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Improving productivity and job quality of low-skilled workers in the United Kingdom

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IMPROVING PRODUCTIVITY AND JOB QUALITY OF LOW-SKILLED WORKERS IN THE UNITED KINGDOM

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By Sanne Zwart and Mark Baker

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ABSTRACT/RÉSUMÉ

Improving productivity and job quality of low-skilled workers in the United Kingdom

More than a quarter of adults in the United Kingdom have low basic skills, which has a negative impact on career prospects, job quality and productivity growth. Furthermore, unlike most other countries, young adults do not have stronger basic skills than the generation approaching retirement. The lack of skills development starts at young ages and continues in secondary education; despite a modest reduction in recent years, the educational attainment gap between disadvantaged and non-disadvantaged students remains high. The low participation in lifelong learning of low-skilled individuals puts them at risk of falling behind in meeting the changing skill demands of the dynamic labour market. Ongoing reforms to the vocational education and training (VET) system and apprenticeship system should have a positive impact on low-skilled productivity, enabling students to gain the necessary basic skills and for workers to find quality jobs. Improving the targeting of active labour market policies, and ensuring that the ongoing increases in the national living wage are delivered in a sustainable way will also play an important role in improving job quality and reducing the high rate of youth neither employed or in education or training. Policy responses to the rise of non-standard work will also be essential in improving the job quality of the low-skilled.

This Working Paper relates to the *2017 OECD Economic Survey of the United Kingdom* (www.oecd.org/eco/surveys/economic-survey-united-kingdom.htm).
JEL classification: E24, H75, J24, J62
Keywords: Productivity, low-skilled, job quality, social mobility

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Améliorer la productivité et la qualité d'emploi des peu qualifiés au Royaume-Uni

Plus d'un quart des adultes au Royaume-Uni possèdent un faible niveau de compétences élémentaires, ce qui nuit à leurs perspectives de carrière, à la qualité de leur emploi et à la croissance de la productivité. Qui plus est et à la différence de la majorité des autres pays, les compétences élémentaires des jeunes adultes ne sont pas plus solides que celles de la génération proche de la retraite. Cette insuffisance de développement des compétences commence tôt et se poursuit dans l'enseignement secondaire ; en dépit d'un léger tassement ces dernières années, l'écart des niveaux d'instruction entre élèves de milieux défavorisés et favorisés demeure important. Le faible taux de participation des actifs peu qualifiés à la formation tout au long de la vie les expose au risque d'être distancés dans l'adaptation à l'évolution des besoins en compétences d'un marché du travail dynamique. Les réformes en cours dans le système d'enseignement et de formation professionnels (EFP) et dans la formation en apprentissage devraient avoir un effet positif sur la productivité des actifs peu qualifiés et permettre aux étudiants d'acquérir le bagage élémentaire nécessaire, et aux actifs de trouver des emplois de qualité. De même, veiller à une meilleure sélectivité des mesures d'activation et à la viabilité à long terme du processus en cours de revalorisation du salaire national de subsistance (NLW) sera essentiel pour améliorer la qualité des emplois et réduire l'importance du nombre de jeunes n'étant ni en emploi, ni scolarisés, ni en formation. Enfin, la réponse des pouvoirs publics à la progression des emplois atypiques sera également primordiale pour améliorer la qualité d'emploi des peu qualifiés.

Ce Document de travail se rapporte à l'*Étude économique de l'OCDE du Royaume Uni, 2017* (http://www.oecd.org/fr/economie/etude-economique-royaume-uni.htm)
Classification E24, H75, J24, J62
Mots clefs: productivité, peu qualifié, qualité d'emploi, la mobilité sociale

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Improving productivity and job quality of low-skilled workers

By Sanne Zwart and Mark Baker[1]

Low skills in the United Kingdom

The share of low-skilled people is comparatively high

This paper analyses how job quality and productivity of low-skilled workers can be improved. After assessing challenges faced by the low-skilled worker in the United Kingdom, it first looks at how competencies at the bottom of the skill distribution can be strengthened through education and training. It then looks at ways to make low-skilled workers more productive by reducing skill mismatches and improving labour mobility. Finally, it considers the role of labour market institutions in setting proper incentives for the low-skilled to work and for employers to provide jobs of good quality.

The low-skilled are a diverse group and can be defined using different overlapping dimensions, including lower assessed proficiencies, lower educational attainment, or based on occupational or industry classifications. According to the World Indicators of Skills for Employment (WISE) data, which define low-skilled workers as those with a low educational attainment, more than half of low-skilled individuals in the United Kingdom were employed in 2014 and their unemployment rate was slightly above 10% compared to 7% for medium-skilled and around 3% for high-skilled individuals. About a quarter of low-skilled workers are first generation immigrants. Low-skilled workers are relatively concentrated in the Midlands and northern England as opposed to southern England (OECD, 2015a), mimicking the large differences in productivity across regions (Gal and Egeland, 2017).

More than a quarter of workers in England and Northern Ireland have low basic numeracy and literary skills as measured by the Survey of Adult Skills of the OECD Programme for the International Assessment of Adult Competencies (PIAAC), which is more than in most other OECD countries (Figure 1, Box 1). In England, around 5 million people do weakly in both domains (OECD, 2016a). In particular, the performance for numeracy is low relative to other OECD countries, but even for literacy it is just average. Excluding migrants does not significantly affect the relative UK performance: although migrants in the United Kingdom have weaker literacy and numeracy skills than native-born, their proficiency is comparable to that of migrants in other countries.

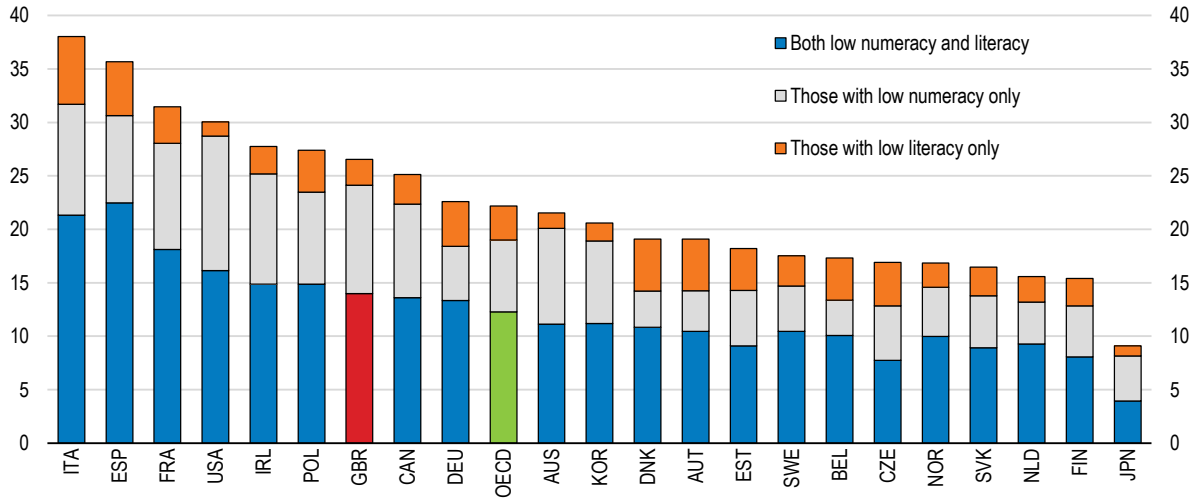
The percentage of young people with weak basic skills is particularly high in the United Kingdom. Almost 30% of 16-24 year-olds has weak skills, which is three times higher than in the best performing countries (Figure 2). Moreover, while in most countries young adults have stronger basic skills than the generation approaching retirement, this is not the case in the United Kingdom. Contrary to other countries the rising educational attainment during the last decades has thus not resulted in stronger basic skills.

1. The corresponding authors are Mark Baker (mark.baker@oecd.org) from the OECD Economics Department and Sanne Zwart (formerly from the OECD Economics Department). The authors would like to thank Pierre Beynet, Rafal Kierzenkowski, Balasz Égert, Catherine L. Mann, Sebastian Barnes (all from the Economics Department), Glenda Quintini, Christopher Prinz (Directorate for Employment, Labour and Social Affairs) and Malgorzata Kuczera (Directorate for Education and Skills) for their valuable comments and suggestions. Special thanks go to Gabor Fulop for statistical assistance and Elisabetta Pilati for editorial assistance (also from the Economics Department).

Low-skilled people, based on low literacy skill levels, are about twice as likely to be unemployed than those with higher skill levels (OECD, 2013a), with the unemployed also losing the possibility to maintain and develop their skills on the job. Disability is also more common among low-skilled adults, with around 7% of them reporting to be permanently disabled.

Figure 1. Over 25% of working aged adults have low basic skills in the United Kingdom

As a percentage of all adults aged between 16 and 65, 2012[1]



1. Low-skilled are defined as those who are below level 2 on either literacy or numeracy as measured by the Survey of Adult Skills of the OECD Programme for the International Assessment of Adult Competencies (PIAAC). Low-skilled adults struggle with basic quantitative reasoning or have difficulty with simple written information. Data for Belgium refers to Flanders. Data for the United Kingdom are calculated as the population weighted average of England and Northern Ireland. The OECD aggregate is calculated as an unweighted average of 22 OECD countries (with the data for England and Northern Ireland combined by population weights) that participated in the first round of the Survey of Adult Skills.

Source: OECD (2016), "Building Skills for All: A Review of England", *OECD Skills Studies*.

Box 1. What does it mean to have low skills?

The OECD Survey of Adult Skills, which is part of the Programme for the International Assessment of Adult Competencies (PIAAC), assesses the proficiency of adults in literacy, numeracy and problem solving in technology rich environments. These skills are "key information-processing competencies" that are relevant to adults in many social contexts and work situations, and necessary for fully integrating and participating in the labour market, education and training, and social and civic life.

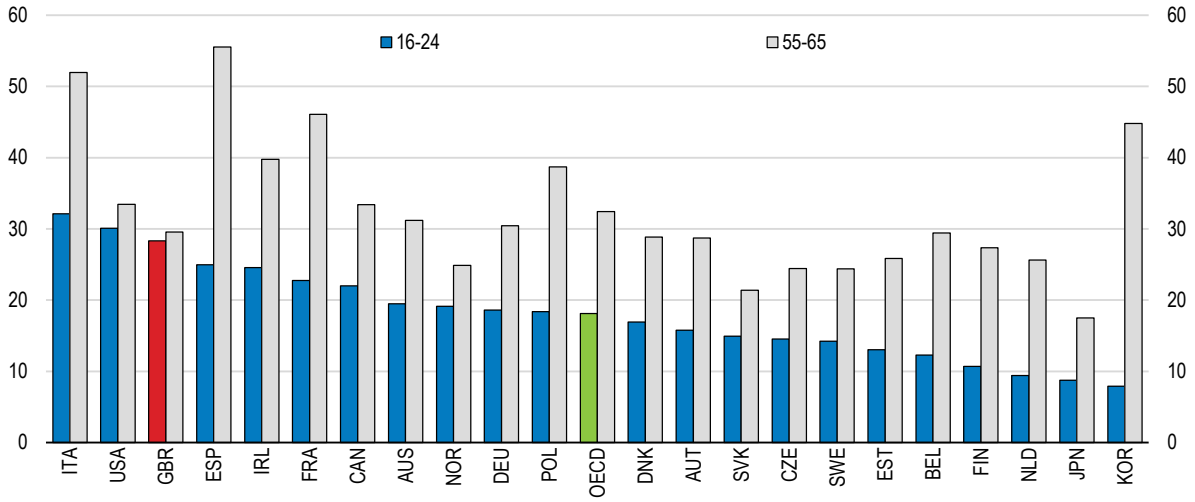
In PIAAC, "low-skilled" people are categorised as those with literacy or numeracy proficiency at level 2 or below (recognising that some will have good occupational skills and others will have strong basic skills in a language other than English). These people struggle with basic quantitative reasoning or have difficulty with simple written information, for example estimating how much petrol is left in the petrol tank from a sight of the gauge, or fully understanding the instructions on a bottle of aspirin. Constructing meaning across larger chunks of text or performing multi-step operations in order to identify and formulate responses is often too challenging, as is understanding numerical information that is embedded in non-familiar contexts.

The third domain surveyed by PIAAC regards skills related to problem solving in technology rich environments. It gauges a person's capacity to use ICT devices and applications to solve the types of problems adults commonly face as ICT users in modern societies. Although these skills are highly relevant at work and in private life, methodological issues related to limited proficiency among the low-skilled in the use of computers make this domain unsuitable to identify adults with low skills and to compare their performance across countries.

Sources: OECD (2016), Building skills for all: a review of England, OECD Skills Studies, OECD Publishing, Paris; OECD (2016), Skills Matter: Further Results from the Survey of Adult Skills, OECD Skills Studies, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264258051-en.

