



SKILLS-FIRST APPROACHES

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Foreword

In recent years, discussions around the role and function of the world of work have become more and more prevalent, driven by the pandemic and the ongoing impact on the labour market.

This has led to businesses offering greater flexibility regarding working patterns, and employees rethinking not just how and where they work, but why.

The impact of recent events and periods of instability has therefore accelerated long-standing labour market trends towards a new normal of more frequent change.

Resilience and the ability to bounce back have always been common characteristics of UK businesses, from industry leaders to SMEs.

Despite some clear challenges, the emphasis on the importance of skills has remained. In order to drive economic growth, businesses understand that they must hire and retain individuals with the necessary skills.

As the world of work and technologies change, new skills are required to meet the needs of developing sectors, especially those in the digital and green industries of the future where there is so much exciting room for growth.

In the UK this trend is particularly advanced, with the UK second globally for green skills intensity.

Skillsets for existing jobs have changed by approximately 25% since 2015, and this number is expected to rise to 65% by 2030 as nascent industries continue to grow.

New technologies, such as artificial intelligence, increased specialisation and demographic shifts are accelerating these labour market changes – ultimately making less linear career pathways the norm.

However, in its current form both the skills and the labour market are full of missed opportunities.

Skills provision is typically designed around curricula suitable for the jobs of yesterday. This does not support workers to train for the jobs of today, nor those of tomorrow.

Furthermore, the way talent and opportunity is connected is inefficient and inequitable, often excluding workers who don't have the “right” paper-based credentials and disregarding relevant direct experience.

Consequently, many jobseekers find that they are not equipped with the skills needed for jobs on the rise.

Simultaneously, those that have the right skills often find it difficult to identify the roles for which they are best suited.

For business, they are struggling to find those with the requisite skills – due to simultaneous failures in both skills provision and approaches to hiring. Businesses are aware of this, with 88% recognising that highly skilled candidates are filtered out because they lack traditional credentials.

Skills-first approaches

Recent years have shown that the new normal involves rapid changes in UK labour markets. It is therefore crucial for future productivity and growth that the UK has an agile workforce that can sustain periods of economic upheaval and shift with the changing nature of work.

To deliver this agile workforce, newly available skills-based insights provide a significant opportunity. These insights support a skills- focused approach that will deliver improved training provision - supporting workers to upskill into new roles, as well as skills-based hiring - with candidates identified, assessed and ultimately hired based on their suitability for the role.

The UK government is already taking strides in this area with the Local Skills Improvement Plans (LSIPs), a landmark project that LinkedIn supported to drive skills-based approaches to training, which maps training provision to the demands of local employers.

However, we can go further, faster. **Adopting a skills-first approach to hiring, with hiring expanded beyond titles, companies, degrees and schools, would ensure the workforce is prepared for the jobs of the future and allow businesses to find the right workers for the jobs in demand.**

We have already seen companies start to do this: more than 50% of hirers on LinkedIn explicitly use skills data to fill their roles, up over 30% between 2021 and 2022.

The value of learning and skills development is becoming increasingly clear to our members as well. 338M skills were added to LinkedIn members' profiles, up 39% compared to 6% the year before (comparing 2022 to 2021). We're also seeing LinkedIn members add certifications to their profile at an accelerated rate, up 44% in August 2022 compared to August 2020. As we embrace the challenges of green and digital, skills will play a key role in enabling the necessary transformation of the labour market.

The LSIPs initiative demonstrates the growing awareness of the benefits a skills-first approach to training will deliver. Whilst LinkedIn's data insights in this report detail how adopting a skills-first approach to hiring will drive benefits for both workers and businesses.

To deliver this new approach to hiring, a cultural change amongst workers and particularly businesses that embraces skills-based hiring is vital, but skills policy has a central role to play in driving this.



Sue Duke
Global Public Policy, LinkedIn

Executive Summary

The Local Skills Improvement Plans (LSIPs) show how skills-first approaches to training will deliver benefits – both for individuals to upskill appropriately and for businesses to access the skills they need.

This report demonstrates how data insights support such approaches, but alongside this we also conducted analysis to assess the benefits a skills-first approach would deliver.

This shows that the benefits from a skills-first approach to hiring will

not only drive efficiency in the labour market, supercharging growth, but will also deliver improved generational, gender and educational impacts. Skills will provide the building blocks for us to address the future challenges in the world of work, in green and in digital.

However, to truly deliver a skills-first approach to hiring, policy-makers, funding providers and businesses must work together to support cultural and institutional changes that will support a new approach to skills.

FOR POLICY-MAKERS:

- o **Support skills-first approach:** Through formal guidance, Jobcentre Plus and government bodies encourage businesses and certain sectors to adopt skills- first hiring approaches
- o **Develop a comprehensive skills offer:** Create a Public Education Curriculum with a focus on the jobs of the future, driven by data - such as LinkedIn's regional skills gaps data - that shows the jobs and skills most in demand locally

- o **Develop partnerships:** Work with public education institutions to ensure funding - such as through the Lifelong Loan Entitlement - can be targeted to driving future skills needs in the green and digital jobs of the future
- o **Flexible funding:** Focus funding on flexible reskilling programmes - for example by reforming the Apprenticeship Levy to support additional in-work upskilling and lifelong learning

FOR BUSINESSES:

- o **Take a proactive approach to skills:** List the required skills needed for a job, with specific detail on the level and type of skill required
- o **Adopt a more skills-friendly approach:** This should apply across both internal promotions and external hiring – with certifications and broader skills training prioritised or at least on par with past job titles

A skills-first approach to training

The Government's Local Skills Improvement Plans (LSIPs) are driven by the welcome recognition that local skills provision should be aligned to the needs of local employers.

