LinkedIn

Data for Impact

Data Menu 2025

As part of LinkedIn's vision to generate economic opportunity for all, Data for Impact seeks to:



Amplify the impact of public investments in economic and workforce development



Inform public policy decisions on digital and economic development strategy



Enable cutting-edge research on efforts to improve labor markets and economies

WORLD BANK GROUP

OECD

International Labour Organization

International Energy Agency

UNDP

International Monetary Fund

Stanford University Human-Centered Artificial Intelligence

IVF

CAF Development Bank of Latin America

European Bank for Reconstruction and Development

IDB

Federal Reserve Bank of San Francisco

European Central Bank

Banc Ceannais na hÉireann Central Bank of Ireland Eurosystem

DESTATIS Statistisches Bundesamt

VA U.S. Department of Veterans Affairs

United States Census Bureau

NSF

Eurofound

IDSP

TDRI Thailand Development Research Institute

NORC

IAB Institute for Employment Research The Research Institute of the Federal Employment Agency

ESRI Economic & Social Research Institute

TNO innovation for life

CENIA Centro Nacional de Inteligencia Artificial

LinkedIn

LinkedIn Economic Graph



1.2B

Members



67M

Companies



15M

Jobs



41K

Skills



133K

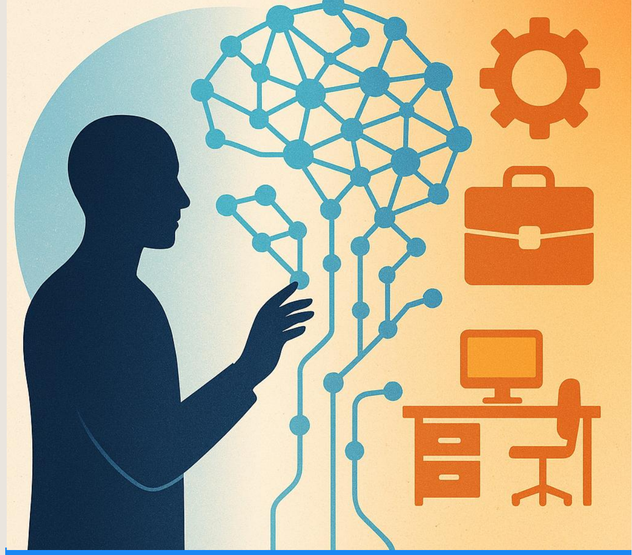
Schools

Real-time, granular labor market insights

Data and insights from LinkedIn's Economic Graph support policymakers to monitor economic shifts, adjust to labor market disruptions and transformations, and plan for the future of work.



Sharpening Economic Monitoring



Understanding AI's Impact on Work



Advancing Productive Labor Markets



Training the Workforce of Tomorrow

Privacy is our priority

We do not share individual-level member data.

We also do not share overly granular cuts of data that are not likely to be statistically sound, or data that may be sensitive to our business operations.

As a result, we rely on **internally-created indicators** to translate real-time data into meaningful labor market insights.



Data comes from members' public profiles. If it cannot be derived from a profile (e.g. IP address-based location or country of origin), it cannot inform our analysis.



If the data cut requested is *too* granular on any dimension—time, population, occupation, skill—we cannot share the insight (and it's likely just noise).