Figure 2. Young adults have weak basic skills and perform no better than older cohorts

Percentage of adults with low skills in different age groups, 2012[1]



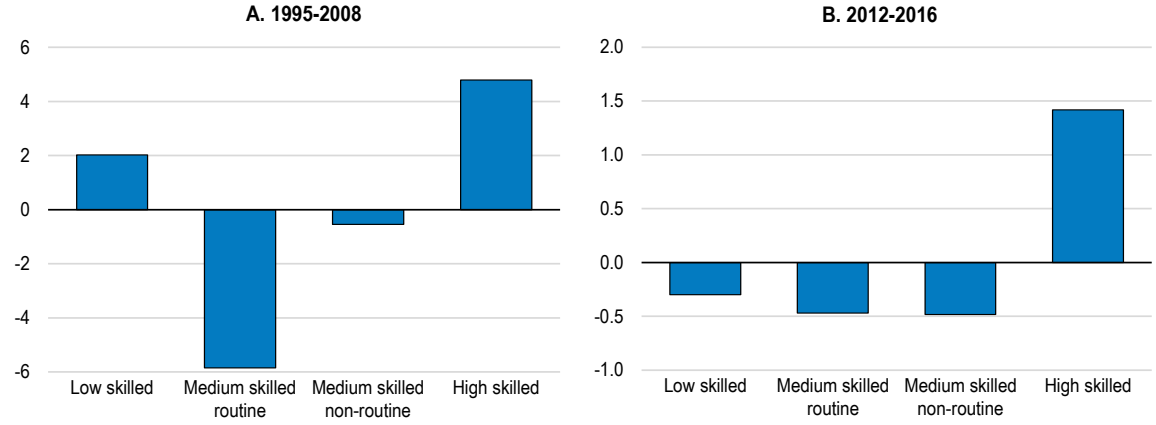
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Source: OECD (2016), "Building Skills for All: A Review of England", *OECD Skills Studies*.

Apart from the lack of employment opportunities, a lack of information-processing skills could also be a major obstacle to full participation in modern societies and could even lead to social and economic exclusion and marginalisation (OECD, 2016b). These difficulties will increase over time in the United Kingdom as the percentage of low-skilled jobs is declining, although not as much as medium-skilled routine jobs (Figure 3). The percentage of low-skilled jobs are expected to decline steadily in coming years with some estimates suggesting that only 10% of the job opportunities in the next decade will require low qualifications (CEDEFOP, 2015).

Figure 3. Job polarisation in the United Kingdom

Change in employment shares by occupation category, percentage points[1]



1. Refers to population aged between 15 and 64. High skilled occupations include managers, professionals, technicians and associate professionals. Medium skilled non-routine occupations include service and sales workers and craft and related trades workers. Medium skilled routine occupations include clerical support workers, skilled agricultural, forestry and fishery workers and plant and machine operators and assemblers. There is a structural break in the data due to change in classification in 2010/11. ISCO-08 classification 1-digit level.

Source: Eurostat (2017), "Employment and unemployment (Labour Force Survey)", *Eurostat Database*, May.

Weak skills hurt productivity and job quality

The skills proficiencies of workers, and how these skills are utilised, play an important role in influencing productivity growth. Workers that possess only low skills tend to have a limited contribution to aggregate productivity growth. In fact, low-skilled workers are estimated to have made a negative contribution to UK productivity growth in the three decades ending in 2007, with most of the growth coming from higher-skilled workers (Mason et al., 2014).

Importantly, individuals who possess low skills, and who have fewer opportunities to improve these skills, are limited in the possibility of achieving upward social and income mobility throughout their lives, as the United Kingdom is one of the weakest performers in intergenerational social mobility with one of the highest levels of intergenerational earnings persistence in the OECD (OECD, 2010). In fact, those born in the 1980s are the first post-world war UK cohort to not start their working careers with higher real incomes than their immediate predecessors (SMC, 2016). Higher-paying and higher-skilled jobs continue to be filled by those from privileged backgrounds: workers from working-class backgrounds currently account for only 4% of doctors and 6% of barristers (SMC, 2016).

Low-skilled individuals who work often have jobs of low quality, with lower wage and job security than is the case with higher-skilled workers. The United Kingdom ranks as a near average performer in the different aspects of job quality amongst OECD countries (Figure 2; OECD, 2016c). Weak real wages over recent years have occurred across the wage distribution, but have made it much harder to make ends meet for an increasing number of workers at the lower end. Estimates on the percentage of employees with incomes below a threshold based on the independently estimated UK Living wage rates, prior to the introduction of the National Living Wage in 2016, increased from 15% to 23% during 2010-15 (Clarke and D'Arcy, 2016). Furthermore, it is estimated that 30% of households now have incomes below the minimum level needed to afford a basic basket of goods and services (Padley et al., 2017).

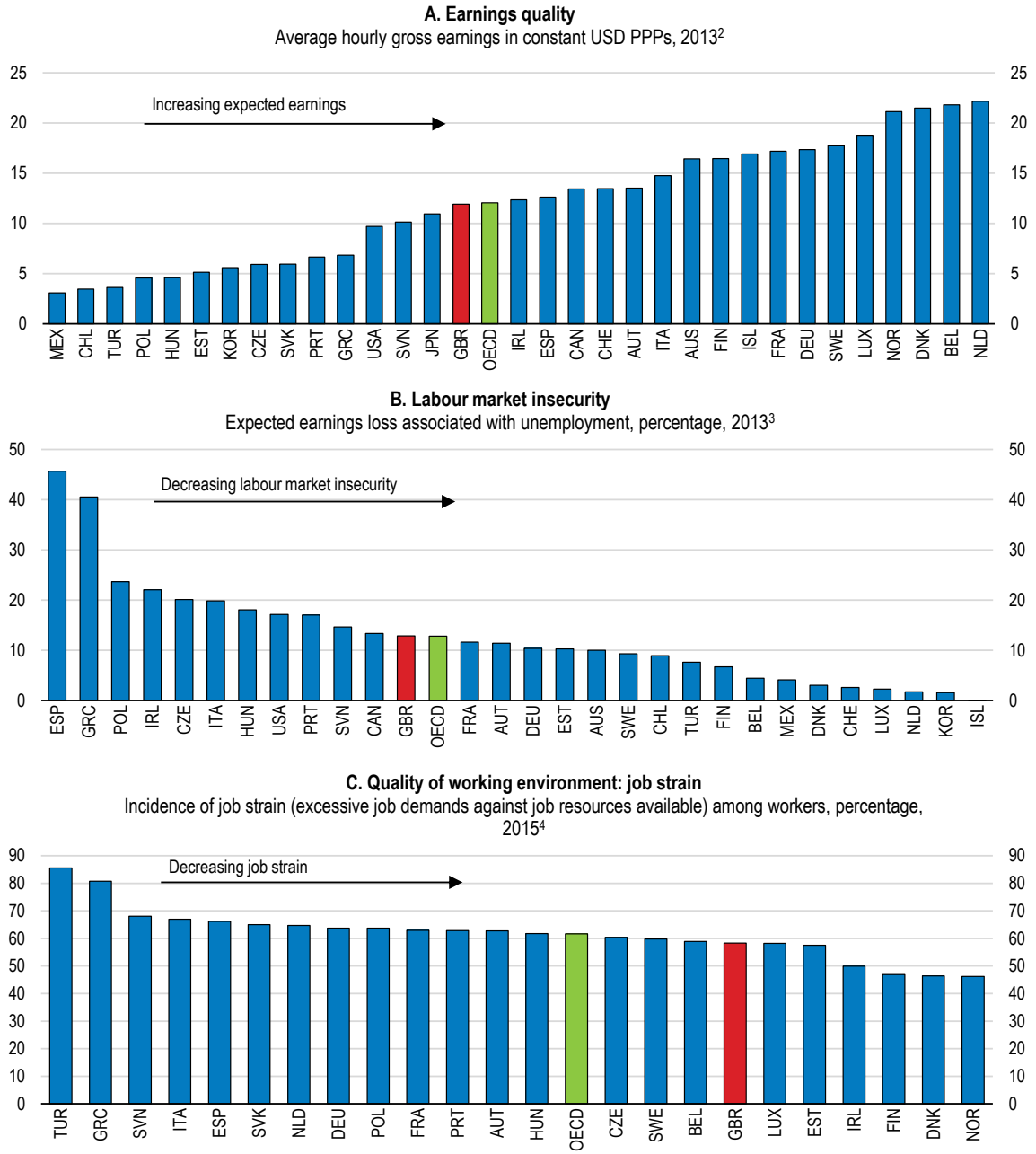
Low-skilled workers also have relatively low earnings compared to their peers in other G7 countries, although only slightly below the OECD average (Figure 4). Strengthening skills is thus an important way to reach better jobs and productivity, particularly given that the United Kingdom is one of the countries where the effect of higher skills proficiency on earnings is large (OECD, 2016b).

Developing the full skill potential

Developing one's skills potential fully is a continuous process that starts at a young age and includes formal education and lifelong learning. Leaving the education system with strong basic skills helps finding a higher quality first job, which in turn has a positive long-run impact on employment outcomes (OECD, 2016a). Nevertheless, 12% of young people in the United Kingdom left formal education while possessing only low-level qualifications in 2013, which is above the EU 2020-benchmark of 10% (CEDEFOP, 2014).

Strengthening basic skills of students requires action throughout the entire education system. Early childhood, primary and secondary education should primarily be focused on ensuring that all students gain at least the minimum level of basic skills needed to properly function in a modern society. Given the high proportion of individuals with low basic skills, this is an area that needs improvement. Following the completion of formal education and once in the labour market, continuous investment in skills is needed to ensure that workers, especially the low-skilled, are keeping up-to-date with changing technologies and business practices. This will also help to close the productivity gap between the United Kingdom and its peers. Supporting individuals to fully develop their skills would also help to improve social mobility.

Figure 4. Overall job quality in the United Kingdom is near the OECD average[1]



1. The OECD aggregate is calculated as an unweighted average of the data shown.
2. 2012 for Australia, France, Italy, Korea, Poland, Mexico, Spain, Sweden and Switzerland. 2011 for Chile. 2010 for Estonia, Luxembourg, the Netherlands, Slovenia and Turkey. "Earnings quality" consists of average earnings and earnings inequality. "Average earnings" is defined as average gross hourly wages per worker in constant 2013 USD PPPs (purchasing power parities). "Earnings inequality" is calculated using the Atkinson index, a weighted average of individual earnings which allows focusing on specific parts of the distribution depending on the inequality aversion parameter (Atkinson, 1970; Foster et al., 2013).
3. 2012 for Australia, Korea, Mexico, the Netherlands, Turkey and the United States. 2011 for Chile. "Labour market insecurity" consists of unemployment risk and unemployment insurance. "Unemployment risk" is defined as the proportion of time that a worker is expected to spend on average in unemployment and calculated by the monthly probability of becoming unemployed multiplied by the average expected duration of unemployment spells in months. "Unemployment insurance" is measured by the coverage of the unemployment insurance and replacement rates of public transfers received by the unemployed.
4. 2010 for Norway and Turkey. "Quality of the working environment" is measured by job strain – discrepancy between job demands and job resources to accomplish tasks. Two types of job demands are considered: i) time pressure and ii) physical health risk factors. Two types of job resources are considered: i) work autonomy and learning opportunities and ii) workplace relationships. "Job strain" refers to those jobs where the workers face one demand but have no resources or fact two demands but have one or no resource.

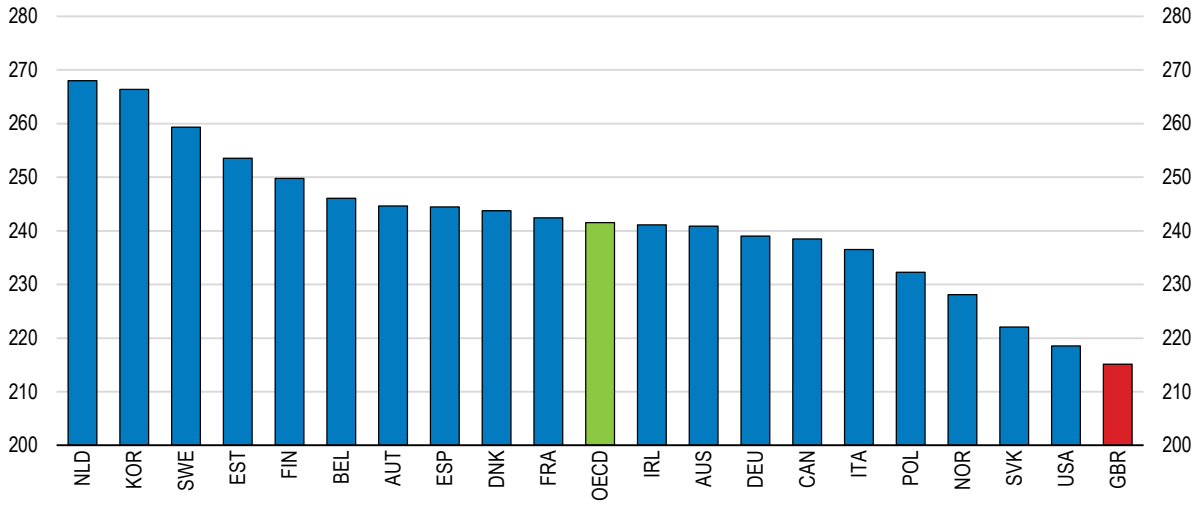
Source: OECD (2017), "Job quality", *OECD Employment and Labour Market Statistics* (database), May.