LINKEDIN'S ROLE

The LSIPs aligned perfectly with LinkedIn's commitment to better connect the global workforce with the necessary skills and jobs. We therefore liaised with the British Chambers of Commerce (BCC) to supply the initial eight trailblazer pilots with regionally delineated data that demonstrates how existing skills compare to skills demand locally.

The initial eight pilots were a success and the Government subsequently announced a nationwide roll-out of 38 LSIPs, which LinkedIn have worked with the Department for Education (DfE) to deliver.

LinkedIn's regional skills gap data has therefore supported the LSIPs to analyse local skills needs and offer real recommendations on how skills provision can better meet business demand.

LINKEDIN'S REGIONAL SKILLS GAP DATA

LinkedIn's insights show the shifts taking place locally in terms of job demand, the changes driving these shifts and the necessary skills needed for these jobs. We then map these requirements against current skills in the region to identify local skills gaps.

As Table 1 indicates, applying the LSIPs approach shows the regional differences and commonalities in the fastest growing jobs in the last five years. The fastest growing UK job titles nationwide provide some insights of note, but only by delving into the data can further actionable insights be obtained. ▶

Table 1: Fastest growing UK job titles	
1	Customer Success Consultant
2	Sustainability Manager
3	Product Operations Manager
4	Sales Development Representative
5	Chief Growth Officer
6	Enterprise Account Executive
7	Growth Marketing Manager
8	Cloud Engineer
9	Business Development Representative
10	Chief People Officer
11	Data Science Manager
12	Site Reliability Engineer
13	Data Engineer
14	Security Operations Centre Analyst
15	Workplace Coordinator
16	Machine Learning Engineer
17	Import Coordinator
18	Cable Technician
19	Software Engineer
20	Renewal Manager
21	Product Analyst
22	Private Equity Associate
23	Head of Rewards
24	Data Governance Manager
25	Risk Management Associate

LinkedIn Jobs on the Rise Report, 2023

Skills-first approaches

When using the regional skills gap data to show the fastest growing jobs each region, it becomes clear that one in five of the fastest growing jobs across the country were digital and tech roles. Indeed, over ten times more members have added AI skills to their profile in 2022 compared to 2016.

Looking in more detail at the specific tech roles that are in-demand, and the underlying skills needed for them, gives a clear indication of the skills that should be prioritised by policy-makers when providing skills training locally:

- **Job title: Social Media Manager**
Top skills: Social Media Marketing, Instagram, Digital Marketing
- **Job title: Data Scientist**
Top skills: Data Science, Machine Learning, Python
- **Job title: Data Engineer**
Top skills: Apache Spark, Hadoop, Python
- **Job title: Data Analyst**
Top skills: SQL Data Visualisation, Tableau

Considering other relevant sectors, recruitment is also particularly well represented across the country, with 3 out of 20 of the most frequently appearing jobs in this industry.

Not only is the ‘Recruiter’ title the most common found across regions, ‘Recruitment Advisor’ and ‘Recruitment Coordinator’ also appear frequently, highlighting that skills supporting these jobs should be prioritised to address current skills gaps.

Similarly, customer facing roles - including ‘Server Assistants’ and ‘Food and Beverage Servers’ - are in demand across the UK, demonstrating the broad importance of these industry sectors.

The regional skills gap data therefore highlights the commonalities across regions – giving a broad overview of those jobs growing nationally and the necessary skills to support each. This supports with designing skills-first approaches to training provision, ensuring training appropriately maps to those jobs most in demand. ▶

Rank	Job Title	Frequency of appearance in Regional Top 20 lists (out of 49 regions)
1	Recruiter	35
2	Supply Chain Associate	34
3	Material Handler	34
4	Brand Associate	33
5	Server Assistant	25
6	Laboratory Assistant	24
7	Legal Assistant	20
8	Food and Beverage Server	19
9	Business Development Representative	18
10	Content Producer	17
11	Social Media Manager	17
12	Data Scientist	16
13	Recruitment Advisor	16
14	Healthcare Assistant	14
15	Data Engineer	13
16	Recruitment Coordinator	13
17	Data Analyst	11
18	Strategic Partnerships	10
19	Supply Chain Coordinator	10
20	Social Media Coordinator	10

Skills-first approaches

It also provides an actionable framework to focus on particular occupations that need to be addressed. For example, in the Hertfordshire LSIP, LinkedIn data shows a need to focus on advanced engineering, but also skills in other sectors which could enable new people entering advanced manufacturing.

The regional skills gap data demonstrates the significant differences that exist between regions, including that:

- When considering the proportion of existing skills against the skills needs in a local area, London is distinctly more balanced across all job sectors than any other region in the country.
- While hiring in the arts and design sector has unanimously declined across the country, there is a particular drop in East Sussex and London, which are experiencing a decline of -1.68% and -1.45% respectively.

- Within the IT sector, there is a national demand for data engineers. However, these skills are particularly in demand in the traditional 'levelling up' zones, including the West Midlands, Manchester and Northumberland. Consequently, LinkedIn insights presented in the West Midlands & Warwickshire LSIP demonstrate that there is a increasing demand for digital skills in the region, as evidenced by the top 20 in-demand jobs.

At a granular level, what the regional skills gap data therefore provides is an evidenced indication of the skills that should be prioritised to support local businesses in a set area.

Our regional skills gap data therefore supports a skills-first view at the training level, enabling training provision to be mapped to employer need.



A skills-first approach to hiring

Historically, hiring has relied on insufficient and unequal signals to evaluate talent and predict success - for example, who you know, where you went to school and who your last employer was.

However, the skills insights that are now available demonstrate how this can be changed for the better.