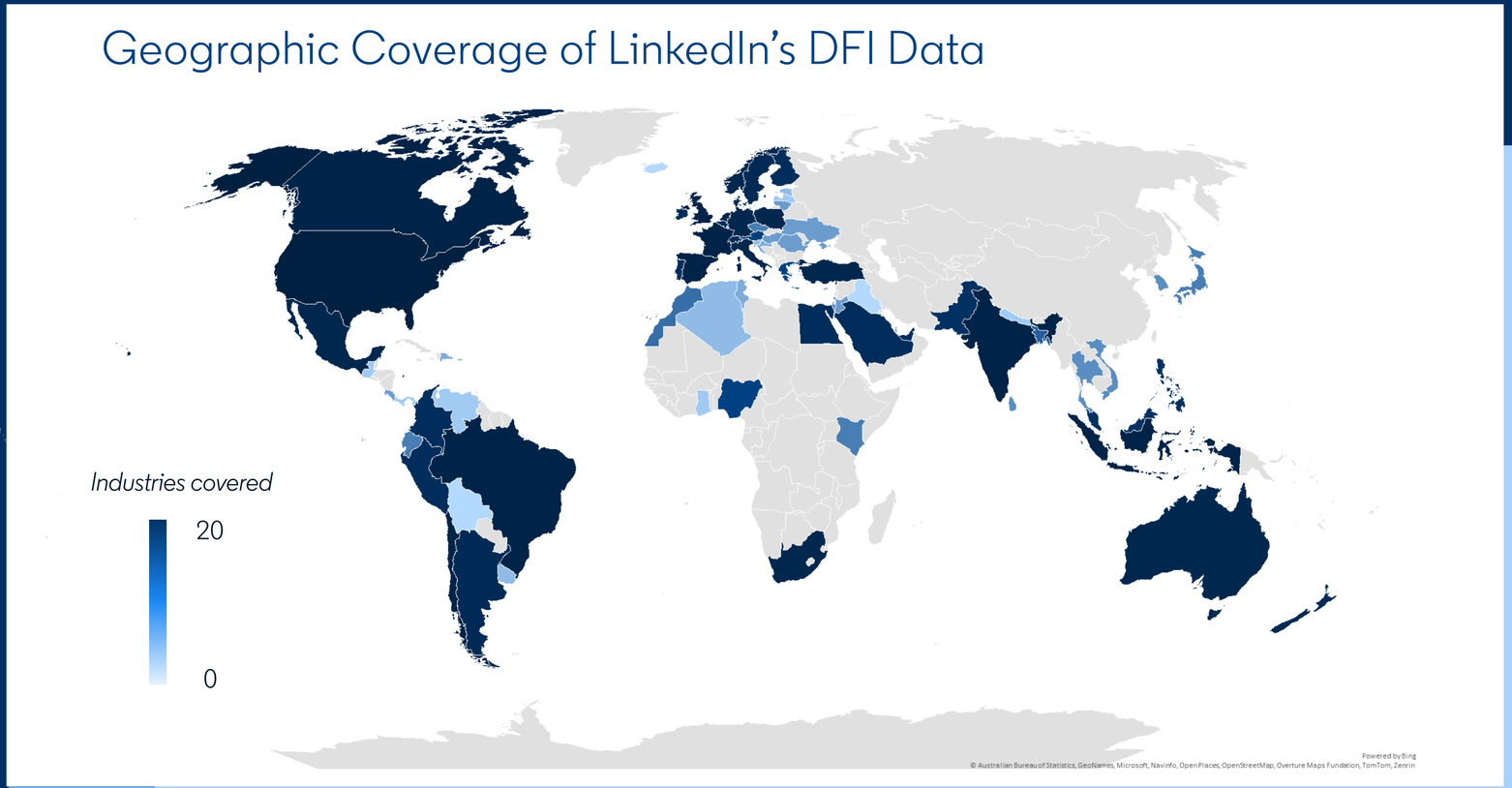


A small, talented team of data scientists and economists generates our insights. Requests with clear, high-impact use cases—informing policy, program design, and public investment—will get priority. No data fishing, please.

Coverage

Data across 80+ countries

- The World Bank has validated use of LinkedIn data across 80 countries[1], but representativeness varies. This map serves as a guide to inform data use.
- Data quality varies across and within geographies due to differences in:
  - Income and internet access
  - Labor market formality
  - LinkedIn language coverage
  - Use and reliance on technology and LinkedIn, specifically
- Dataset availability varies by country and time period.