Not all children have the same opportunities

Family background has a relatively large effect on basic skills, highlighting the need to increase equity of the education system in order to provide equal chances to all children. Family background is more important for a person's skill level in the United Kingdom, considering that young people whose parents have a low level of educational attainment have significantly weaker basic skills than in all other surveyed countries (Figure 5; OECD, 2016a). The education system has a key responsibility in ensuring that all children can fully develop their skill potential, but there is significant scope to increase its equity (see below).

Figure 5. Basic skills of young people are strongly related to parental education

Mean score point in numeracy for those individuals whose parents have not attained upper secondary education, aged 16-24, 2012[1]



1. Data for Belgium refers to Flanders. Data for the United Kingdom are calculated as the population weighted average of England and Northern Ireland. The OECD aggregate is calculated as an unweighted average of 22 OECD countries (with the data for England and Northern Ireland combined by population weights) that participated in the first round of the Survey of Adult Skills of the OECD Programme for the International Assessment of Adult Competencies (PIAAC).

Source: OECD (2013), *OECD Skills Outlook 2013: First Results from the Survey of Adult Skills*.

Rising child poverty threatens to increase the number of children whose disadvantaged backgrounds negatively affects their chances. Child poverty fell steadily in the early 2000s, but has been broadly stable since 2010, and the government's child poverty target of fewer than 10% of children living in households with net income below 60% of median income by 2020 is likely to be missed by a large margin (Browne and Hood, 2016; Reed and Portes, 2014). The latest projections even see relative child poverty rising from 29% in 2015–16 to 36% in 2021–22, undoing most of the falls since 1997–98 (Hood and Waters, 2016).

Increasing participation of disadvantaged children in early childhood education and care

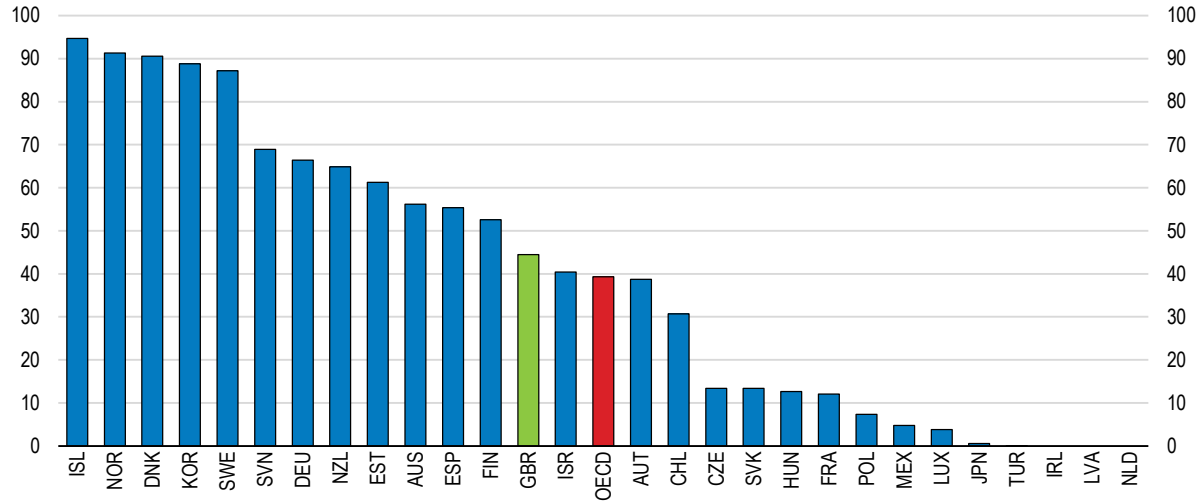
Attending early childhood education and care (ECEC) from an early age onwards has been shown to have long-term beneficial effects in the United Kingdom, in particular for children with a less stimulating home-learning environment or whose parents have poor or no qualifications (Melhuish, 2013; Taggart et al., 2015). The positive effects extend beyond higher educational attainments, as risks of anti-social behaviour are also lower.

The quality of childcare is generally quite good in the United Kingdom, and has continued to improve in recent years. As of early 2017, over 90% of childcare facilities in England were judged "good" or "outstanding" in terms of their effectiveness in meeting the needs of children in their foundation years, up from 74% in 2012 (Ofsted, 2017). Furthermore, the assessed quality gap between facilities in the least deprived and most deprived areas has nearly closed. Staff qualifications have also been rising, despite pay remaining close to the National Minimum Wage (Simon et al., 2015). Despite the improvement in assessed quality of ECEC facilities, there has been only a limited reduction in the school readiness gap between children with disadvantaged backgrounds and non-disadvantaged backgrounds in recent years (SMC, 2017).

Participation in ECEC is nearly universal for 3- to 5-year-olds, but lower for younger children, although there has been a marked improvement in recent years. As of 2015, over 40% of 2-year-olds is enrolled in formal childcare and pre-schools, slightly higher than the OECD average and nearly twice as high as in the previous year (Figure 6). In all constituent countries of the United Kingdom, free part-time ECEC is available from age 3 onwards, with disadvantaged children, or those in disadvantaged areas, already eligible from age 2. The number of hours of free provision in England has doubled from 15 hours per week to 30 in September 2017 for eligible working parents, which should help to raise further the participation rates of young children. Despite the increase in provision of free childcare, and the newly introduced "tax-free" 20% deduction on ECEC costs, out-of-pocket ECEC expenses for working families with children aged 2-3 are likely to remain high (OECD, 2016d).

Figure 6. Fewer children attend formal early childhood education and care at the age of 2

Percentage of children at the age of 2 enrolled in formal early childhood and pre-primary education, 2015[1]



1. Enrolment rates at young ages should be interpreted with care, as there are other forms of effective education available below the age of 3. Countries, for which data for either early childhood educational development programmes (ISCED 01) or pre-primary education (ISCED 02) is missing, are excluded.

Source: OECD (2017), *Education at a Glance 2017: OECD Indicators*.

Having more young children with disadvantaged backgrounds participate in formal ECEC requires better information for parents and an adequate funding structure for childcare staff. Local municipalities are legally required to provide information to help parents find an appropriate place for their child, which is particularly useful for parents with lower literacy and numeracy skills. To address the lower take-up of the two year old benefit, the government should reduce compliance costs and raise awareness in local areas where participation is low.

Education and training could help ECEC institutions and staff to take into account the increasing cultural diversity in ECEC facilities (OECD, 2015b). Children with different mother tongues or low socio-economic backgrounds require specific attention. Mandated staff-to-children ratios are among the most advantageous in the OECD for children of age 2 and below at 1 member of staff for every 4 children, but are average for children aged 3 to 6 at 1 member of staff for every 13 children, although a higher ratio of 1 to 8 is required if no staff member has advanced level qualifications. Higher staff to child ratios would give staff more opportunities for individual and more targeted pedagogy, but is costly. Hence, investing in specific staff education and training, in particular by private providers in disadvantaged areas, would help to equip staff with the skills to work with young children from different backgrounds, which is especially important if they are responsible for large groups. The government could provide additional training incentives for ECEC staff through the new apprenticeship system, by increasing subsidies on targeted training (see below).

Strengthening the skills acquired in compulsory education

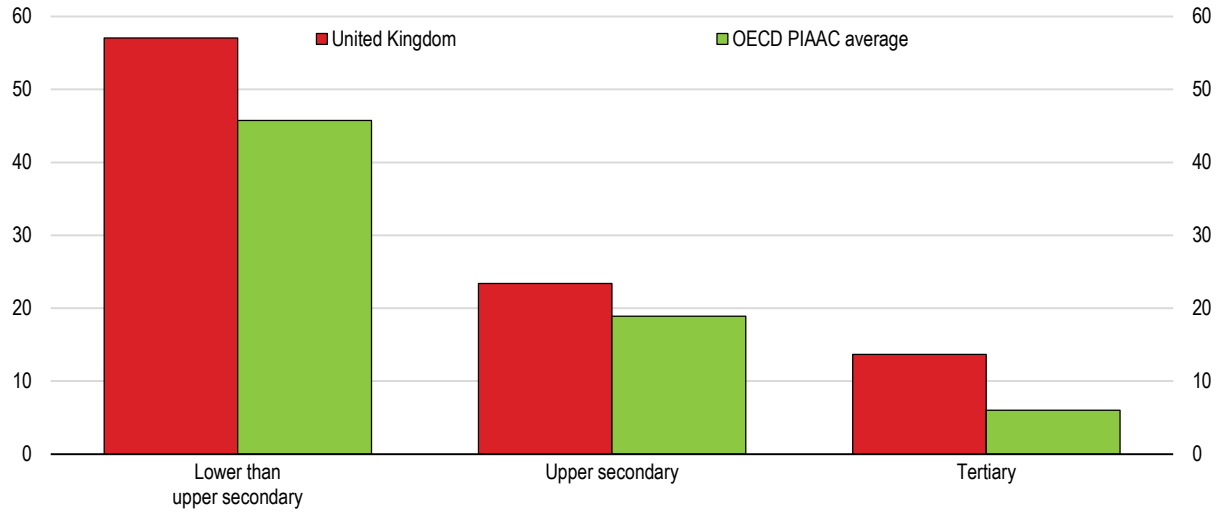
Differences between the educational attainment of disadvantaged and non-disadvantaged students have narrowed considerably within primary education. In the past decade, attainment gaps of 7 year olds have halved in reading and narrowed by one third in writing and maths (SMC, 2017; Ofsted, 2016a). Attainment gaps have also been reduced for 11 year olds, although the reduction has been more modest (DfE, 2016). The introduction of the pupil premium in 2011, which increases funding to individual schools based on the number of disadvantaged students they have, is deemed to have played an important role in narrowing these gaps (SMC, 2017). Unlike in primary school however, there has been no progress in reducing attainment gaps in secondary education, with the differences in attainment between disadvantaged and advantaged students remaining broadly unchanged for over a decade, despite also benefitting from additional funding through the pupil premium programme (SMC, 2017). Given this lack of progress in improving education outcomes at the secondary level, particularly when compared to the improvement in primary education in recent years, the former will be the focus of this section.

Low skill outcomes throughout the secondary education system call for higher skills standards. For most low-skilled individuals, upper secondary education will be the final stage of formal education, and it is therefore important that students are equipped with a sufficient skill set that will put them on the right path to higher productivity work. In the United Kingdom, despite young people being more likely to continue education after age 16 than their parents, their skills remain weak. This reflects that within every level of qualification, a larger percentage of young people in the United Kingdom have low basic skills than in other countries (Figure 7). Furthermore, although the United Kingdom generally has a greater proportion of top-performing students than the OECD average according to the Programme for International Student Assessment (PISA) scores, the gap between the highest and lowest achieving students is high, particularly for science (Jerrim and Shure, 2016; Figure 8).

Raising participation in upper secondary education from its low level will also help to increase basic skill levels. Countries with higher participation rates typically have better basic skill levels (OECD, 2016a). Indeed, the United Kingdom is at the low end in both dimensions, as many young people currently in the labour force have weak skills and school participation has been relatively low. Almost all 16-year-olds and 17-year olds attended secondary education in 2015, but participation in secondary and post-secondary education at age 18 was around 60%, which is well below the OECD average (Figure 9). The English Education and Skills Act increased the compulsory age to 18 until which individuals must either be in full-time education, undertake vocational training or do an apprenticeship, which may be contributing to an increasing trend in 16 and 17 year old participation (DfE, 2017a).

