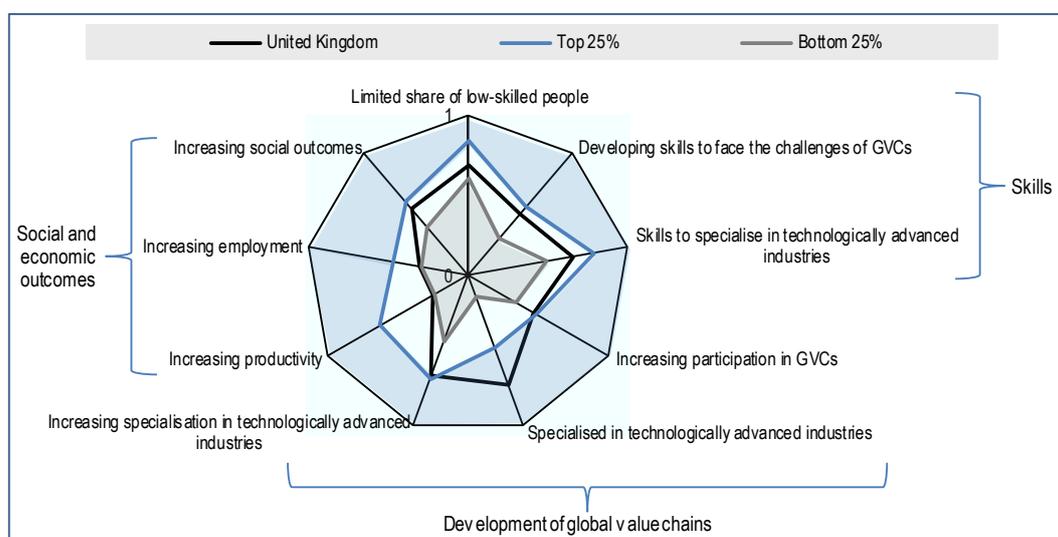## SKILLS OUTLOOK 2017
SKILLS AND GLOBAL VALUE CHAINS

How does the United Kingdom compare?

OECD Skills Outlook 2017

The *OECD Skills Outlook 2017* shows that skills matter for global value chains. The report presents new analyses based on the Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC), and the Trade in Value Added Database. It develops a Scoreboard on Skills and Global Value Chains with the objective to measure the extent to which countries have been able to make the most of GVCs through the skills of their populations in terms of skills, global value chains, and social and economic outcomes. It also explains what countries would need to do to specialise in technologically advanced industries.

Figure 1. **Scoreboard on skills and global value chains**

Source: OECD (2017), *OECD Skills Outlook 2017, Skills and Global Value Chains*, http://dx.doi.org/10.1787/9789264273351-en.

- Since the 2000s, the United Kingdom has increased its participation in global value chains slightly more than other OECD countries to reach levels close to the OECD average (Figure 1, Table A.1; OECD, 2017, pp. 41-44). One in three jobs in the business sector of the United Kingdom is sustained by foreign final demand, because of direct links with trade partners or indirect ones when products reach final consumers through exports of third countries (OECD, 2017, Figure 2.9).

- The United Kingdom specialises in several technologically advanced industries, particularly more complex business services, but the analysis shows that this specialisation pattern is not fully supported by the country's skills characteristics (Table 1; OECD, 2017, pp. 107-115). In

particular, the skills mix of its population is not well aligned with the skills requirements of these industries, making it difficult to maintain specialisation in these industries as competition intensifies, or to specialise in similar industries.

- While participation in global value chains and specialisation in complex business services have increased, productivity growth has been below the OECD average (Figure 1, Table A.1).

- As many other countries, to ensure that the United Kingdom benefits economically and socially from its participation in global markets, the country needs to equip its population with skills mixes of both cognitive and social and emotional skills, achieve more equity in learning outcomes, and encourage adults to continuously develop and adapt their skills. The Survey of Adult Skills (PIAAC) shows that 27% of adults are low performers in either literacy or numeracy skills and many have low readiness to learn (OECD, 2017, Figure 1.7). In addition, the mathematics scores of 15-year-old students have not improved since 2003 (OECD, 2016).

