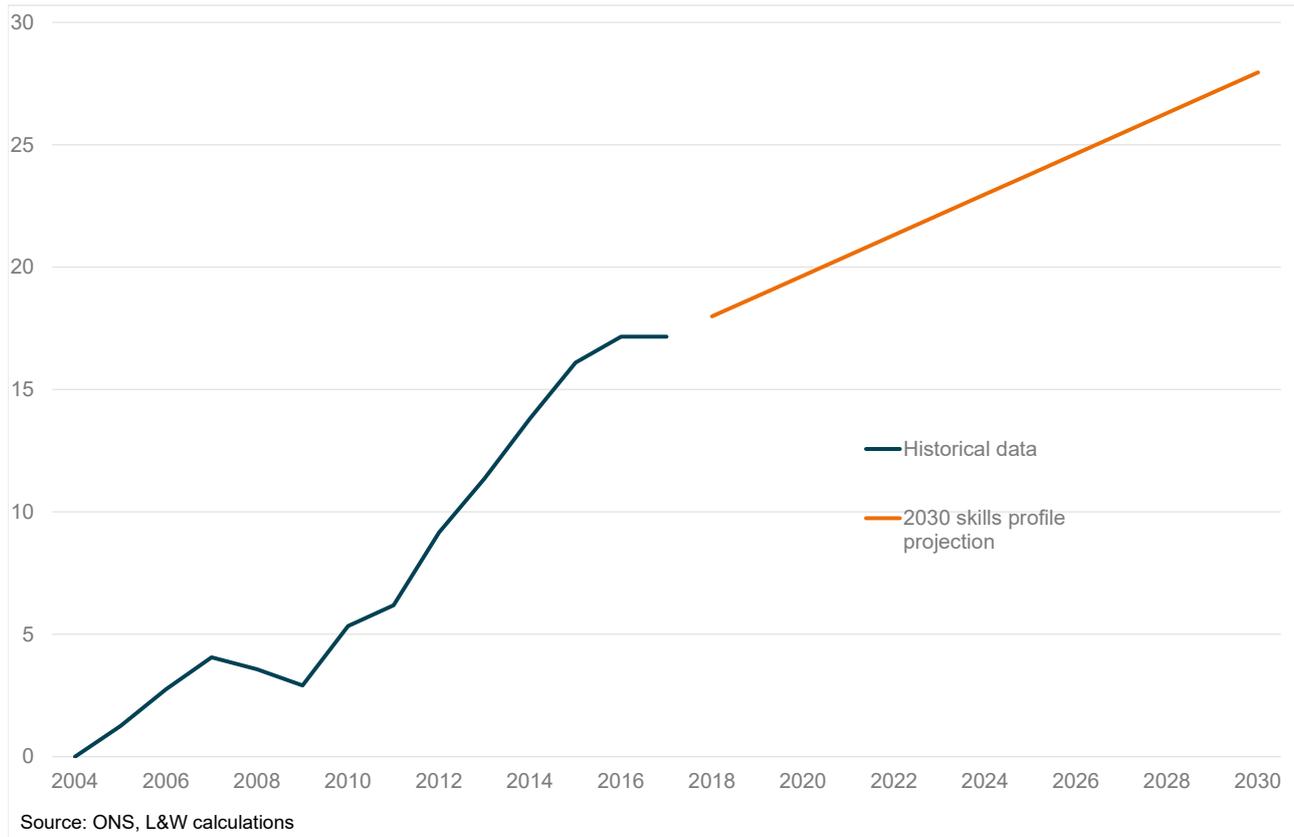


Potential impacts on economic growth

These projections suggest the rate of improvement in the UK's skills base is likely to slow. Improvements in skills will

therefore contribute less to economic growth and social justice. Analysis for this report suggests this could mean the quality adjusted labour input (QALI) index growing at around half the rate in the next decade compared with the last ten years.

Figure 16: Growth in the quality adjusted labour input index



This projection should be interpreted with caution: it looks solely at the impact of changes in qualification levels, holding employment and pay levels by sector constant. In practice, all of these variables are likely to change and for a number of reasons. However, it gives an indication of the potential reduced contribution of skills improvements to growth.

The UK is poised to remain mid-ranking at best compared to other countries and, in some cases, risks going backwards from a lower base. This would clearly not match the challenges and ambitions set out in previous chapters nor the increasing importance of learning and skills. The UK can and must do better.

4. A higher 2030 ambition

Previous chapters have shown that the UK's skills base does not compare well to other countries and that declining participation in learning is likely to leave the UK trading water at best in the international league tables. This chapter sets out a higher ambition for the UK, its potential impact on economic growth and social justice, and the guiding principles for delivering it.