Figure 7. Low basic skills at every education level are more prevalent than the OECD average

Percentage of young adults with low basic skills who have left formal education by highest qualification, 16-34 year-olds, 2012[1]

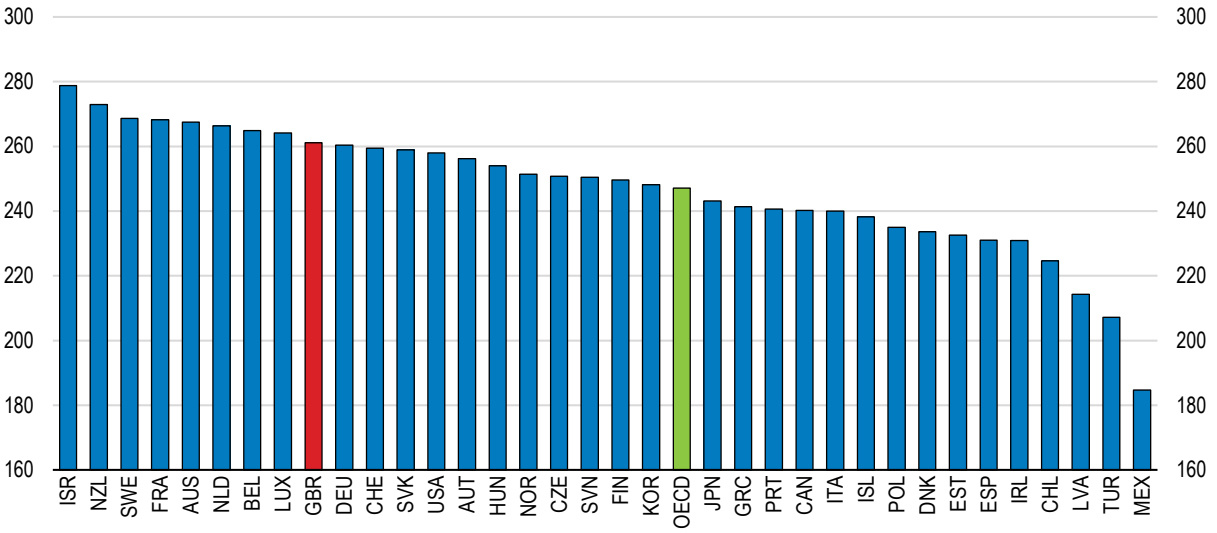


1. Low-skilled are defined as those who are below level 2 on either literacy or numeracy as measured by the Survey of Adult Skills of the OECD Programme for the International Assessment of Adult Competencies (PIAAC). Low-skilled adults struggle with basic quantitative reasoning or have difficulty with simple written information. Lower than upper secondary includes ISCED 1, 2 and 3C short. Upper secondary includes ISCED 3A, 3B, 3C long and 4. Tertiary includes ISCED 5A, 5B and 6. Data for the United Kingdom are calculated as the population weighted average of the figures for England and Northern Ireland. The OECD PIAAC average is calculated as an unweighted average of 22 OECD countries (with the data for England and Northern Ireland combined by population weights) that participated in the first round of the Survey of Adult Skills.

Source: Calculations based on the PIAAC database.

Figure 8. Difference between the highest and lowest achievers in science is above the OECD average

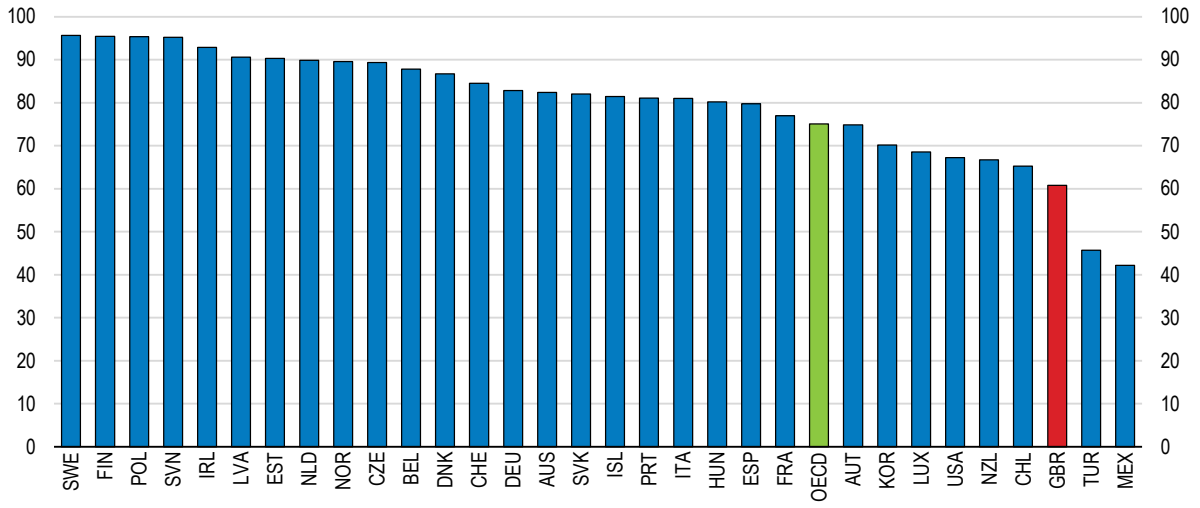
Difference between the 10th and 90th percentiles of PISA science scores, 2015



Source: OECD (2016), *PISA 2015 Results (Volume I): Excellence and Equity in Education*.

Figure 9. Many students stop formal education at the age of 18

Percentage of students enrolled in secondary, post-secondary non-tertiary or tertiary education at the age of 18, 2015



Source: OECD (2017), *Education at a Glance 2017: OECD Indicators*.

The weak performance of disadvantaged children in secondary education cannot be fully explained by their lower socio-economic background. It also reflects the fact that students from deprived areas are more likely to attend worse schools (Clifton and Cook, 2012). The different types of schools also lead to sorting that reduces educational equity. At age 16, disadvantaged students are less likely to continue at advanced level colleges ("School sixth forms"; DfE, 2015), which typically aim for higher qualifications than alternatives such as Further Education (FE) colleges. Moreover, based on free school meal entitlements, only 3% of students in English grammar schools are coming from disadvantaged backgrounds, compared to 15% of all students (Ofsted, 2016a, Box 2.).

Box 2. Selective schooling in England and social inequality

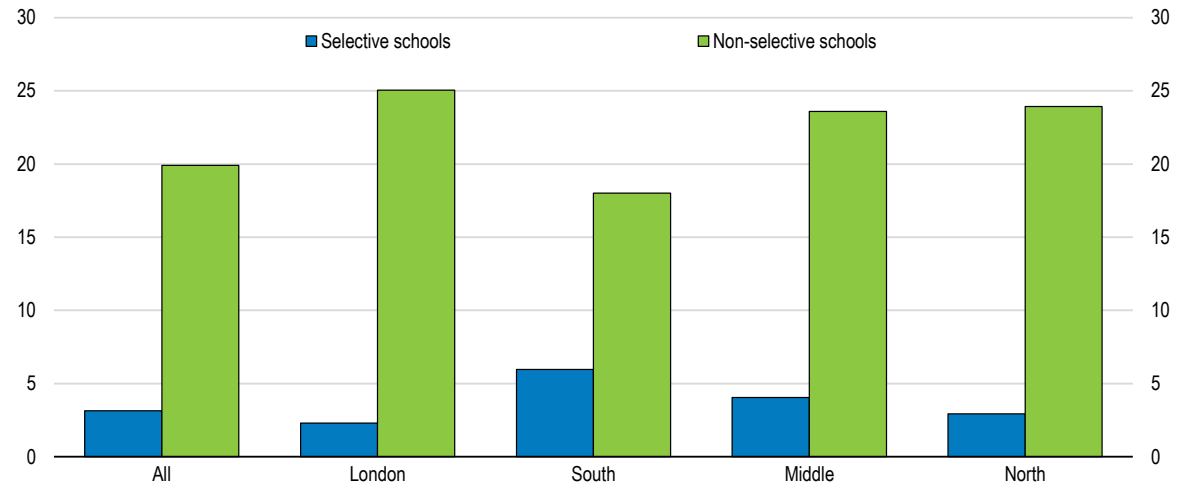
The government has indicated its intention to allow for an increase in the number of selective grammar schools operating in England in order to increase the opportunity for more high-performing students to benefit from a more advanced and targeted education at the secondary school level. Selection based on merit is a good idea in theory. However, in practice a student's socio-economic background tends to be a better indicator of whether a pupil is successful at entering into a selective school than their academic achievements (Oakes, 2005). Also, through their recruitment of the highest quality teachers, grammar schools are potentially exacerbating the shortage of good quality teachers in the overall system, diminishing the quality of education in non-grammar schools.

Merit-based selection should act as an enabler to upward social mobility for children from disadvantaged backgrounds, but in England the evidence shows that grammar school selection amplifies existing social inequalities. Students who are eligible for free school meals (FSM) represent a very small share of the student population in grammar schools (Figure 10), compared to non-selective schools with the gap between the two varying across the different regions of England. Furthermore, pupils who are educated through independent schools that are generally located in non-deprived areas are 10 times more likely to be accepted into a grammar school than FSM eligible pupils (Sutton Trust 2016). Indeed, there is also evidence that FSM eligible pupils who achieve a relatively high mark at the end of primary school are one third less likely to get into a grammar school than a non-FSM eligible pupil with a similar score (Cribb et al., 2013)

From an international perspective, using the latest Programme for International Student Assessment (PISA) results, it is more difficult to find a strong link between selective education and inequality in test results, although the evidence does indicate that inequality of results is higher in school systems where selection is done at an earlier age (OECD, 2016).

Figure 10. Disadvantaged students make up a small share of grammar school students

Percentage of students eligible for free school meals by type of secondary school, 2015-16[1]



1. South includes South East and South West regions; Middle includes East Midlands, West Midlands and East of England; and North includes North East, North West and Yorkshire and the Humber.

Source: Department for Education (2016), *Schools Census 2015-16*.

Source: Oakes (2005); Sutton Trust (2016); Cribb et al., (2013); and OECD (2016), *PISA 2015 Results (Volume II): Policies and Practices for Successful Schools,* OECD Publishing, Paris.

In England, improving the overall quality of schools needs to be complemented by targeted student-level interventions. Leadership and management of schools in deprived areas should be strengthened, as 23% are categorised as "less than good" in these areas compared to 6% in the most prosperous areas (Ofsted, 2016b). Disadvantaged children often attend schools with large numbers of other disadvantaged students. While this could make the schools better equipped to provide support, in practice it often worsens the educational development of already disadvantaged children, as poorer children living in affluent areas are more likely to enter advanced level courses than disadvantaged children living in poorer areas (Sammons et al., 2015). Furthermore, the gaps between the quality of management in schools in the most and least deprived areas are significantly higher in the North and middle of England compared to the South, largely mimicking gaps in regional productivity (Gal and Egeland, 2017 and SMC, 2017). The reform of the funding system in England should be used to strengthen incentives for schools to combat the compound effect of family disadvantage and living in a poor neighbourhood.

Teacher shortages have become a growing issue at the secondary level, reflecting recruitment and retention issues. Targeted recruitment levels into initial teacher education for the majority of secondary school subjects have been missed for a number of years (HCEC, 2017). Furthermore estimates on retention show that around a third of teachers who enter into teacher training are no longer working at a state school five years later (DfE, 2017b). Between 2011 and 2014, the proportion of teachers who have left the profession for reasons other than retirement increased from 64% to 75% (NAO, 2016). Retention is also important from the fiscal side, given that the cost of initial teacher training to the central government can be between GBP 15,000 and GBP 25,000 per trainee, an investment that is lost if the teacher subsequently decides to move to another occupation or overseas (Allen et al., 2016).

Schools in deprived areas have more problems to recruit staff and have more often temporary teaching arrangements in place than in more affluent areas (Ofsted, 2016b). Headmasters in deprived areas also indicated that there is insufficient teacher training provision nearby. This development can become

increasingly self-enforcing as the best teachers are recruited by the best schools and are provided the best training, with other schools lagging further behind.

Schools that have large numbers of disadvantaged students should be provided with more scope to attract and retain experienced teachers. Bolstering the pupil premium grant, and making a portion of funds contingent on teacher salary and training, would improve the incentives to attract high quality teachers and also improve the quality of teaching in schools with a larger share of disadvantaged pupils. Improving teacher satisfaction will also play a key role in retaining quality teachers. Encouraging a more collaborative working environment, and allowing teachers to be more involved with school decisions could help improve the low retention rates. Teachers who more frequently participate in professional collaboration – like team-teaching, engaging in joint activities across different classes and age groups, participate in collaborative professional learning and are able to observe other teachers' classes and provide feedback – indicate higher levels of both self-efficacy and job satisfaction (OECD, 2014d).

In Wales, better designed funding schemes for disadvantaged students would help schools build up their internal capacity to best respond to students' needs (OECD, 2014b). In addition, recruitment, professional development and career progression policies for teachers, school leaders and support staff can be developed further. Welsh schools need to move towards more personalised learning while still setting high expectations for every child. In Scotland, the *Curriculum for Excellence* implemented in 2011 aims to provide a coherent, more flexible and enriched curriculum for students aged 3 to 18, and despite its name it has a dual emphasis on quality and equity. There is no evidence available yet for a thorough evaluation of the new curriculum.

Additional efforts to help parents create a better home learning environment would help disadvantaged children to be more successful at school. Providing extra-curricular activities like tutoring and after-school sporting clubs would improve the social and educational development of children from disadvantaged backgrounds, whose parents are unable to provide a reasonable amount of support outside of their formal education (Chanfreau et al., 2016). Targeted education and career guidance for the most disadvantaged students, guidance that might not necessarily be available to them outside of school, would also help improve educational outcomes. Increased engagement by local employers and more information regarding available vocational paths would further improve outcomes (OECD, 2017a).