A skills-first approach to hiring, with decisions taken based on the skills people have and the skills a role demands, will create a transparent job matching process that drives better outcomes for employers and workers.

An increasing number of companies are already adopting this new approach by utilising LinkedIn's skills insights to identify candidates, with more than 50% of hirers on LinkedIn explicitly using skills data to hire.

To determine the impact a skills-first approach to hiring would deliver we have created new career pathways data, demonstrating the implications of adopting a skills-first approach to the labour market in practice. This data demonstrates that a skills-first approach would support with:

- Hiring hard-to-fill roles by expanding the talent pool
- Creating opportunity for new groups of workers
- Enabling life-long learning and career development for workers of all ages

However, taking a skills-first approach can also yield dividends in addressing the medium-term challenges facing the labour market, specifically the need to transition to a green workforce and the changes being brought about by the advent of generative AI. 

The benefits of skills-first hiring

Our analysis assessed the impact of skills-first hiring by comparing: (i) the number of eligible candidates if hiring is conducted based specifically on past job titles; and (ii) the number of eligible candidates a skills-first hiring approach would deliver.

This demonstrated that the benefits in taking a skills-first approach to hiring were significant. Not only would it result in a substantial increase in the number of eligible candidates, but would have a positive impact on the gender balance of candidates, provide access to candidates from broader educational backgrounds and support younger people to enter the workforce.



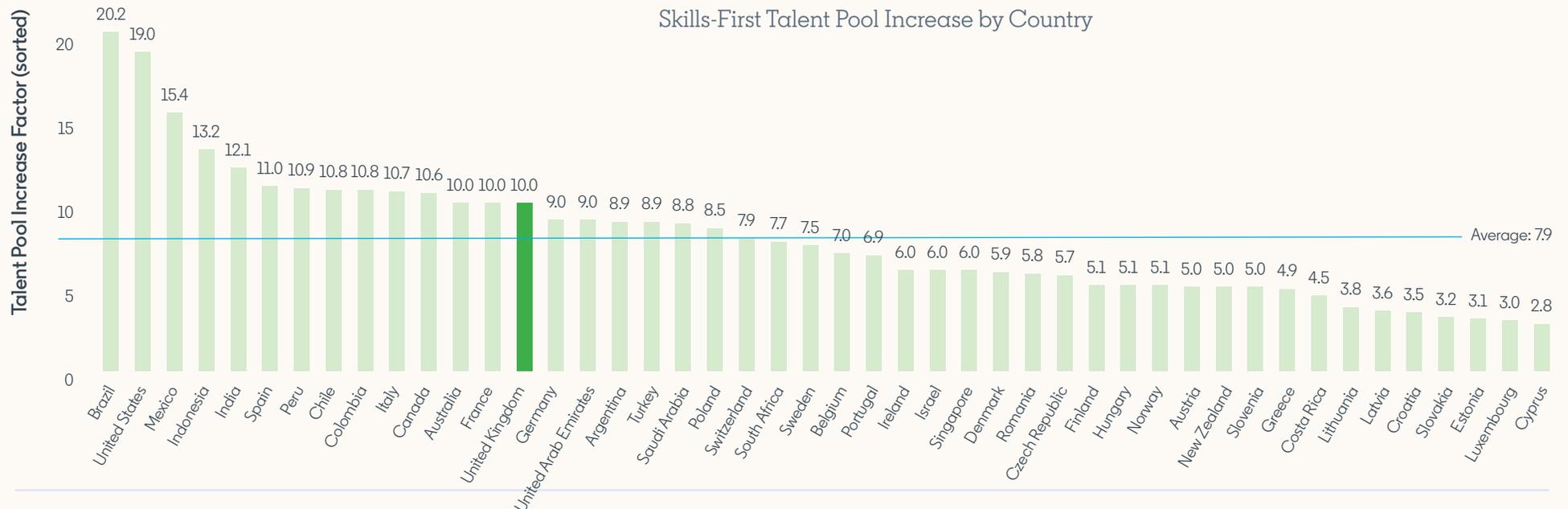
Skills-first approaches

OVERALL IMPACT

Skills-first hiring would drive a 10x increase in the number of eligible candidates for roles in the UK. It is notable that the UK also performs better than the global average in this area, demonstrating the real benefits this would deliver in terms of expanding the talent pool.

Furthermore, skills-first hiring would support both businesses and workers: a broader talent pool would lead to less in-industry competition for the same small pool of candidates; and drive more focused hiring as businesses target the necessary skills rather than focusing predominantly on past titles.

And for workers, this would remove current tendencies and biases in favour of past job titles, connections or roles. Instead, this approach would focus on the fundamental prerequisites for an advertised job - the skills needed to do it.



Skills-first approaches

SECTOR AND ROLE-SPECIFIC IMPACTS

A skills-first approach would also have an outside impact on certain individual sectors, with this especially pronounced in sectors that are currently struggling to recruit staff.

A skills-first approach would deliver significant increases in the number of candidates available in Hospital and Health Care: 8.5x; Education: 13.6x; and Accommodation: 17.4x.

As a result, not only would skills-first hiring benefit all industries by providing a broader talent pool, it would particularly benefit many of those industries that have experienced historically tight labour market conditions.