A higher ambition for learning and skills

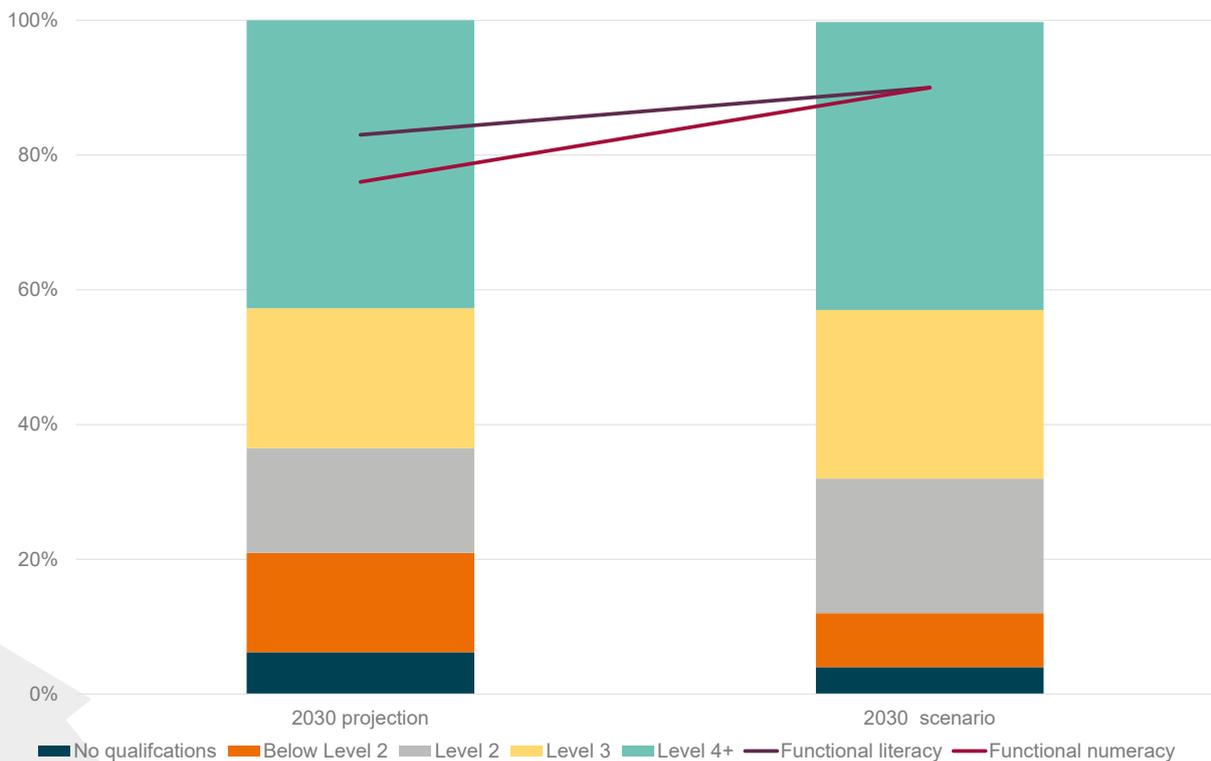
The higher ambition scenario is based on:

- Accelerating improvements in basic skills, to stop the current scenario where the UK may slip down the international league tables, so that 90% of adults have functional literacy and numeracy by 2030;

- Increasing the proportion of people with medium qualifications, with a greater focus on Level 3 qualifications, so that around 20% of people have Level 2 qualifications and 30% have Level 3 qualifications by 2030; and
- Maintaining the expected rate of progress in high qualifications, so that 43% of people have Level 4 qualifications or higher by 2030.

This scenario would improve the UK's relative skills and qualifications profile, but would not leave it world-leading. The UK would narrow the gap with other comparator countries but still be behind the best performing countries in the world on all measures.

Figure 17: A higher skills scenario



Source: L&W calculations

There is therefore a case for setting an even higher ambition, but this must also be tempered by realism over the ability to

rapidly scale up provision and attract more adults into learning.

Estimating the costs and benefits of skills improvements

Productivity and employment benefits.

Previous chapters showed how learning and skills can help improve earnings, productivity and employment. Earnings and employment returns vary by level, type, learner demographic, subject and mode of delivery.^a To simplify analysis, mid-range figures from the literature are used with: 8% and 5% earning and employment returns respectively for basic skills; 7% and 4% for Level 2; and 9% and 4% for Level 3.^b The productivity benefits are assumed to be 50% bigger than the earnings effect, a cautious assumption given research shows they may be 100% bigger.^c

Direct costs of delivery. The unit costs of qualification delivery also vary by level, type, geography, demography, subject and mode of delivery. To provide an indicative cost of delivering a higher ambition, average unit cost based on a mid-range length of qualification by level and cost for this length were used.