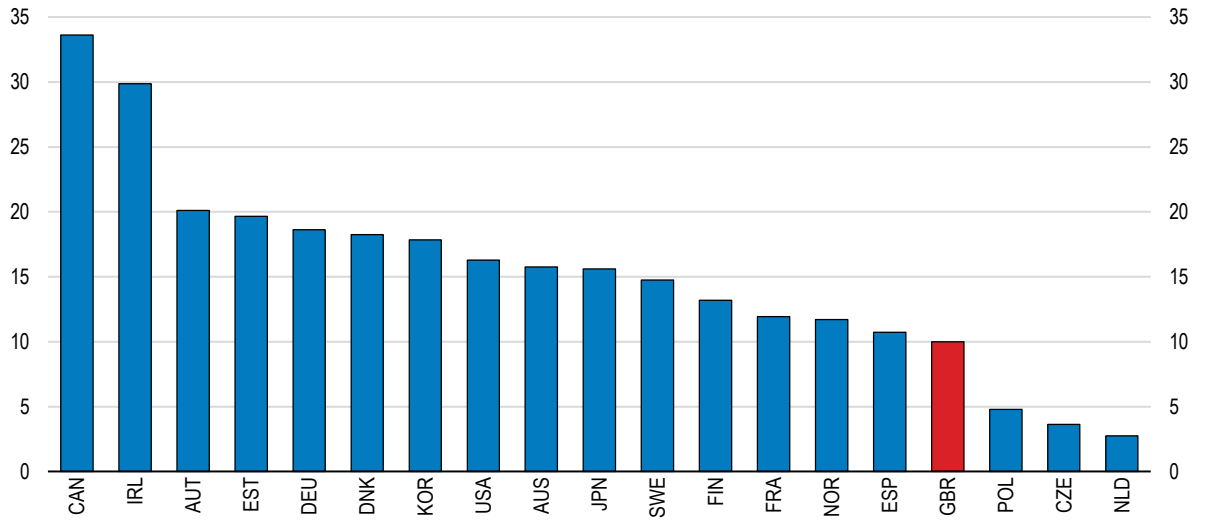
Expanding vocational education while simplifying the system

Routes through vocational education at the post-16 level are varied and complex. In England, awarding organisations develop vocational qualifications adhering to the National Qualifications Framework, while colleges and other training providers buy the right to deliver these qualifications to individuals with their quality monitored by the awarding organisation (Musset and Field, 2013). Over 20 000 courses are provided with qualifications offered by around nearly 160 different awarding organisations.

Despite the large number of courses offered, the provision of post-secondary vocational and education training (VET) is limited in size relative both to other countries (Figure 11) and to potential demand, which could potentially lead to a shortage of mid-level skills (Musset and Field, 2014). A simpler and larger VET system would ensure that young adults who are disengaged from general education are able to fully develop their skill potential and reach better quality jobs with higher incomes. By some estimates, the skill premium for a low-skilled upper secondary graduate of pursuing vocational education can be as large as 25%, even after controlling for other factors such as numeracy level, parental education, gender and age (OECD, 2016a).

Figure 11. Provision of post-secondary vocational education and training is limited

Percentage of adults aged 20-45 who have short-cycle professional vocational education and training as their highest qualification, 2012[1]



1. Data for the United Kingdom are calculated as the population weighted average of England and Northern Ireland.

Source: OECD (2014), "Skills Beyond School: Synthesis Report", *OECD Reviews of Vocational Education and Training*.

The authorities have announced plans to transform post-16 education following recommendations from the in-depth *Sainsbury Panel Report* on technical education. Through simplifying reforms to the current system, the existing thousands of vocational qualifications will be replaced by 15 "routes", with standards being set by employers and only one provider being licensed to offer qualifications in each of the routes, with a single institute in charge of approving apprenticeships. Although these streamlining reforms are welcome and closely follow earlier recommendations (OECD, 2015c), previous efforts to reform the VET system over the past two decades have been numerous and the results have been mixed, and in many cases have only added to the complexity of the system instead of simplifying it (SMC, 2017).

Employers have limited involvement in the VET system compared to other countries, but the new proposal aims to increase co-operation. Past initiatives in the United Kingdom to improve the skill set of the labour force have been strongly targeted at the public sector (OECD, 2013b), but a closer involvement of employers in the design and offering of VET programmes will help to ensure that these programmes fit regional needs. The new plans for the VET system are a welcome step in this direction as they emphasise closer co-operation with local employers, in particular small and medium enterprises, and better utilise the Local Enterprise Partnerships between local authorities and businesses. After a period of significant changes to policy, the current stability in the institutional architecture should be conducive to more engagement of local employers.

Limiting the variety of VET programmes does not need to reduce the flexibility of the system. Colleges already have the freedom to innovate and respond flexibly to the needs of individuals, employers and local communities, but constraints related to funding streams can be an obstacle to meet local employer needs and addressing emerging skills deficiencies (OECD, 2015a). Furthermore, courses and training often depend on national drivers such as funding schemes. With fewer programmes on offer, the (local) job prospects of each programme can be better gauged, which improves career guidance for students. In addition, it provides more insight in how close the local VET programmes that are offered meet the needs of local employers. Funding should increase in line with the expansion of VET

programmes, and provide the right incentives for businesses and students. The new plans for VET are receiving significant additional funding to accommodate a large increase in the number of students.

Safeguarding access to adult learning for low-skilled workers

For a large group of low-skilled workers, in particular school drop-outs, attending adult education is the most efficient way of strengthening skills, increasing social mobility and improving their productivity. However, low-skilled workers generally have very low participation in lifelong learning programmes which limits their opportunities to achieve these goals (OECD, 2013a). Of the many students that stop formal education before age 18, some have managed to find work, although often of low quality, but many remain jobless and struggle in the labour market to obtain the basic skills they need to gain employment. Nearly 15% of the 15-29 year-olds is not in employment, education or training (NEET), which is around the OECD average, and almost 40% of these have not finished upper secondary schooling. Even more than in other countries, many people in this group have cumulative disadvantages, which increases their vulnerability. For example, some 45% of NEETs live in a jobless household, compared to 7% of other youth, and the probability of living in a jobless household rises to around 55% for low-skilled NEETs (Figure 12; OECD, 2016c). The low participation in lifelong learning by low-skilled workers occurs despite financial incentives via existing policies to undertake these types of skills investment in the United Kingdom. The estimated marginal effective tax rates associated with lifelong learning and job-related training are low from an international perspective, and the United Kingdom has some of the lowest required post-training wage increases needed to recoup the costs associated with these types of skills investment (OECD, 2017b).

Despite the need to address learning opportunities for low-skilled NEET individuals, the budget for adult learning has fallen significantly in recent years, putting the provision of this type of education under pressure. Spending on core adult skills, including classroom and workplace based learning and adult apprenticeships for people aged 19 and over, fell by about 35% in nominal terms between 2009/10 and 2015/16 (AoC, 2015), and by close to 40% when accounting for inflation (Fullfact, 2015).

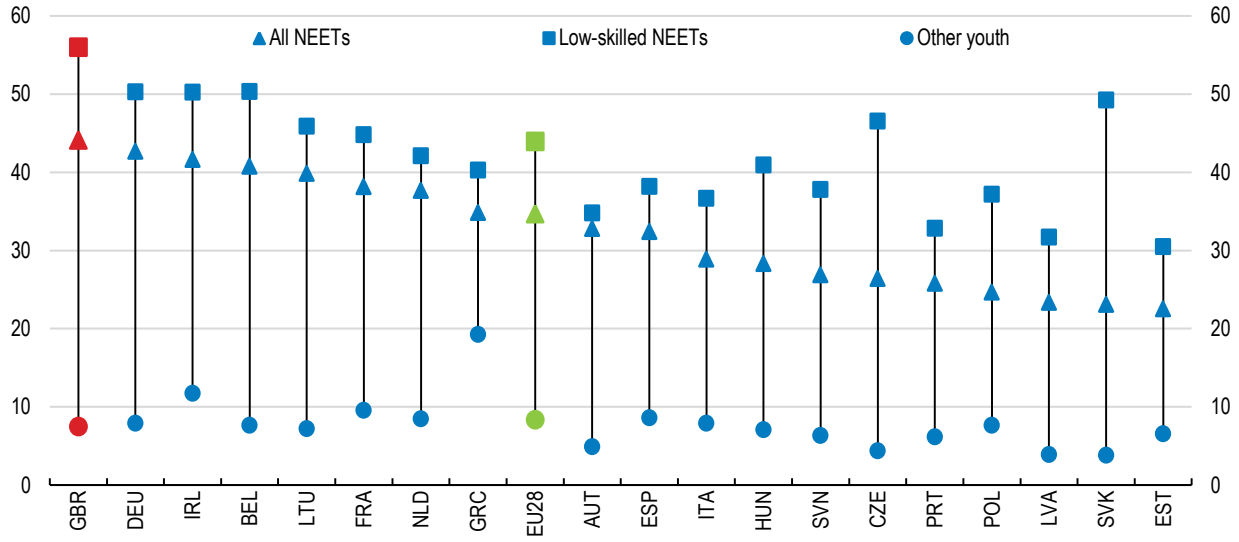
The central government is in the process of transferring control of the Adult Education Budget to local governments, with the budget powers set to be devolved to London by 2019-20 (Skills Funding Agency, 2016; HM Treasury, 2016). Devolving responsibilities should help to align local programmes to economic priorities and productivity challenges, although increased employer engagement will be crucial to improve the skills levels of those with very basic skills.

Some two-thirds of UK employers had arranged or funded formal training for any of their staff during a year, including training on or off the individual's immediate work position, and some 63% of staff participated (Figure 13; UKCES, 2016). The incidence of training has increased in recent years, in particular due to more off-the-job training provided in England. In general, employees in larger companies are more likely to receive training and the differences are important: some 70% of staff in firms with more than 250 employees participated in training compared to nearly 45% of staff in firms with fewer than five employees.

The government has introduced recent changes to the apprenticeship system in order to stimulate the take-up of apprenticeships and to improve the technical skills of both low- and higher-skilled individuals. Along with the new system, the government has recently announced a very ambitious target of 3 million new apprenticeships by 2020, and also a minimum number of new apprenticeships per year by every public employer, proportional to the size of the workforce (Amin-Smith et al., 2017). New apprenticeships in the private sector will be partly funded by a new Apprenticeship Levy on large employers. These large employers can use the funds they have paid in England to spend on apprenticeship training, while the majority of apprenticeship costs of small and medium-sized enterprises (SMEs) will be covered by the government.

Figure 12. NEETs, and in particular those with low skills, are likely to live in jobless households

Percentage of indicated group living in jobless households, persons aged 15-29, 2014[1]

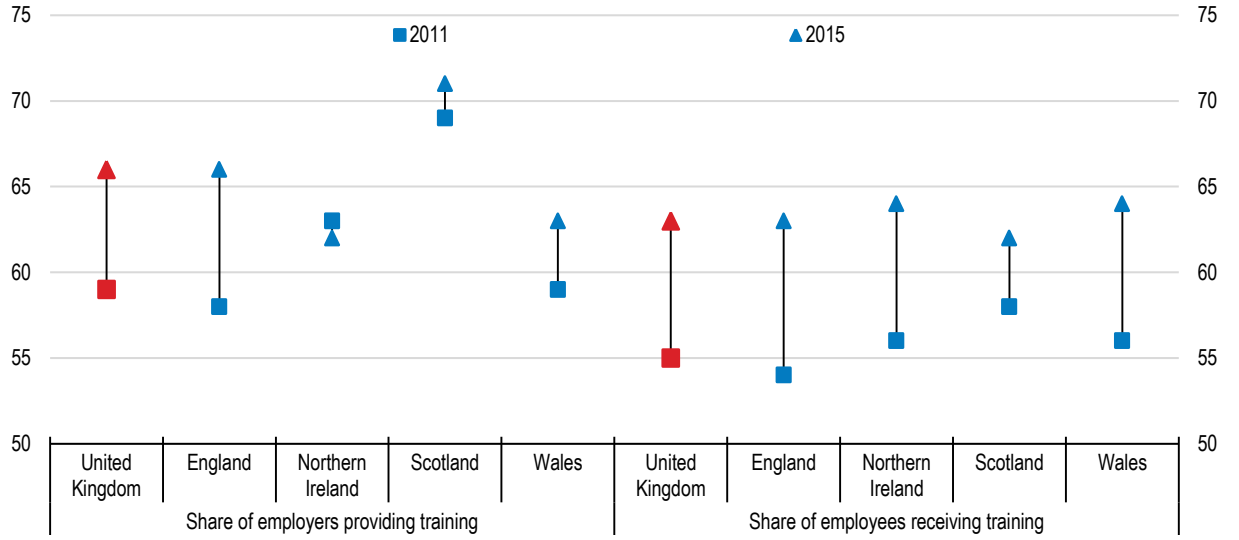


1. NEETs: Youth not in employment, education or training. The EU28 aggregate refers to the European Union.

Source: OECD (2016), *OECD Employment Outlook 2016*.

Figure 13. Training of employees has risen in recent years, in particular in England

Training provision by employers over the last 12 months, as a percentage of all employers/employees[1]



1. The population of the UK Commission's Employer Skills Survey comprises business establishments (as opposed to enterprises) in the United Kingdom with at least two staff (including both employees and working proprietors). Sole traders and establishments with just one employee (and no working proprietors) are excluded.