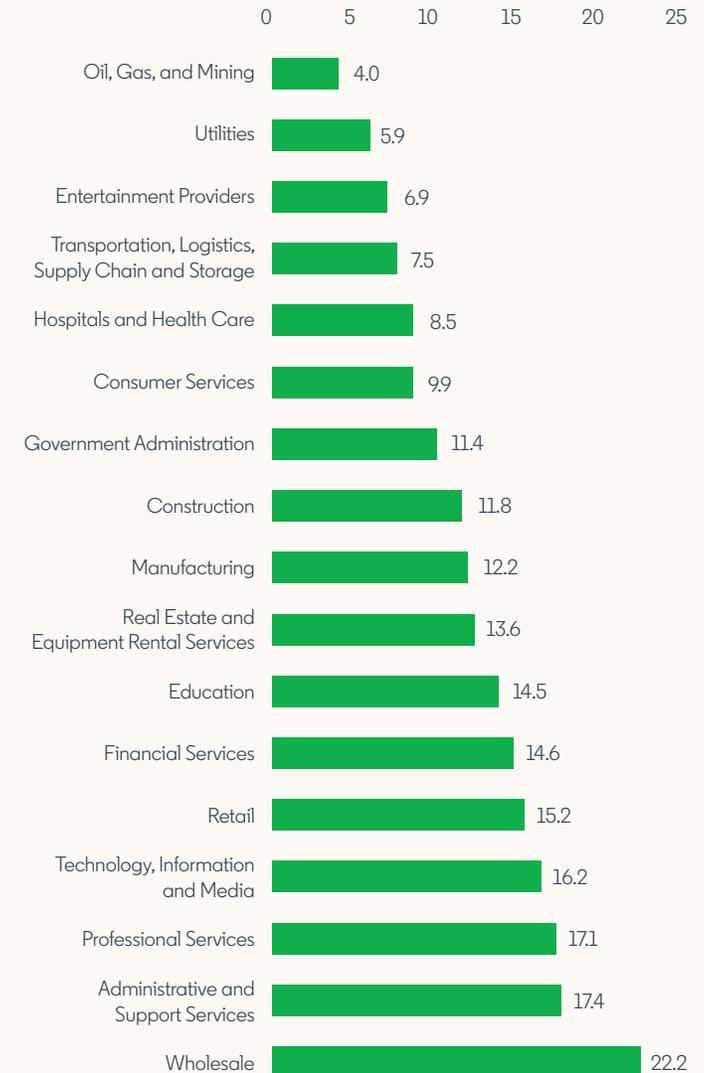
At a more local level, the LSIP report for Hertfordshire found there were specific skills gaps in advanced manufacturing and operations and logistics. The Warwickshire LSIP found similarly for digital skills. As this chart demonstrates, a skills-first hiring approach would better support hiring and the size of the talent pool in each of these sectors.

HEALTHCARE - CASE STUDY

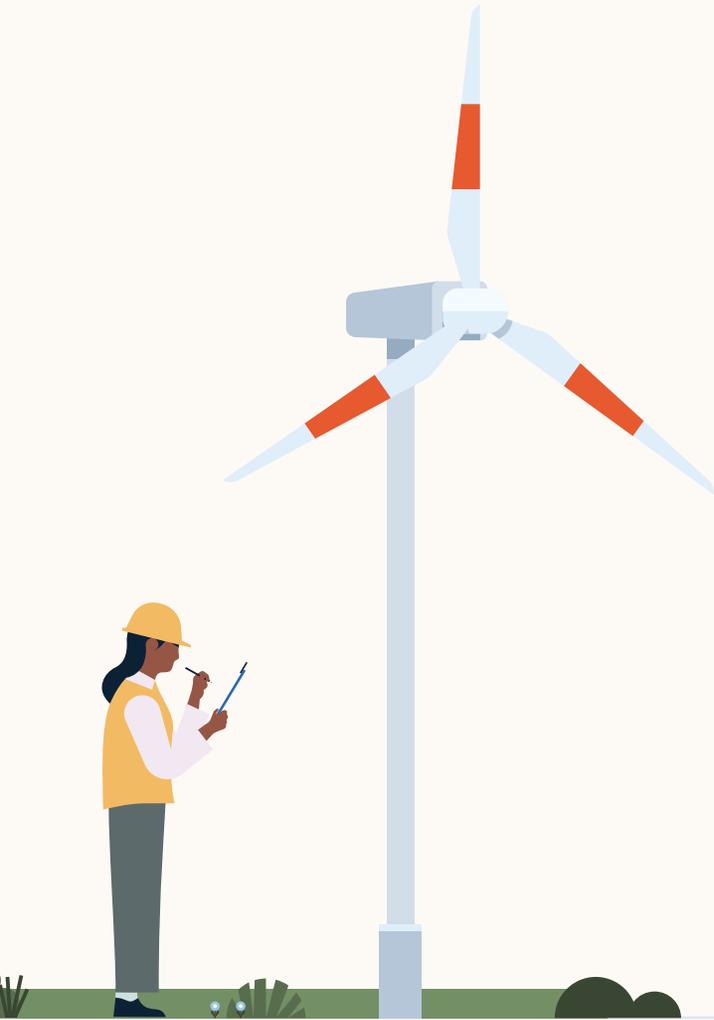
For example, a business recruiting a Healthcare Assistant by searching for candidates that previously had been a Healthcare Assistant could get 20 potential candidates.

However, if the business used a skills-first approach to hiring that assesses whether a candidate has the necessary skills to be a Healthcare Assistant, the business could have 170 possible candidates to chose from.