Opportunity costs. The time spent in learning by people carries an opportunity cost. These costs are not included. Public investment also carries an opportunity cost – investing in learning needs to at least match the rates of return that other services (such as transport for example) would bring.

Wider benefits. Previous chapters showed the wider benefits that learning can bring to health, wellbeing and inclusive communities among other things. These benefits are not quantified in this analysis.

^a Estimation of the labour market returns to qualifications gained in English further education, BIS, 2014.

^b Labour market returns to vocational qualifications in the labour force survey, McIntosh and Morris, CVER, 2016; Measuring and assessing the impact of basic skills on labour market outcomes, McIntosh and Vignoles, LSE, 2000.

^c The impact of training on productivity and wages: evidence from British panel data, Dearden, Reed and van Reenen, Oxford bulletin of economics and statistics, 2006.

A higher 2030 ambition

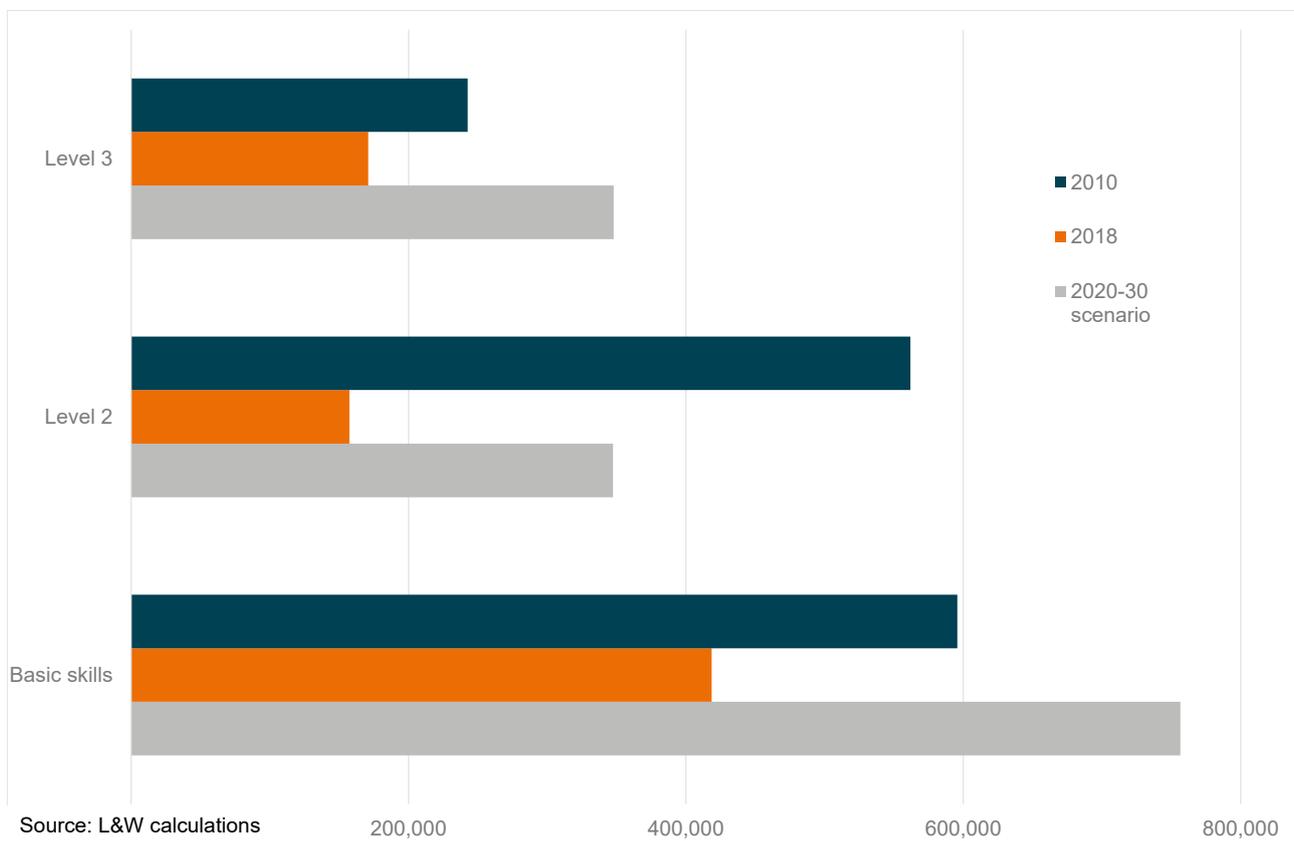
The benefits of a higher ambition

Compared to the baseline, delivering this ambition would require an additional three million people to improve their functional literacy and numeracy by 2030, 1.9 million extra people to achieve Level 2, and 1.8 million extra people to achieve Level 3.