Source: UKCES (2012), "Employer Skills Survey 2011: UK Results", UK Commission for Employment and Skills, *Evidence Report 45*, July; and UKCES (2016), "Employer Skills Survey 2015: UK Results", UK Commission for Employment and Skills, *Evidence Report 97*, May.

The targeting of smaller business in the new system is particularly important for improving the productivity of low-skilled workers, given that SMEs tend to have lower skilled workforces than larger firms in both manufacturing and services industries (OECD, 2017c). The changes to the apprenticeship

system should increase the number of apprenticeships, specifically through the targets for public employers and the desire of large employers to recoup the costs of the levy. Going forward, it will be important that the government monitors the high quality of apprenticeships being offered by providers, and ensures that the new apprenticeships being undertaken by public employers meet their technical needs. Close monitoring is needed even more so as there are risks that employers could simply re-brand existing training in order to benefit from the new scheme, substituting existing on-the-job with off-the-job training programmes.

Subsidised training initiatives that promote an individual's choice in participating in lifelong learning and other training would improve the opportunities for lower-earning individuals to better meet ever-changing skill demands. A well-structured system would allow the co-payment of individuals, public authorities and employers to cover the costs of targeted training and lifelong learning programmes. The amount of financing and training courses made available could be targeted to address local skills needs. In order to target low-skilled workers, and to limit the overall costs of the scheme, participation could be restricted to workers who earn below a maximum amount of taxable earnings, or who have lower than post-secondary educational attainment. The recent *Taylor Review of Modern Working Practices* (DfBEIS, 2017) also recommends introducing such a scheme that could focus on individuals in receipt of Universal Credit payments. Similar training programmes have been introduced in other countries and have proven to be effective in improving the participation in training and lifelong learning of low-skilled individuals (CEDEFOP, 2009; Leckie et al., 2010).

Improving skills utilisation by reducing mismatches and improving job quality

The best way for strengthening one's skills is having a job. After initial education ends, the vast majority of learning is typically done while in employment even in informal ways (Borghans, 2007). Increasing job market perspectives for low-skilled workers (see below) is thus crucial in developing their skills. For that purpose, the first priority is that labour policies facilitate return to work.

A second priority is to make sure that existing skills are utilised adequately. A misalignment between the skills that workers possess and those that are used in their work can constrain innovation, limit the adoption of new technologies and ultimately restrict productivity improvements (Wright and Sissons, 2012). Management practices, work organisation, and labour market institutions play key roles in limiting the mismatch between the skill proficiency of workers and their skill utilisation at work (OECD, 2016c).

A third priority is avoiding the negative impact that poor job quality can have on the decision and the ability to upgrade one's skills. The job quality of low-skilled work has been deteriorating in the United Kingdom. Global economic integration increases the risk of worker displacement, as lower skilled individuals are not suitably equipped to benefit from the increasing rates of technological advancement and knowledge diffusion (OECD, 2017c).

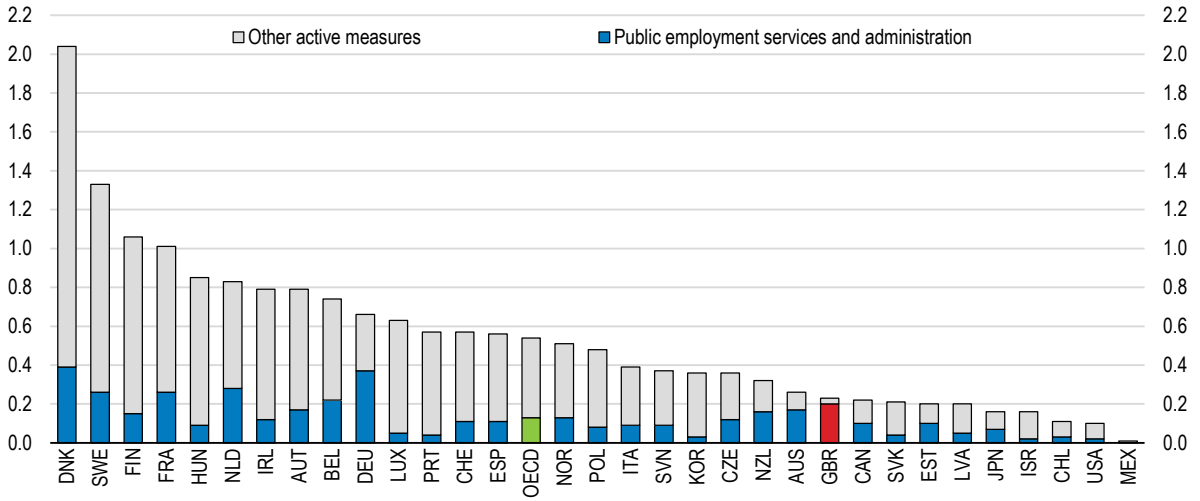
Encouraging employment participation

Activating the low-skilled unemployed, particularly NEET

Active labour market policies play an important role in reducing unemployment and increasing the employment prospects of low-skilled individuals in particular (Escudero, 2015). Currently, the United Kingdom has one of the lowest levels of expenditure on active labour market policies (ALMP) in the OECD, with the distribution of funds highly skewed towards support provided by Jobcentre Plus, with relatively low expenditure on more targeted activation strategies (Figure 14). Increasing such spending could also improve productivity, with higher levels of ALMP associated with higher levels of multi-factor productivity across OECD countries (Égert, 2017).

Figure 14. Spending on active labour market programmes is low

Public expenditure as a percentage of GDP, 2014[1]



1. Active labour market programmes include all social expenditure (other than education) which is aimed at the improvement of the beneficiaries' prospect of finding gainful employment or to otherwise increase their earnings capacity. Public employment services and administration includes placement and related services as well as benefit administration expenditure. Other active measures include Training, employment incentives, sheltered and supported employment and rehabilitation, direct job creation and start-up incentives. 2011 for the United Kingdom.

Source: OECD (2017), "Labour market programmes: expenditure and participants", *OECD Employment and Labour Market Statistics* (database), July.

The UK unemployment rate is currently at its lowest level in almost 40 years and the low level of ALMP expenditure may reflect in part the effectiveness of existing policies: lower unemployment due to previously jobless individuals re-entering the workforce would lead to lower expenditures. However, there is scope to bolster the assessment of existing policies and benefit delivery. The introduction of a more formal profiling procedure of individual job-seeker characteristics, in addition to the current interviewer assessment-based measure, would help in improving the matching efficiency and better targeting support. The assessment of the performance of individual Jobcentre Plus offices, taking local labour market conditions into consideration, would also raise the effectiveness of existing policies. Furthermore, increased decentralisation of delivery and planning decisions to individual JobCentre Plus offices and individual training providers would help to ensure that any increase in expenditures is targeted to meet local needs (OECD, 2014c).

Targeting youth should be a priority in assessing ALMP effectiveness, given the high level of NEET youth in the United Kingdom. Long spells of joblessness can also be particularly damaging for youth who tend to be more negatively affected through lower life-time earnings, lower well-being, a higher propensity to disengage from labour market activities and poorer mental health throughout the remainder of their lives (Bell and Branchflower, 2011 and Strandh et al., 2014). Enhanced monitoring and counselling services through Jobcentre Plus would limit the disengagement of NEET youth and improve the school to work transition, as job search assistance is considered to be one of the most effective policies for jobless youths (Caliendo and Schmidl, 2015). Career guidance programmes could also be expanded to provide information to individuals who already have work but are looking to transition to a different career or who face possible redundancies, facilitating changes in career paths to better meet evolving skill demands (OECD, 2017a).

The government's ongoing rollout of Universal Credit is a welcome step in simplifying the benefits system. The earnings-based tapering of benefits allows for a more seamless transition into the labour force,

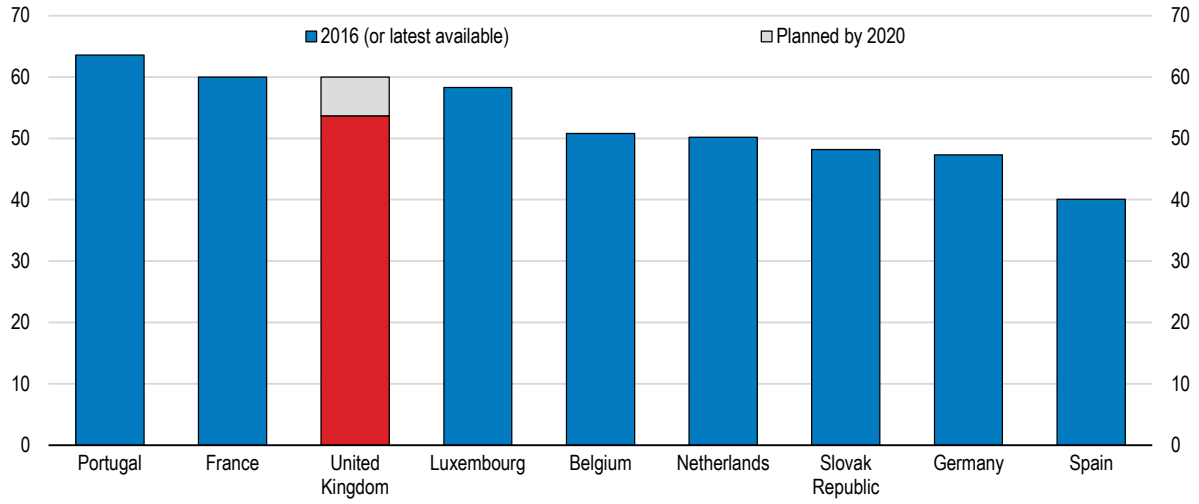
sparing new entrants a sharp reduction in benefits once they find paid work. The real-time earnings information of current and recent benefit recipients, collected in order to effectively implement the tapering of benefit payments, provides scope for a better assessment of the employment outcomes of individuals. These data will also provide a better assessment of the system's overall effectiveness compared to the earlier system when information on the end of a claimant's benefits was recorded with no ongoing assessment of employment outcomes.

Avoiding that too high minimum wages hinder the low-skilled

The UK authorities are currently in the process of increasing the National Minimum Wage, for those under the age of 25, and the newly introduced National Living Wage, for those 25 years and older. The impact on UK labour costs will be sizeable with recent estimates suggesting that approximately 12% of all employees will earn at or slightly below the National Living Wage by 2020 (Low Pay Commission, 2017). The government's stated goal of raising the National Living Wage to 60% of the median wage rate will result in the United Kingdom having one of the highest expected relative minimum wage rates across European OECD countries (Figure 15).

Figure 15. Planned minimum wage will be high relative to other European OECD countries

Monthly minimum wage as a percentage of median monthly earnings[1]



1. Data cover the industry, construction and services (except activities of households as employers and extra-territorial organisations and bodies) sectors. Data refer to 2015 for the Netherlands, Portugal and the Slovak Republic. Data refer to 2014 for Belgium, France and Spain.

Source: Eurostat (2017), "Minimum wages", *Eurostat Database*, July.

On the positive side, raising the statutory minimum wage provides incentives for firms to improve the skills use of existing workers which can help outweigh the possible negative impact on the employment prospects of new labour market entrants. Hirsch, Kaufman and Zelenska (2015) found that improving the skills utilisation of existing employees was an important adjustment by firms in response to rising labour costs associated with a gradual increase in the minimum wage. Improving the skills utilisation of employees will have an understandably positive impact on productivity growth while also having a positive impact on job satisfaction (OECD, 2016c).

However, the risks of negative side effects are not negligible. Apart from the likely small but negative employment impact, businesses may have the incentive to change the status of their workers from employees to self-employed contractors, in order to avoid the higher labour costs. This could lead to

increased casualisation of the labour force, and less job and income security for low-skilled, low paid individuals.

The negative impact of rising labour costs could be particularly strong on the hiring of new workers, especially young workers with limited experience and low-skilled workers. The employment impact of minimum wage increases on low-skilled and younger workers has consistently been found to be negative (Clemens and Wither, 2014; Neumark et al, 2014; Neumark and Wascher, 2007), although there is some evidence that the impact could be small (Allegretto et al, 2011; Dube et al, 2010). UK research shows that the overall employment impact of past minimum wage increases has been negligible, but with the impact on some low-skilled occupations being larger (Leonard et al., 2014). Close monitoring of the effects on low-skilled employment, which forms an essential part of the Low Pay Commission's remit, will be important, especially given the magnitude of the increase to already 15% and further planned increases to 60% of the median wage . The impact on smaller businesses and in sectors that employ a large proportion of low-skilled workers should also be monitored given that they tend to have a much larger percentage of employees who earn at or near the minimum wage (ONS, 2017).

The Low Pay Commission should maintain the flexibility in recommending the rate of the increase in the minimum wage rate. The 2020 target is subject to sustained economic growth and the Commission is asked to consider the pace of increases taking into account the state of the economy, the impact on employment and unemployment levels, and relevant policy changes. This flexibility should be used to respond to possible shocks associated with Brexit by delaying the 2020 target to a later date.