1. DATA INSIGHTS: JOBS, SKILLS AND MIGRATION TRENDS METHODOLOGY & VALIDATION RESULTS

Requesting data



INNOVATE

Partners leverage "off-menu" data for novel, high-impact labor market insights that inform policy

- DFI and Germany's leading labor market think tank, IAB, joined forces to develop a new indicator
- The Reallocation Radar predicts cross-industry career changes, informing labor market conversations in the German market



INFORM

Partners request "on-menu" data to inform specific, well-scoped investments, programs, or reports

- World Bank partners requested LinkedIn data for multi-billion dollar country development strategies
- These strategies leveraged data on gender inequities and industry hiring to inform relevant labor market interventions



INTEGRATE

Statistical, fiscal, and labor partners integrate "on-menu" data for economic monitoring

- The German Statistical Authority, Destatis, now receives monthly LinkedIn data on industry hiring
- Destatis validated use of LinkedIn data, identifying it as a key source for faster, actionable labor market insights

Appendix 1: Key Datasets

Appendix A
Sharpening Economic Monitoring



1 LinkedIn Hiring Rate

2 Labor Market Tightness

3 Hybrid and Remote Work

4 Migration

5 Company Foundation Index

1. LinkedIn Hiring Rates *(Monthly)*

Indicator Description

The LinkedIn Hiring Rate (LHR) measures hiring activity based on positions added to members' profiles in the same month as the start date, seasonally adjusted. See methodology here.

Job transitions, a related metric, measures when members switch from one role to another.

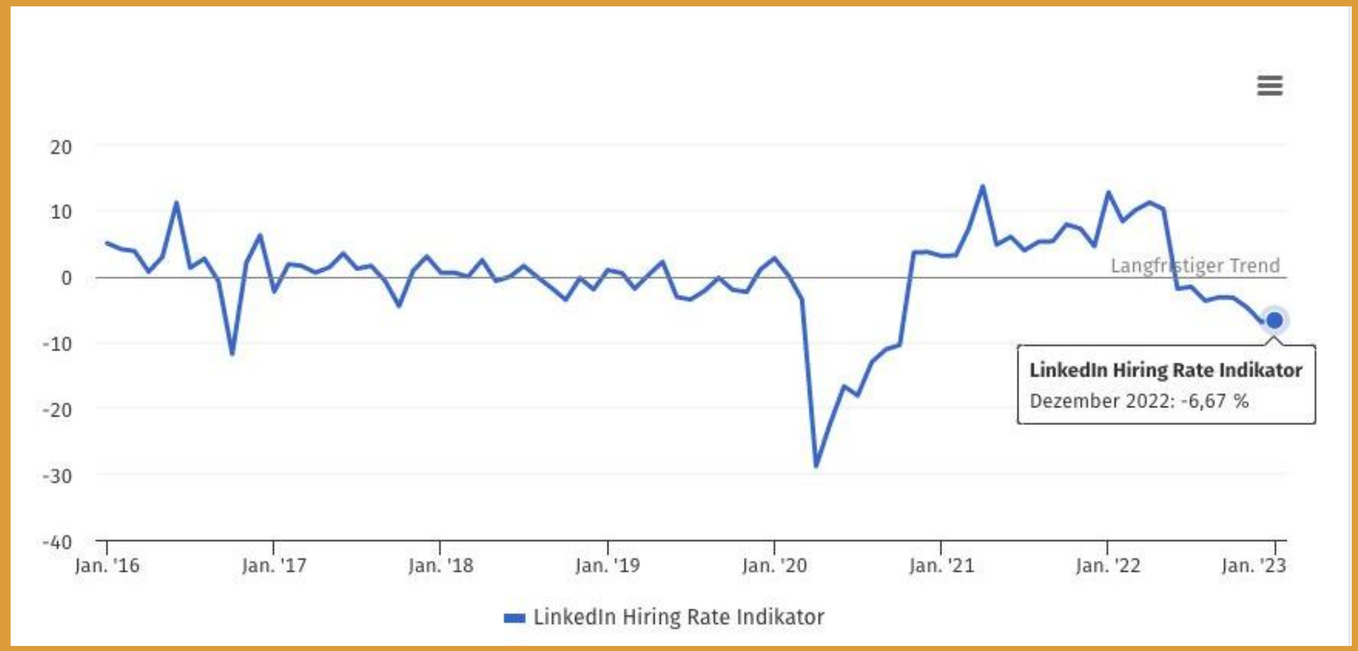
Use Cases

- Economic monitoring by the German Statistical Authority, Destatis – here
- Programmatic planning by the Inter-American Development Bank – here
- Fiscal analysis of Asia and the Pacific by the International Monetary Fund – here