This could be achieved by roughly doubling current rates of adult attainment in these skills and qualifications in

England.⁵⁴ This sounds ambitious and is ambitious. However, it only returns the number of adults gaining full Level 2 and Level 3 qualifications each year back to the levels seen in 2010 (with a greater emphasis on Level 3 within this) and a 25% increase in basic skills attainment compared to 2010.

Figure 18: Rates of required skills and qualification improvement



⁵⁴ Skills policy is devolved within the UK. The general messages of the analysis in this report apply to each nation and the analysis is at UK level. However, the implications for investment and policy will vary between nations depending on their context.

This would bring significant benefits in terms of extra earnings for individuals, productivity for employers and the economy, and employment levels. It would boost the economy by £20 billion per year, with an extra 200,000 people in work. There would be significant savings to the Exchequer from more people in work and earning more. The extent of these savings would depend on the demographics of those improving their skills.

The impacts on social justice would depend on the ways in which it is delivered and who benefits from new opportunities to learn. It is likely to have a positive impact on social justice, given it focuses on improvements in basic skills and intermediate skills. The preceding analysis showed that gaining these skills opens a range of career opportunities. Global economic changes mean they are increasingly essential for preventing people being 'locked out' of opportunity. In addition, there would be significant wider benefits to health, wellbeing and civic participation, which are not quantified here.

This scenario shows that investment in learning and skills, with a focus on intermediate and basic skills, is a win-win: economic growth and social justice go hand in hand.

Delivering a high skills future

There are a range of ways this higher ambition could be delivered. Improvements in attainment at school and compulsory education could contribute, and this would help to reduce the overall cost of delivering the ambition (given investment is already made in school places – this is about getting better results for that same investment).

However, 75% of the UK's 2030 working age population have already left compulsory education. Delivering a higher ambition will depend on a significant increase in adult learning. People's longer working lives coupled with a changing world of work will also increase the importance of learning through life.

It is difficult to estimate the total cost of delivering the higher ambition, given the cost of courses varies according to their levels, subject and modes of delivery. It is also important to focus on a wide range of ways that people can access learning and improve their skills and capabilities. This includes informal learning, adult and community learning and on-the-job learning, as well as more formal learning leading to qualifications. Under reasonable assumptions, the total cost of additional learning would be £1.9 billion per year until 2030.

This is a significant sum of money. However, spending on adult skills (including apprenticeships) was cut by around £1.2 billion in the five years to 2016-17, and the Apprenticeship Levy is projected to grow in the coming years. This, along with the new T Levels, are likely to make a difference but be insufficient on their own.

More is required, with investment from individuals, employers and the government. In practice, the bulk of money, particularly for basic skills, would need to come via increased government investment. There is, though, a range of routes for raising and investing this money. These include: increasing the Adult Education Budget through taxation; increasing or expanding the Apprenticeship Levy to widen employer investment; or

A higher 2030 ambition

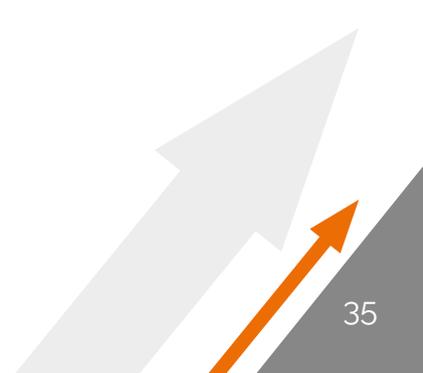
increasing individual investment through use of income-contingent loans, personal learning accounts or other approaches. The preferred approach will vary by nation across the UK.

Investment on its own would not be enough. Learning and Work Institute research has shown that a range of other factors will also be crucial, including: building a culture of learning; inspiring adults to want to learn; encouraging employers to invest in and utilise skills; and ensuring learning can fit around work and home life.⁵⁵

The analysis of future skills profiles is at UK level. However, skills policy is devolved. There is a case for greater investment and new forms of engagement in each of the nations in the UK. However, the form that this takes will vary according to the context of each nation.

The case for a higher ambition for learning and skills is clear: it is crucial for economic growth and social justice. Making this happen requires a clear strategy, increased investment, and new ways of engaging both employers and individuals in learning.

⁵⁵ Adult participation in learning survey, Learning and Work Institute, 2018.



 learningandwork.org.uk

 enquiries@learningandwork.org.uk

 [@LearnWorkUK](https://twitter.com/LearnWorkUK)

 **0116 204 4200**

Learning and Work Institute
4th Floor, Arnhem House, 31 Waterloo Way, Leicester, LE1 6LP
Company registration no. 2603322.
Charity registration no. 1002775

All rights reserved. No reproduction, copy or transmission of this publication may be made without the written permission of the publishers, save in accordance with the provisions of the Copyright, Designs and Patents Act 1988, or under the terms of any licence permitting limited copying issued by the Copyright Licensing Agency.