Reducing skill mismatches

Skills mismatches, whether they involve workers with less than sufficient skills for their work tasks or workers who possess a vaster skillset than needed for the current job, have a detrimental impact on labour productivity and economic well-being. Importantly, differences in skill mismatches across countries are related to differences in labour market and product market policy settings, suggesting that public policy plays an important role in reducing skill mismatches (Adalet McGowan and Andrews, 2015).

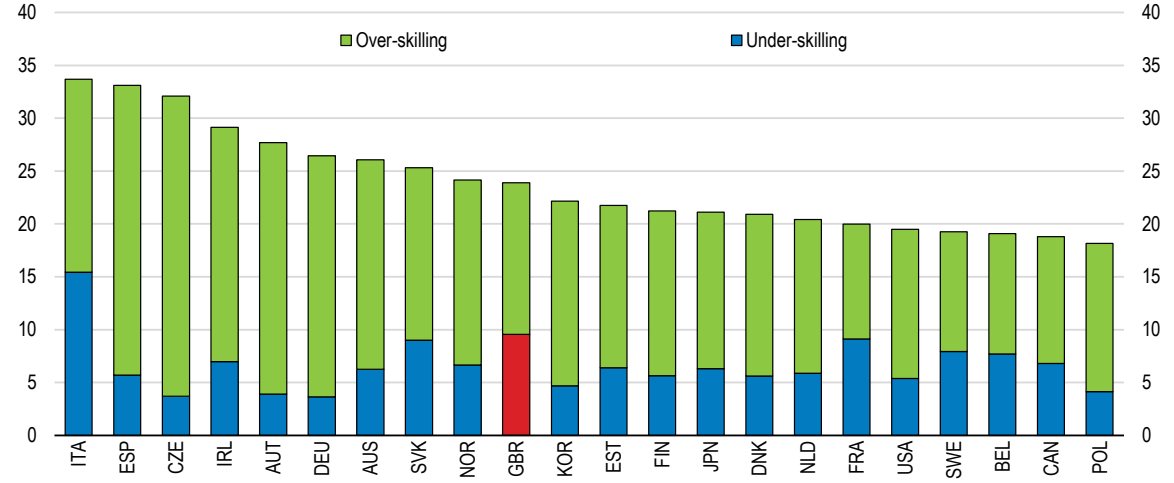
Skill mismatches are not negligible

The level of skills mismatch in the United Kingdom, based on calculations using PIAAC data, is above the OECD average although lower than in most of the larger European countries, with just under a quarter of workers either under-skilled or over-skilled in their current job (Adalet McGowan and Andrews, 2015). However, the share of UK workers who are under-skilled is one of the highest in the OECD, second only to Italy (Figure 16).

UK over-qualification rates, represented by the share of highly educated workers who are employed in occupations requiring a lower education or set of skills, have been on an upward trend over the past decade, increasing from around 13% of all employed individuals in 2006 to over 16% by the end of 2015 (ONS, 2016a). However, the share of workers who are under-educated for their current positions has been trending downwards over the same time period, although it has been broadly unchanged in recent years (Figure 17, Panel A). The combined trends have left the share of mismatched workers in the United Kingdom at their highest level since early 2005. Labour mismatch since the crisis has become more prevalent for part-time workers than those on full-time contracts. Compared to other countries, educational mismatches in the United Kingdom are quite high: both migrant and native workers have high over-qualification rates that are above the OECD average, while the gap between the two is below the OECD average (OECD, 2015d).

Figure 16. Skill mismatch, particularly under-skilling, is high in the United Kingdom

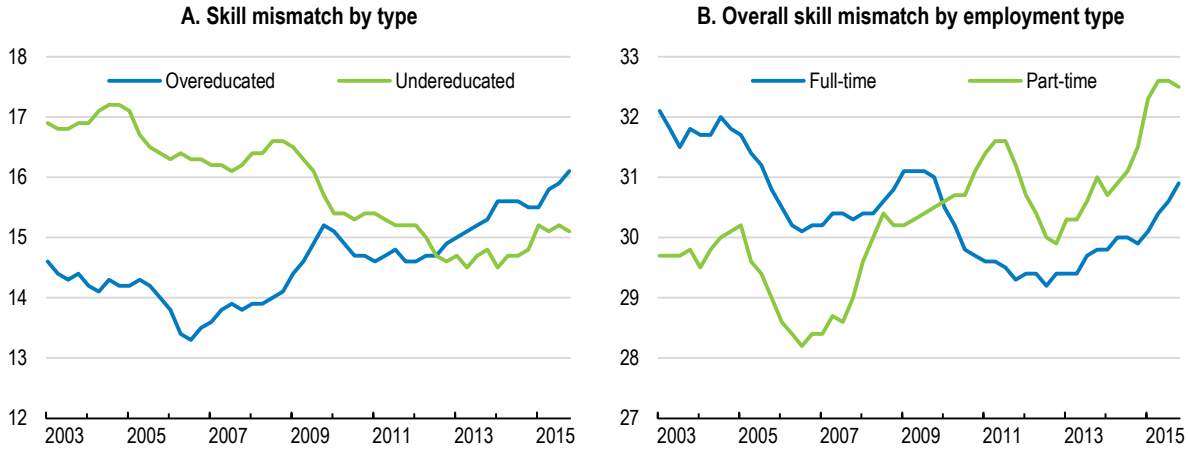
Percentage of workers with skill mismatch by type, 2011-12



Source: Adalet McGowan, M. and D. Andrews (2015), "Labour Market Mismatch and Labour Productivity: Evidence from PIAAC Data", *OECD Economics Department Working Papers*, No. 1209, OECD Publishing, Paris.

Figure 17. UK skill mismatch shifted towards overeducated and part-time employment

As a percentage of those in employment, 4 quarter rolling averages[1]



1. Data refer to the population aged between 16 and 64.

Source: ONS (2016), "Analysis of the UK labour market - estimates of skills mismatch using measures of over and under education: 2015", Office for National Statistics, March.

A mismatch of workers' skill-levels and their jobs can lead to increased job dissatisfaction, particularly for those workers who are over-educated, leading to a higher tendency to engage in counter-productive behaviour and making them more likely to look for alternative employment (Luksyte et al., 2011; Maynard and Parfyonova, 2013). High rates of over-educated individuals in lower-skilled occupations could also make it more difficult for lower-skilled workers to compete, particularly those that are young and relatively inexperienced.

Recent estimates suggest that there is a higher share of overqualified workers in occupations that require lower skills. In occupations that require at least a level 2 GCSE or equivalent, around 40% of employees on average have a higher education than is necessary for the job, which compares to almost

25% of employees that were over-educated in occupations that require the higher advanced level GCE (DfBIS, 2016). The same study also suggests that skills mismatches in England are in large part related to the actions of employers, who are not willing to invest in further skill development and more likely to implement short-term work-arounds to address gaps, including: requesting existing workers or ex-employees to take on more tasks; using short-term agency workers or; outsourcing work (DfBIS, 2016). The increasing use of temporary contracts, particularly zero hour contracts, could also be a reflection of these short-term employer work-arounds.

Policies to reduce skill mismatches

Making labour more mobile by limiting restrictions that workers face in moving to jobs where their skills are better utilised, as well as lowering the adjustment costs of employers will limit the skill mismatch. Increased labour mobility would help in addressing skills mismatches for workers across the skills spectrum without the detrimental impact on total employment. Increased labour mobility would impact low-skilled workers in particular, who face a higher probability of joblessness but with an offsetting rise in the probability of being hired to a new position (Cournède, Denk and Garda, 2016).

Regional mobility is also a particular problem for low-skilled workers who have a lower propensity than higher-skilled workers to relocate to regions with a higher demand for their skills (Bauernschuster et al., 2014). Differences between expected incomes between regions can be much narrower for low-skilled employees, reflecting lower productivity, than is the case for high-skilled workers (Moretti, 2011), which will lead to a much narrower job search for those with low-skills (Amior, 2015). When local labour market conditions deteriorate relative to other regions, lower-skilled workers are also less likely to relocate to more prosperous areas as they tend to be more generously compensated through social transfers and to benefit from falling rental costs (Notowidigdo, 2011). Improving both intra- and inter-regional transport infrastructure would better allow low-skilled workers to expand their targeted job searching areas, and reduce commuting times which could act as a barrier to working afar (Gal and Egeland, 2017).

Where lack of information on labour market prospects in different regions acts as a potential barrier for low-skilled individuals to re-locate, this could be better addressed through the formal education system. The reformed post-16 educational system, where students enter into academic or technical streams (see above), provides an opportunity to address local skills shortages by not only attracting technical stream graduates from local schools but also to provide information for potential workers in other regions, limiting the perceived risks associated with re-location. Information regarding local skills and training needs, provided by local businesses and councils, should be consolidated to provide students information on the UK-wide opportunities available for someone with their technical education, and not just in their local area.

Higher housing costs, particularly related to strict land-use rules, act as an important barrier for lower-skilled individuals to relocate to more prosperous higher-income areas (Ganong and Shoag, 2016). This is a particular issue for the skills development of children from lower-income families, as improving the performance of UK primary schools in affluent areas is associated with rising house prices (Hussain, 2016), which leads to more inequality of opportunity in obtaining a better education. Gal and Egeland (2017) examines in more detail the role that housing constraints play in holding back productivity.

Improving the quality of non-standard work

As in other OECD countries, the United Kingdom is experiencing an increasing share of the workforce entering into non-standard work, exemplified by the rising percentage of workers who are self-employed on flexible and temporary contracts that have no minimum number of work hours provisions

(zero-hours contracts). The limited job security associated with non-standard work has led to an increase in precariously employed workers and to increased risks of labour market dualism (OECD, 2015e).

The limited job security that characterises non-standard work impacts the low skilled disproportionately, given they represent a higher share of workers employed on a non-standard basis. Furthermore, rising shares of part-time and temporary employment have increased earnings inequality in OECD countries by nearly 20%, reflecting a greater negative impact on the productivity and wages of low-skilled than compared to higher-skilled employment (OECD, 2011).

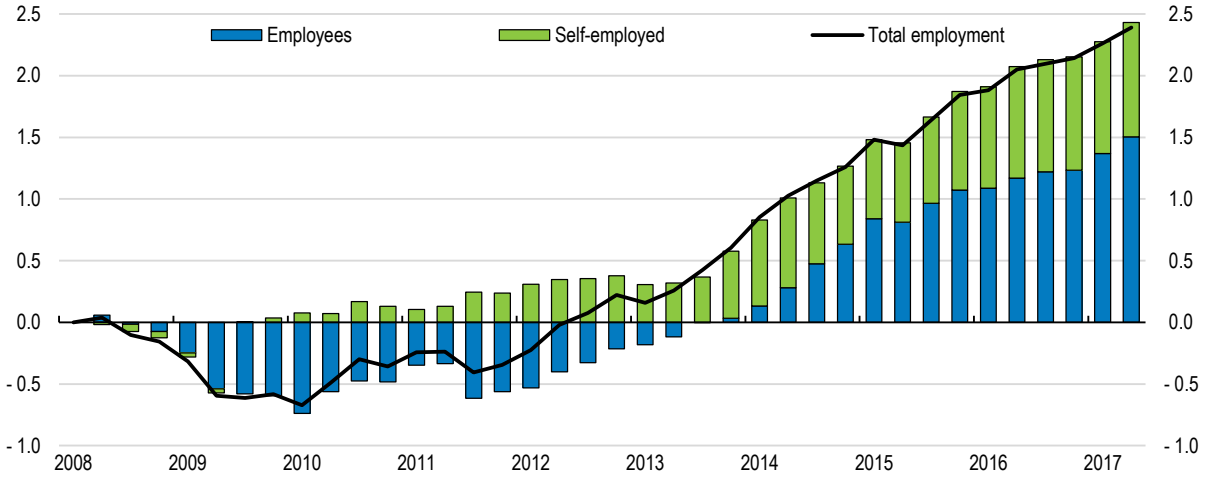
These non-standard work contracts play a key role in keeping the labour participation of those who want more flexibility in their working arrangements, and would have otherwise been out of the labour force. However, non-standard workers are generally paid less than their full-time counterparts, are precariously employed and have limited scope to transition to full-time permanent employment (OECD, 2015e). The pay gap with permanent employees, who have comparable jobs, differs across the different types of non-standard employment. According to recent UK estimates (Gardiner, 2016), after controlling for a number of personal and job characteristics, the pay gap for zero-hours contract workers and permanent agency workers was respectively about 6.5% and 2.5%. Importantly, the pay gap is larger for lower-skilled low-earning individuals; the gap widens to 9.5% for those at the bottom quintile of zero-hours contract workers and almost 4.0% for those in the bottom quintile permanent agency workers.

There is little incentive to further invest in improving the skills of existing workers, given the generally short-term and temporary nature of a large share of job placements. Furthermore, workers on temporary contracts may find it difficult to invest in their skills themselves, as the low relative pay and "on-call" nature of the work might mean that they do not have the resources or the time to commit into further training and education. There is evidence that temporary jobs often do not provide opportunities to develop skills further and that temporary contract workers use fewer skills than permanent workers (OECD, 2014d). Low-skilled workers run the risk of only finding low quality and low-paid temporary work, without being able to invest in the skills that would allow them to improve their productivity and earn higher incomes.