Available Dimensions

National Industry Skill Groups

LinkedIn Hiring Rate (SA), Germany



LinkedIn data, analysis by Destatis (German Statistical Authority)

2. Labor Market Tightness
(Monthly, Large Economies Only)

Indicator Description

Labor Market Tightness is the number of jobs that LinkedIn members apply to divided by the number of applicants within the relevant labor market. This definition implicitly accounts for both recruiting intensity by firms and job search effort by job seekers. See methodology here.

Use Cases

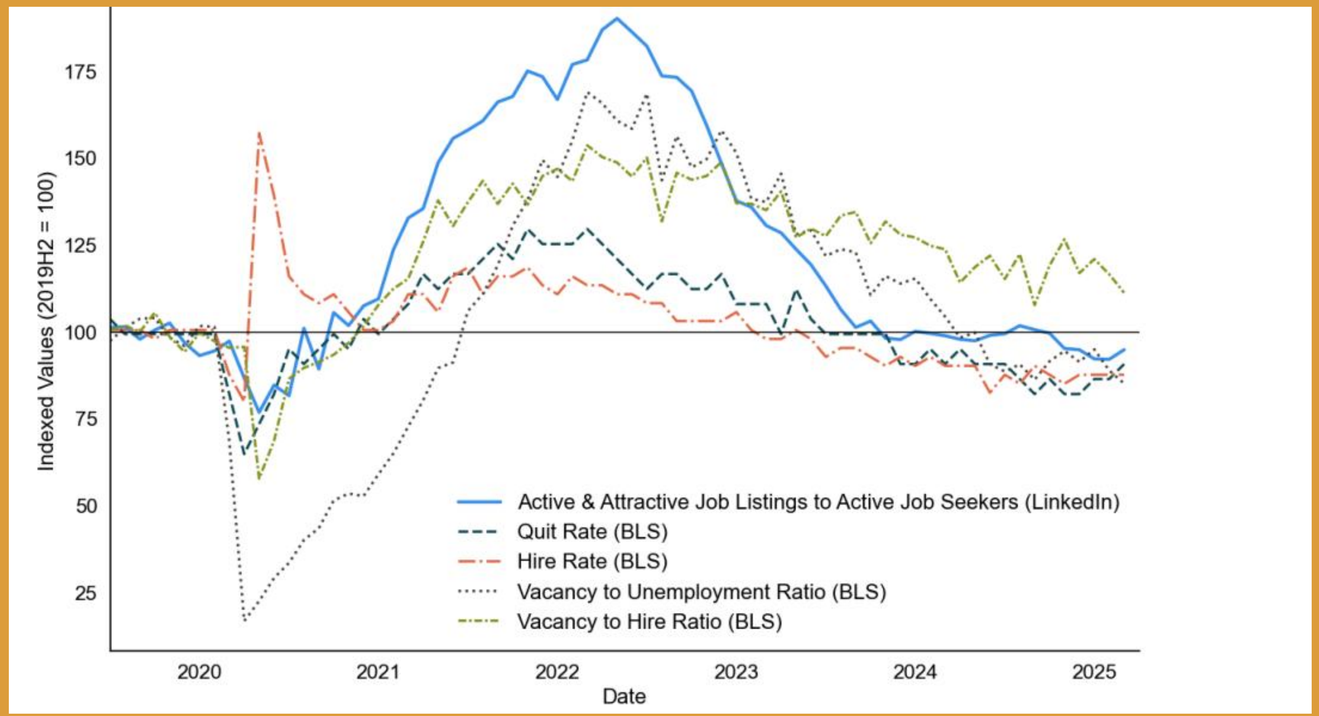
- Shared with a variety of partners, including the Federal Reserve, the Mexican Statistical Authority (INEGI), the Spanish Statistical Authority (INE), and German Labor Ministry (BMAS) to complement traditional labor market metrics

Available Dimensions

National

Industry

LinkedIn and BLS-based Measures of LMT, United States



3. Hybrid and Remote Work
(Monthly, Large Economies Only)

Indicator Description

The share of job postings offering remote or hybrid work, as well as the share of applications dedicated to these roles.