Table 1. **Specialisation opportunities in technologically advanced industries**

From the alignment of countries' skills characteristics with industries' skills requirements

		Medium/high-tech manufacturing			High-tech manufacturing			Business services (more complex)				
		Machinery and equipment n.e.c	Electrical machinery, apparatus n.e.c	Motor vehicles, trailers, semi-trailers	Chemicals and chemical products	Computer, electronic, and optical	Other transport equipment	Finance and insurance	Real estate activities	Renting of machinery, equipment	Computer and related activities	R&D, and other business services
specialisation in 2011	observed						○	○	○	○	○	○
	opportunity											
specialisation trend 2000-11	increased							●	●		●	●
	decreased	⬤	⬤	⬤	⬤	⬤	⬤			⬤		

Note: The dots in the table show whether countries have increased (black circle) or decreased (grey circle) their revealed comparative advantages over the period 2000-11. Revealed comparative advantages (white circle) show the extent to which a country is specialised in a certain industry within GVCs (or receives more income from its exports in this industry than other countries). Opportunities for specialisation are the results of empirical work developed in the OECD Skills Outlook 2017. Countries have an opportunity to specialise in an industry if there is a good alignment of countries' skills characteristics with the skills requirements of this industry. Several characteristics of skills shape countries' specialisation in GVCs. The extent to which these characteristics are aligned with each industry's skills requirement can be consolidated into one measure showing the specialisation opportunities of each country in each industry.

Source: OECD (2017), *OECD Skills Outlook 2017, Skills and Global Value Chains*, http://dx.doi.org/10.1787/9789264273351-en.

Key policy messages

Equip graduates with strong mixes of relevant skills and reliable qualifications

- Workers in the United Kingdom more frequently carry out ICT, managing, communication and marketing and accounting tasks on the job than workers in other OECD countries (OECD, 2017, Figure 3.3): these skills are highly valued by employers. To turn these skills into a source of comparative advantage, they need to be paired with strong cognitive skills and readiness to learn, which are lower in the United Kingdom than in many other OECD countries.

- To specialise in most technologically advanced industries, countries need pools of workers with qualifications that reliably reflect what they can do. About 25% of the United Kingdom's higher education graduates[1] aged 20-34 years-old have numeracy skills below level 2 (OECD, 2017, Figure 4.7). The relatively large skills discrepancies between advantaged and

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[1] Tertiary-type A only.

disadvantaged 15-year-olds translate into uneven learning outcomes for United Kingdom's adults.

- To equip all graduates with a strong skills mix, the United Kingdom needs to continue increasing the quality of its vocational education and training programmes by strengthening its work-based learning component.

Continuously develop and adapt adults' skills

- The United Kingdom's workers are more engaged in adult learning than on average in OECD countries participating in the Survey of Adult Skills (OECD, 2017, Figure 4.16).

- However, workers that withdraw from the labour market risk a vicious cycle in which they are less likely to benefit from training and therefore their skills remain weak. The participation rate in adult education for those who are not in the labour force is very low (22%). In addition, as in other countries, low-skilled adults are less likely than high-skilled ones to participate in adult learning. Policies need to better support all workers at risk of displacement and ensure quality of adult learning.

Make the best use of the skills pool

- Data suggest that best management practices are used in the United Kingdom but unevenly across firms (OECD, 2017, Figure 4.9). These practices are a powerful tool for using effectively the skills assets, adjusting them to new needs, and thereby giving a country a comparative advantage in GVCs.

Participate in the global network of education, training and innovation
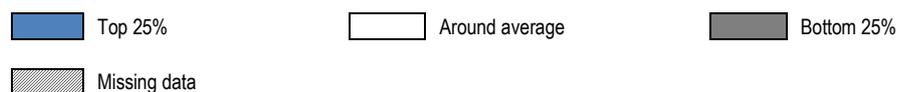
- The United Kingdom has been a frontrunner in the global network of education, training and innovation, producing research and innovation outputs relevant for the international market (OECD, 2017, pp. 144-45). The country's patenting activities run in collaboration with international partners exceeds the OECD average. The international mobility of scientific authors in the United Kingdom is also among the highest in OECD countries, along with the country's funding incentives for international co-operation.

- The United Kingdom has also been successful in attracting international students and researchers (OECD, 2017, Figure 4.13). In 2014, 42% of doctorate candidates and 37% of master students in the United Kingdom come from abroad.