Self-employed workers make up the largest share of non-standard employment in the United Kingdom, with a large share of employment growth since the crisis accounted for by own account workers (Figure 18). The rising trend in self-employment in part reflects an increasing number of older workers re-entering the labour force after retiring from permanent employment (ONS, 2016b). Although a portion of self-employed are higher skilled individuals who want more flexibility and perhaps motivated by tax incentives, a share of self-employed are low-skilled individuals who cannot find permanent work and rely on low attachment, low security, task-based jobs. Given the self-employed status of these workers, they do not fall under minimum wage rules and tend to earn less than permanent employees doing similar tasks, further impacting job quality. Furthermore, the loss of economies of scale and scope that can be associated with organised businesses could lead to lower aggregate productivity. Indeed, there is some evidence that increased self-employment has a negative impact on aggregate productivity growth (Baldwin and Chowhan, 2003), although this could be outweighed by the positive benefits associated with increased specialisation in tasks that self-employed individuals perform (McKinsey, 2016). Regardless, the average earnings of a self-employed worker have been persistently lower than those of an employee in the United Kingdom, implying lower productivity of the former.

Figure 18. Self-employment has been an important contributor to employment growth

Contributions to cumulative changes in total employment since Q1 2008, in millions[1]



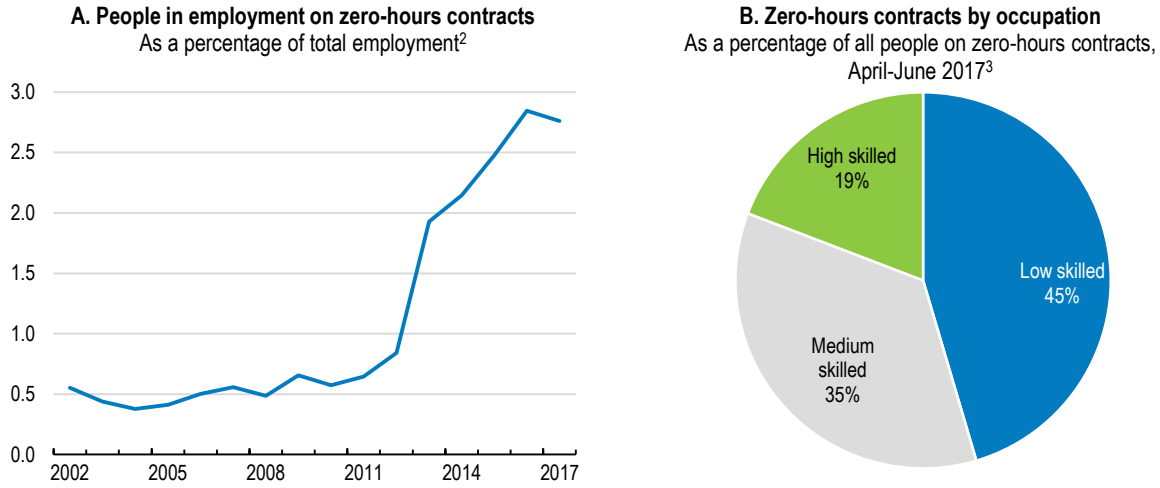
1. Data refer to those aged 16 and above. Total employment also includes unpaid family workers and government supported training and employment programmes.

Source: ONS (2017), "UK labour market: September 2017", Office for National Statistics.

Tax incentives play an important role in the ongoing rise in self-employment in the United Kingdom. Self-employed workers face a significantly lower labour tax wedge relative to employees, in a large part reflecting the lower National Insurance contributions paid by the former. The government should aim to reduce this gap to improve equity across different types of employment and sustain the financing of the social insurance system. To limit the avoidance of minimum wage rules by employers, the government should also introduce a narrower classification of self-employment to ensure that only truly independent entrepreneurs are classified as such. Possible criteria could include the provision of services to multiple clients or the ability to exercise a large degree of autonomy in their work, like independently setting their prices and the ways in which services are provided.

Despite the largest share of non-standard workers being accounted for by self-employed individuals, zero-hours contract usage is rising in importance. These types of contracts, which do not guarantee hours in advance, have prompted legislative changes in other countries to regulate their usage, and were one of the major issues addressed in the *Taylor Review of Modern Working Practices* (Box 3). Although the percentage of UK workers who state that they are employed under zero-hours contracts is still low, at nearly 3% of total employment on average in 2016, this represents a sharp rise from a 1% share in 2012, which to some extent may be explained by increased awareness about these contracts (Figure 19, Panel A). Zero-hours contracts provide a degree of flexibility for both businesses – with no obligation to provide a minimum number of work hours, or provide full benefits – and employees – with no obligation to remain attached to the employer. However, these contracts are primarily used in low-paying, low-skilled sectors, and usually given to younger workers who have limited bargaining power: more than a third of workers on zero-hours contracts are under the age of 24 (in part reflecting a concentration among those in full-time education) and almost half of all zero-hours contracts are in low-skilled occupations (Figure 19, Panel B). There is less incentive for training participation by the worker and training provision by the employer given the lower attachment and temporary nature of the contract, hindering the productivity of low-skilled workers.

Figure 19. Zero-hours contracts are on the rise, mostly affecting the low skilled[1]



1. Zero-hours contracts refer to labour contracts which do not guarantee any hours in a given week.
2. Last data point for 2017 refers to April to June 2017.
3. High skilled occupations include managers, professional and associate professional and technical occupations. Medium-skilled occupations include administrative and secretarial occupations, skilled trades and caring, leisure and other services. Low-skilled occupations include sales and customer services, plant and machine operatives and elementary occupations.

Source: ONS (2017), "UK labour market: August 2017", Office for National Statistics.

Box 3. Policies to address the prevalence of non-guaranteed work contracts

The recent rise of contracts with no guaranteed hours in some OECD countries has led to recent legislative changes and was one of the major motivations for the commissioning of the ***Taylor Review of Modern Working Practices*** in the United Kingdom (DfBEIS, 2017). The Taylor Review recommends different types of compensation for workers on flexible contracts, and updated legislation to better allow for conversion to more permanent employment. The proposed recommendations aim to address the one-sided flexibility that benefits the employer at the expense of the worker. Ireland and New Zealand have recently introduced reforms to address this problem, whereas a system for compensating casual workers in Australia for their lack of entitlements has been in place for some time. Below is a brief description of some the Taylor Review recommendations related to zero-hours contracts in the United Kingdom, and also descriptions of how these contracts are regulated in Ireland, New Zealand and Australia.

- **The Taylor Review of Modern Working Practices –** Some of the key recommendations to address the one-sided flexibility of zero-hours contracts include: Workers should be entitled to receive "rolled-up" annual leave pay; workers should be entitled to a conversion to a fixed contract after a period of one year in regular employment; and workers on a minimum wage who are required to work more than the guaranteed number of hours would earn a top-up on the wage for those excess hours.

- **Ireland –** Legislation was introduced earlier in this year to crackdown on the usage of zero-hours contracts and "if and when" contracts, the latter being more prevalent in Ireland and more comparable to UK zero-hours contracts; existing labour laws codify zero-hours contracts specifically as being one-sided, in that the worker has the obligation to be available for work (O'Sullivan et al, 2015). Changes to the legislation will effectively ban the usage of non-guaranteed work contracts except in cases of genuinely casual work, emergency coverage work, or short-term relief work. Also, if a worker is called into work but then not provided with the agreed upon number of hours, the worker is entitled to 3 times the minimum wage for hours that were not provided.

- **New Zealand –** following legislation introduced in early 2016, employers are now prohibited from requiring employees to be available to work for more than the previously agreed upon hours and they cannot cancel work at the last-minute without providing reasonable compensation. The number of

agreed upon hours must be clearly stated in the employment agreement. However, the worker and employer are allowed to mutually agree upon a contract that has no guaranteed hours, although the employer must provide an "indicative" number of usual hours if this is the case.

- **Australia –** in the absence of leave entitlements, workers on casual contracts receive a top-up or "casual loading" of 20-25% of their wage, which is specified in the industry and occupation specific "award" for the position in which they work. Workers also earn "penalty" rates which represent an additional wage top-up associated with work outside of regular working hours (including overtime, weekends and holidays) and also specific to the industry/occupation award for the position. A recently announced proposal seeks to entitle workers to ask for a conversion to a permanent contract after 12 months under a casual contract.

Source: DfBEIS (2017), "Good Work: the Taylor review of modern working practices", Department for Business,Energy & Industrial Strategy, July; and O'Sullivan, M. et al. (2015), "A Study on the Prevalence of Zero Hours Contracts among Irish Employees", Kemmy Business School, University of Limerick.

The flexibility of these contracts is desirable from a business standpoint, allowing for easier workforce adjustment in response to economic shocks. These contracts can also be attractive for workers who prefer increased flexibility over higher job security, including university students looking for work that can fit outside of their study schedule, or semi-retired workers who want to remain working but reduce their work-hours. However, lower-skilled and lower income workers do not necessarily benefit from the flexibility of non-guaranteed contracts and are limited in their ability to refuse work or negotiate for more hours for fear of job loss (DfBEIS, 2017).

Although the lack of guaranteed work leads to lower job security for all workers under these contracts, they are particularly detrimental to low-income workers who are limited in their ability to smooth consumption reflecting lower levels of financial saving. Any changes to the existing structure of the system for non-guaranteed work contracts should be targeted at improving the job and income security of low-skilled workers whilst limiting the disruption to workers who enjoy the flexibility of these contracts. Non-guaranteed work contracts can play an important role in genuinely short-term casual work or in seasonal jobs, where the variability of the hours provided might not necessarily be in the full control of the employer. In these short-term situations, however, workers are unlikely to receive paid sick and annual leave that they are entitled to (DfBEIS, 2017).

The government's banning of exclusivity clauses in zero-hours contracts in 2015 was a welcome change in addressing the challenges that some workers faced in looking for alternative employment if they were not receiving the desired work hours at their current employer. However, further steps can be taken to improve the fairness of zero-hours contracts and improving the job security of low-skilled individuals who are being hired, while also maintaining the flexibility of these contracts when used in temporary short-term-work. After a period of 3 months, workers should be entitled to receive enhanced employment rights related specifically to job security, including a minimum notice period for dismissal and some form of redundancy payment if they are dismissed. The latter entitlement is more beneficial than the similar rights available to permanent employees (who are not eligible for statutory redundancy pay until after 2 years of employment) and thus provides an incentive to convert zero-hours contract workers who are regularly employed by a business to a more permanent contract. The three month period is chosen to allow for zero-hours contracts to still be flexibly used for work that is temporary or short-term in nature.

To improve job security and incentives of low-skilled workers on zero-hours contracts, the government should review the regulatory, tax and benefit underpinnings of this non-standard form of employment. Workers and employers have incentives to limit the number of hours worked so that they fall below the primary and secondary earnings threshold (GBP 157 per week for 2017-18) at which National Insurance contributions start to be paid. Those earning below the primary or secondary thresholds may still be eligible for contributory benefits as their earnings are above the Lower Earnings Limit t (GBP 113 per

week for 2017-18) or because they are entitled to National Insurance credits. People on zero-hours contracts work 22 hours on average per week in their main job (ONS, 2017), which at the minimum wage of GBP 7.50 per hour is just above the primary threshold, suggesting tax disincentives to work longer hours.

Apart from tax-related incentives, many disincentives to work additional hours stemming from welfare are being reduced or removed through the introduction of Universal Credit. Universal Credit is gradually replacing the complex system of six legacy benefits where in some cases it is not in a claimant's financial interest to work additional hours. Further, the constant withdrawal rate under Universal Credit will avoid a cliff-edge reduction in benefits at a given level of earnings, meaning it should always pay more for a claimant to work more. Overall, the authorities should continue to review the interplay of taxes and welfare benefits on the incentives for individuals to work extra hours.

Recommendations to improve productivity and job quality of low-skilled workers

Developing the full skill potential

Key recommendations:

- Raise training and other incentives to recruit and retain teachers in disadvantaged areas and/or regions with high teacher shortages.
- Introduce individually targeted programmes for low-wage and low-skilled workers to improve lifelong learning opportunities.
- Prioritise funding to training and skills development of childcare staff.

Other recommendation:

- Monitor the quality of apprenticeships introduced in the new system; ensure that those undertaken by public employers match their skill needs.

Reducing skill mismatches and improving job quality

Key recommendations:

- Use existing flexibility in reaching the National Living Wage 2020 target in case of negative economic shocks.
- Increase financing and continue to promote the effectiveness of active labour market policies for youth who are neither in employment nor in education or training.
- Grant workers on zero-hours contracts enhanced job security rights after three months.
- Keep under review the interplay of taxes and welfare benefits to raise incentives to work more hours.
- Introduce tighter criteria to restrict self-employment to truly independent entrepreneurs.

Other recommendation:

- Provide consolidated UK-wide information on skill shortages to technical students under the new post-16 education system, incentivising relocation to areas where their skills are in demand.

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