Sector-specific impacts



Skills-first approaches

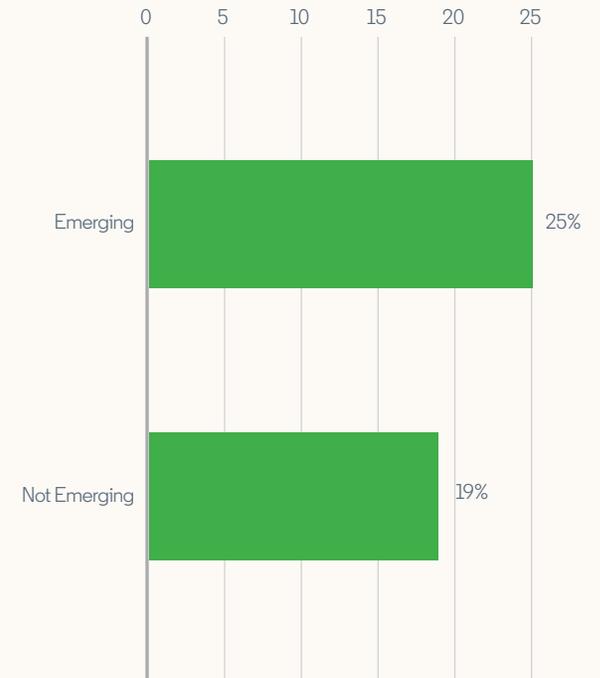


The UK's emerging roles, such as those in the green energy sector, would be particularly supported by a skills-first approach, with a 25% greater impact on emerging roles than across all roles.

We are seeing this on the platform, as although there is a declining fossil fuel industry there has been an 11% increase in workers in the automotive sector including green EV skills on their profiles, with EV infrastructure increasing from 5% to 7%. The UK also performs better than the global median for finance workers with green skills, with 7.6% compared to 6.8%.

We have also seen jobs like Waste management specialist, Solar consultant and Energy auditor be top hires with no prior green experience. This demonstrates the importance of skills-first hiring when it comes to such roles, as the nature of emerging roles means that many of these are in high-growth companies and sectors, and it is also in many of these roles where there is the most demand and the tightest labour market.

Impact for on the rise roles





Generation X	born	1965 - 1980
Millennial	born	1981 - 1996
Generation Z	born	1997 - 2012

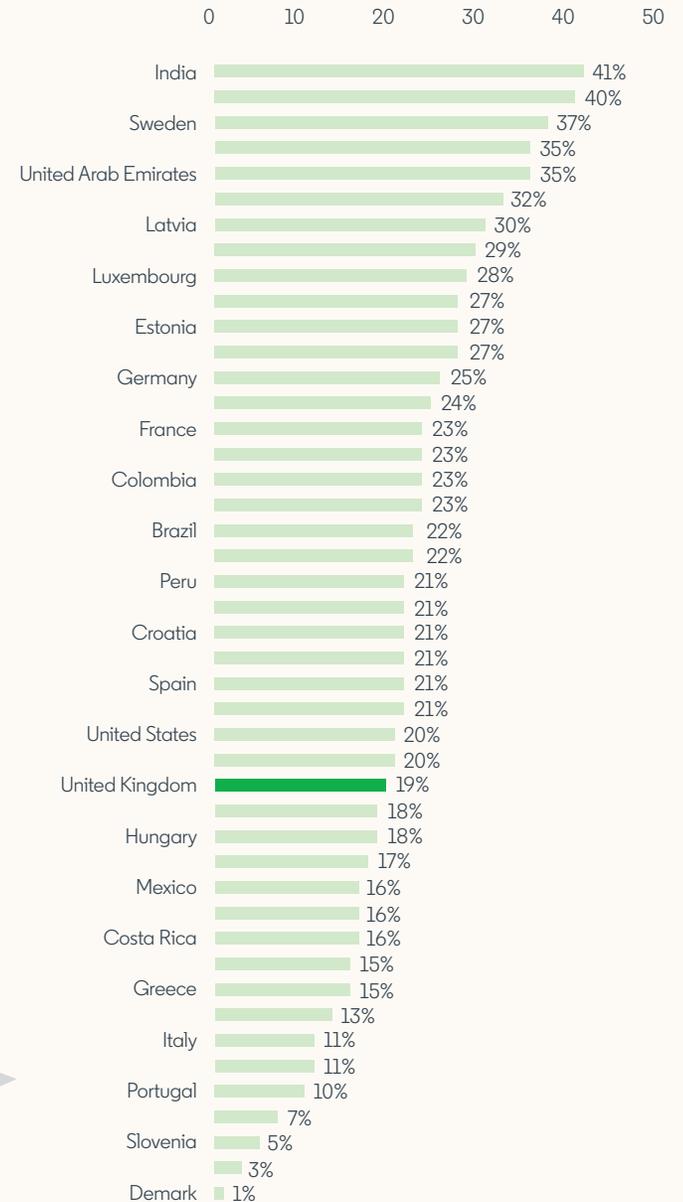
WORKFORCE DEMOGRAPHIC IMPACTS

The impact of a skills-first approach would differ between individual generations. Globally, this would increase the talent pool for Gen X workers by 8.5x, for Millennial workers by 9x and 10.3x for Gen Z workers.

In the UK, the impact on Generation Z candidates would be 19% larger than on Generation X. This approach would therefore expand opportunity across generations, ensuring that younger candidates are not ruled out by virtue of not having had a specific role or not having certain personal connections. Instead, this would help ensure that all candidates are considered based on the skills that they could offer to the role in question.

More broadly, in the longer-term a skills-first approach could support younger workers to take a more flexible approach to their careers. This would both support individuals to take ownership of their own skills journey, whilst better ensuring that the workforce of tomorrow can be more resilient to changing labour market conditions.