Reference

OECD (2017), *OECD Skills Outlook 2017, Skills and Global Value Chains*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264273351-en.

OECD (2016), *PISA 2015 Results (Volume I): Excellence and Equity in Education*, PISA, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264266490-en.

Table A.1. **Scoreboard on skills and global value chains**

Legend: Top 25% (blue) · Around average (white) · Bottom 25% (grey) · Missing data (hatched)

	Skills			Development of GVCs			Economic and Social Outcomes		
	A limited share of low-skilled people	Developing skills to face the challenges of GVCs	Skills to specialise in tech. advanced industries	Increasing participation in GVCs	Specialised in tech. advanced industries	Increasing specialisation in tech. advanced industries	Increasing productivity	Increasing employment	Improving social outcomes
Australia	Top	Bottom	Average	Average	Bottom	Average	Average	Average	Average
Austria	Average	Average	Average	Average	Average	Average	Average	Top	Average
Belgium	Average	Bottom	Top	Bottom	Top	Average	Bottom	Average	Top
Canada	Average	Average	Average	Average	Average	Average	Average	Average	Average
Chile	Bottom	Top	Bottom	Top	Top	Average	Top	Top	Missing
Czech Republic	Average	Average	Average	Bottom	Average	Top	Top	Average	Average
Denmark	Average	Average	Average	Average	Average	Average	Bottom	Bottom	Bottom
Estonia	Average	Top	Average	Bottom	Average	Top	Top	Average	Average
Finland	Top	Bottom	Top	Average	Average	Bottom	Average	Average	Average
France	Average	Average	Average	Average	Average	Bottom	Average	Average	Average
Germany	Average	Average	Average	Top	Average	Average	Average	Top	Top
Greece	Bottom	Average	Average	Average	Bottom	Missing	Bottom	Bottom	Average
Hungary	Missing	Average	Missing	Average	Average	Average	Top	Top	Average
Iceland	Missing	Bottom	Missing	Top	Bottom	Average	Average	Bottom	Top
Ireland	Average	Average	Average	Average	Top	Average	Top	Bottom	Bottom
Israel	Bottom	Top	Average	Average	Top	Average	Average	Top	Average
Italy	Bottom	Top	Bottom	Average	Average	Average	Bottom	Average	Average
Japan	Top	Average	Top	Top	Average	Bottom	Average	Bottom	Average
Korea	Average	Average	Top	Top	Top	Average	Top	Average	Top
Luxembourg	Missing	Bottom	Missing	Top	Average	Average	Average	Top	Average
Mexico	Missing	Average	Missing	Bottom	Bottom	Bottom	Average	Average	Average
Netherlands	Top	Bottom	Top	Bottom	Average	Top	Bottom	Average	Bottom
New Zealand	Top	Bottom	Average	Bottom	Bottom	Top	Average	Average	Average
Norway	Bottom	Average	Top	Average	Average	Average	Average	Average	Average
Poland	Average	Top	Average	Top	Average	Top	Top	Average	Top
Portugal	Missing	Top	Missing	Average	Average	Average	Average	Bottom	Top
Slovak Rep.	Average	Bottom	Average	Bottom	Average	Top	Average	Average	Average
Slovenia	Bottom	Average	Average	Average	Average	Average	Average	Average	Average
Spain	Bottom	Average	Bottom	Average	Average	Top	Average	Average	Average
Sweden	Top	Bottom	Top	Average	Average	Average	Average	Average	Bottom
Switzerland	Missing	Average	Missing	Average	Top	Average	Average	Average	Average
Turkey	Bottom	Top	Top	Top	Top	Average	Average	Top	Top
United Kingdom	Average	Average	Average	Average	Top	Average	Average	Average	Average
United States	Average	Average	Average	Top	Top	Average	Average	Bottom	Bottom

Note: indicators are described in Box 1.1 of the report. The scoreboard shows for each sub-category, countries that perform in the top 25%, bottom 25%, and those around the OECD average. For instance, Finland is among the OECD countries that have the lowest share of low-skilled people, have not developed skills much to face the challenges of GVCs but have the skills to specialise in technologically advanced industries, and have not increased much their specialisation in technologically advanced industries. It performs around the average for the other sub-categories.