Impact by generation – Generation Z v Generation X

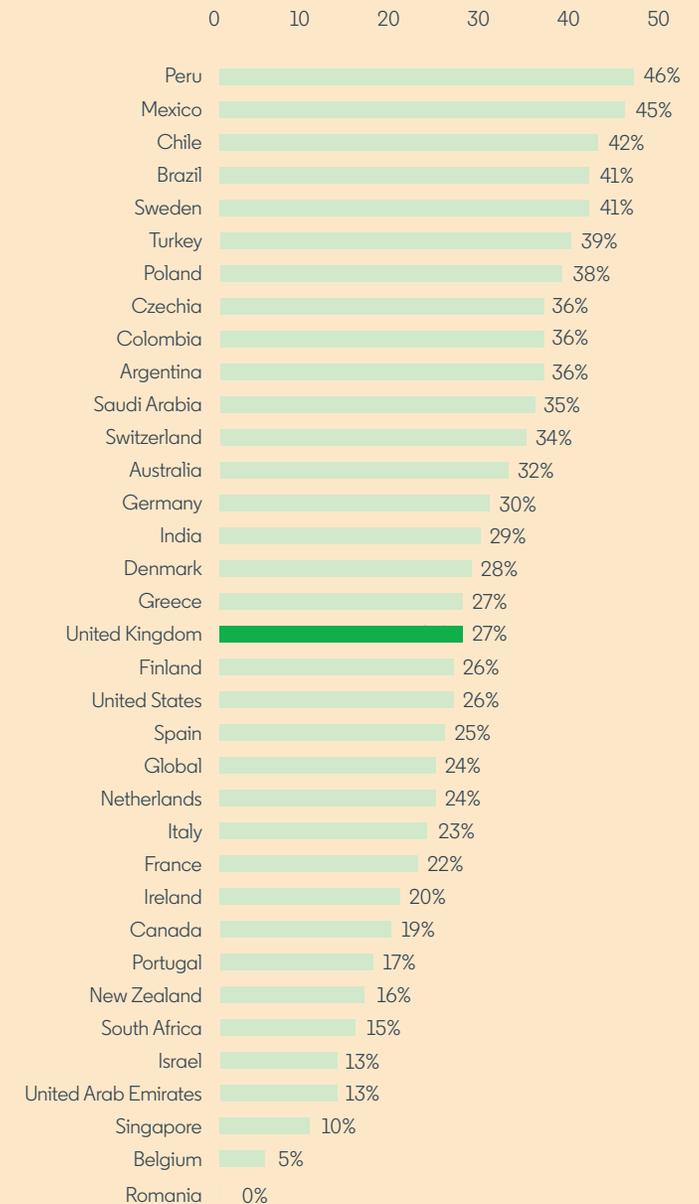


Skills-first approaches

Female representation in the workforce remains a challenge, particularly at more senior levels. However, skills-first hiring would help to address this. In the UK, skills-first hiring would have a 27% greater impact on women than men, significantly expanding the number of women that would be treated as prospective candidates for an available role. This would therefore support with driving gender balance across the workforce.

In tandem with skills-first hiring, employers can do more to support gender balance across hiring practices. Transparency in the hiring process, with skills clearly listed in the description, would support women to apply, as women typically set a higher self-qualification bar than men. This is evidenced by broader data which demonstrates that if jobseekers are shown how their skills overlapped with a job posting, the increase in women versus men applying was 1.8x, which then had a similar impact on hiring outcomes.

Impact by gender – Women v Men



Skills-first approaches

Finally, diversity in hiring practices in relation to educational attainment would also be improved. Globally, a skills-first approach increases the talent pool of workers without bachelor's degrees by 10% more than for workers with degrees (8.5x compared to 9.3x). In the UK, this impact is particularly pronounced, with candidates without degrees impacted 34% more than those that do have a degree.

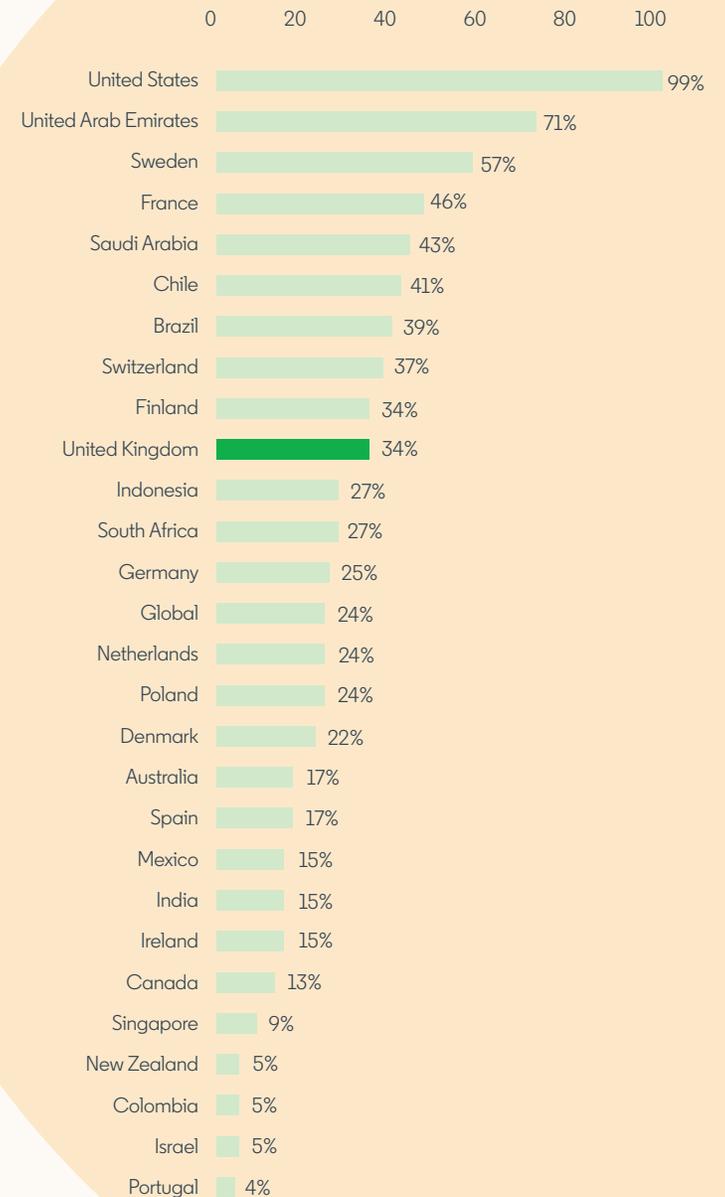
Considering the skills needed for a job – rather than simply titles and educational achievements – will further support those that have taken alternative routes into their career and award those that have gained relevant skills during this journey.

This has never been more relevant than now, given the challenges faced in enabling transition to a low-carbon economy. As green skills are more sought after by employers, there is a key shift towards their adoption across all sectors.

Sustainability in finance is not just a challenge that needs to be grappled with in the medium term. Almost 8% of LinkedIn members in the UK finance sector have green skills (ahead of the global median of 6.8%). Similarly, the shift towards electric vehicles has necessitated a focus on green skills in the auto industry – workers with at least one green skill who work in auto in the UK now make up 7% of members, compared to 4% five years ago.

Longer term this will also support people to take a more flexible approach to their careers, with more attention placed on ensuring they have the necessary skills needed to succeed. Nowhere is this more evident than when looking at the green jobs that are being hired (with no prior green experience), such as Waste management specialist, Solar consultant and Energy auditor.

Impact by qualifications – no bachelor degree vs bachelor degree



Recommendations: Delivering skills-first hiring in practice



A skills-first approach to hiring will increase opportunities for workers now, ensure critical parts of our economy remain suitably staffed and future proof our labour market for the jobs of the future.

However, delivering this requires a cultural shift across the economy, with businesses and workers adopting a more flexible approach to how skill and job requirements are viewed. For policy-makers there are a number of clear steps that could be taken to advance progress in this area and work towards a skills-first hiring model.

For policy-makers:

Support skills-first approaches:

The Government has an array of tools to support businesses to adopt skills-first hiring approaches:

- o formal DfE and DWP guidance, Jobcentre Plus and Government bodies could encourage employers to adopt skills-first practices; and
- o legislation could mandate reducing education requirements, except for where legally mandated, on government job opportunities.

Develop a comprehensive skills offer:

Create a Public Education Curriculum with a focus on the jobs of the future, informed by data points demonstrating the fastest growing jobs and industries in regions. This should encompass:

- o future proofing national skills frameworks to ensure these jobs are prepared for;
- o including emerging job skills in the design of new and existing structures of adult Higher Vocational Education, reskilling and non-formal skill programmes.

Provide funding for:

- o reskilling initiatives focusing on the fastest growing skills;
- o lifelong learning opportunities, building off the Lifelong Loan Entitlement so that employees can upskill throughout their careers;
- o initiatives that more flexibly enable workers to retain and upskill - for example by reforming the Apprenticeship Levy, with funding able to be spent on a wider range of in-work training.

Develop partnerships:

Work with public education institutions to ensure funding schemes target in-demand skills, with this based on data insights that show employer needs. This could involve providing employers with additional allowances or discounts from skills funding pots for skills training that:

- o meets local skills needs;
- o supports the skills needed for the jobs of the future in green and digital industries.

For businesses:

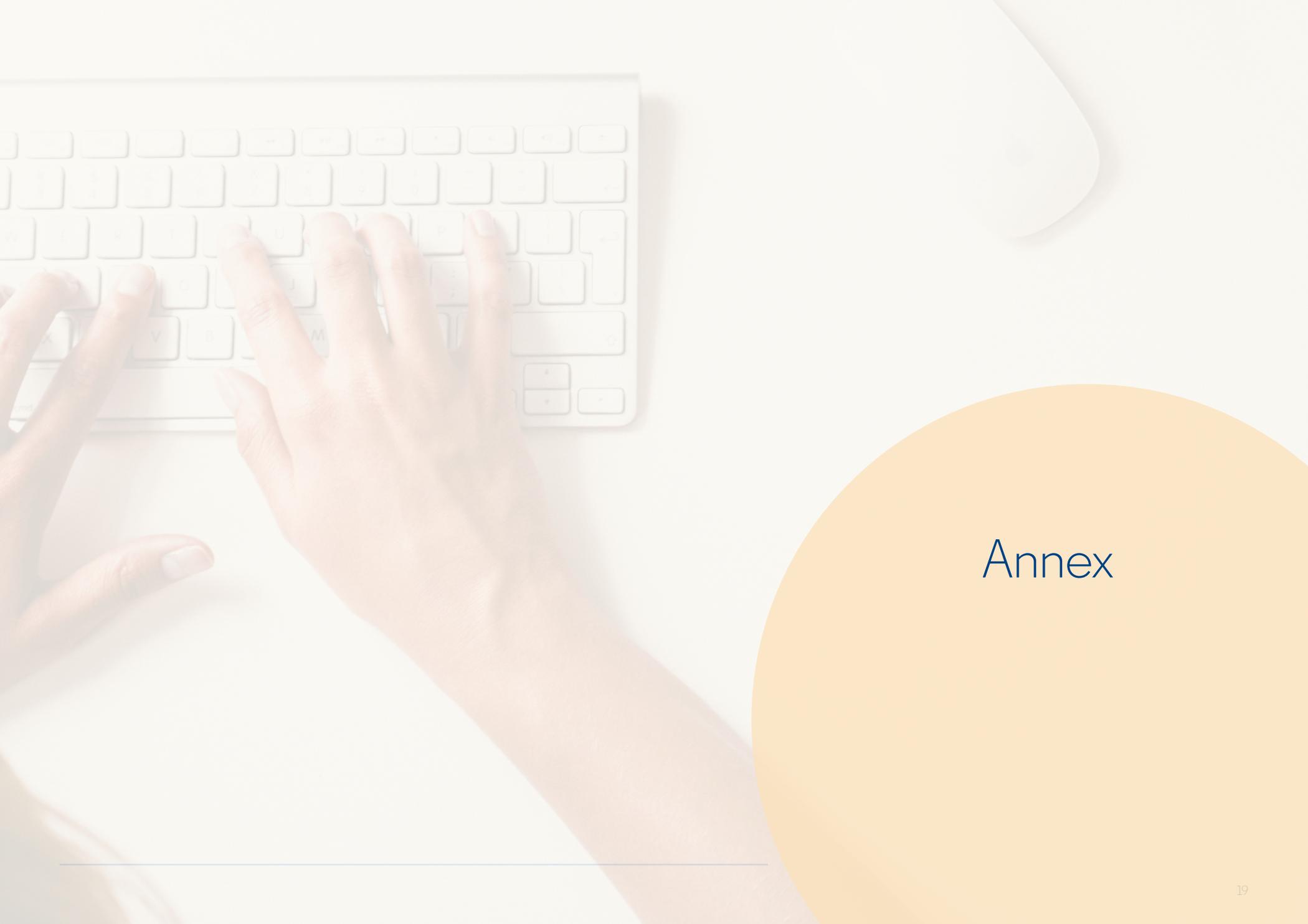
Take a proactive approach to skills:

List the required skills needed for a job, with specific detail on the level and type of skill required.

Adopt a more skills-friendly approach:

This should apply across both internal promotions and external hiring – with certifications and broader skills training prioritised or at least on par with past job titles.

LinkedIn are committed to working with stakeholders to drive a skills-first mindset across the economy, with the benefits this would provide across metrics clearly evident from our analysis.



Annex

Our skills data comes from the skills listed on job postings and the skills LinkedIn members add to their profiles.

We use this data to construct the LinkedIn Skills Genome, which forms the basis for our skills analysis. Our skills data is at the scale of millions of workers, which smooths out the noise associated with self-reported skills.

We only associate a job with a skill if a very high number of workers have that skill on their profile when they hold that associated job. On average, 30 “top” skills are associated with a given job.

Skills Genome: For any entity (occupation or job, country, sector, etc.), the skills genome is an ordered list (a vector) of the 50 ‘most characteristic skills’ of that entity. These most characteristic skills are identified using a TF-IDF algorithm to identify the most representative skills of the target entity while down-ranking ubiquitous skills that add little information about that specific entity (e.g., Microsoft Word).

Skills: Refers to the 41,000+ skills that are sourced from LinkedIn members (skills explicitly listed on member profiles, or inferred from other aspects of members’ profiles, such as job titles, fields of study, etc.) or from job postings. Skills are the main building blocks of the insights in this report.

Skills similarity: The degree of overlap between the most representative skills for each job based on [LinkedIn’s Skills Genome](#). The similarity score reflects both the overlap of common skills between two jobs as well as the relative importance of those skills for each job. The similarity score ranges from 0 (no common skills, a difficult transition) to 100 (perfect overlap in skills, easy transition).

Talent pool: The number of potential skilled candidates for a certain job. We consider all active members with valid skill listings, regardless of their job searching status.

Prior job title talent pool: The number of potential candidates considered when hiring for an open job looking at workers who have held that target job title in the past five years. Job titles include exact matches (e.g., an employer is searching for a Recruiter and the worker has experience as a Recruiter) as well as equivalent matches (e.g., the worker has experience as a Recruiting Specialist).

Skills-first talent pool: The number of potential candidates considered when hiring for an open job looking at workers who have held jobs in the last five years with a large skill overlap with the target job, and meet a threshold of similar worker transitions. For example: a Nurse may have a large skill overlap with a Doctor, but that isn’t a common transition due to the high level of retraining, so Nurses wouldn’t be included in the skill-based talent pool if the open role is for a Doctor.



Skills-first talent pool increase: The ratio of the number of potential candidates for a given occupation identified using a skills-first talent pool approach, to the number of eligible workers for a given occupation identified using the direct jobs experience talent pool approach. Country and industry-level aggregates are defined by taking the median talent pool increase across occupations in the given segment.

Jobs or occupations: LinkedIn member titles are standardised and grouped into approximately 15,000 occupations. These are not sector or country specific. These occupations are further standardised into approximately 3,600 occupation representatives. Occupation representatives group occupations with a common role and specialty, regardless of seniority.

Skill intensity: Based on the skill genome of an entity, skill penetration shows the ‘intensity’ of a set of skills that we call ‘skill groups’ or ‘skill categories’ (e.g., digital literacy, green) in that entity. Skill intensity/penetration rates are calculated at an aggregated entity level (usually occupation or job, but also can be done at the country, company or sector level), for example, if ‘green skills’ are five of the 50 skills in the skill genome vector for an occupation, the green skills intensity for that entity is 10%.



Educational attainment comparison

When estimating the talent pool differences for bachelor’s versus non-bachelor’s holders, we compare members who do not list bachelor’s degrees or equivalent with those who do.

Gender analysis

If not explicitly self-identified, we have inferred the gender of members included in this analysis either by the pronouns used on their LinkedIn profiles, or inferred on the basis of first name. Members whose gender could not be inferred as either man or woman were excluded from this analysis.

We define “occupations where women are most underrepresented” as those occupations that are in the bottom quartile for their country in terms of share of women employed in the last five years.

LinkedIn  Economic Graph