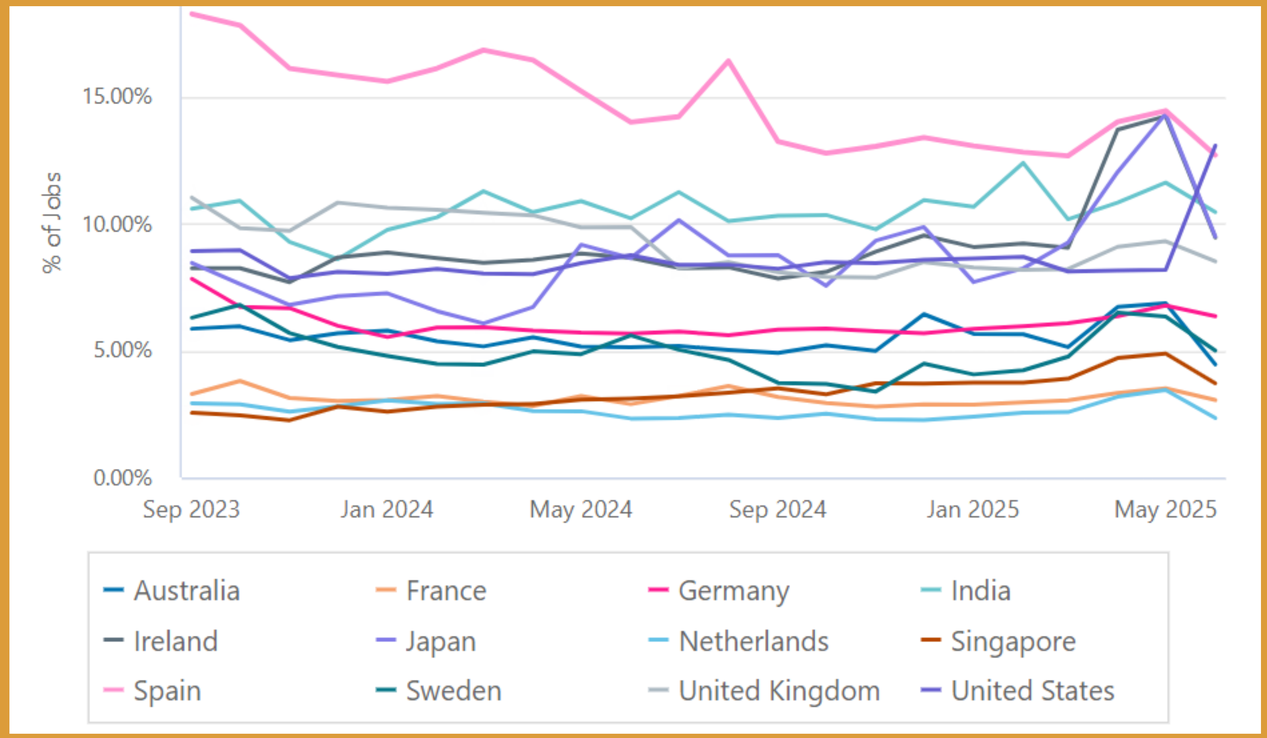
Use Cases

- Inter-American Development Bank leveraged LinkedIn data on remote work to better understand the transition to telework during COVID, as well as to understand its likely durability.

Available Dimensions

National

Share of Job Postings Offering Remote Work, by Country and Month



4. Migration
(Monthly or Annual)

Indicator Description

All data based on members' self-reported place of work, NOT country of origin, education, or IP address. Rolling 12-month sums.

- Y/Y change in net inflow by country, country-industry, or metro
- Net inflow / Net outflow by country, country-industry, or metro

Use Cases

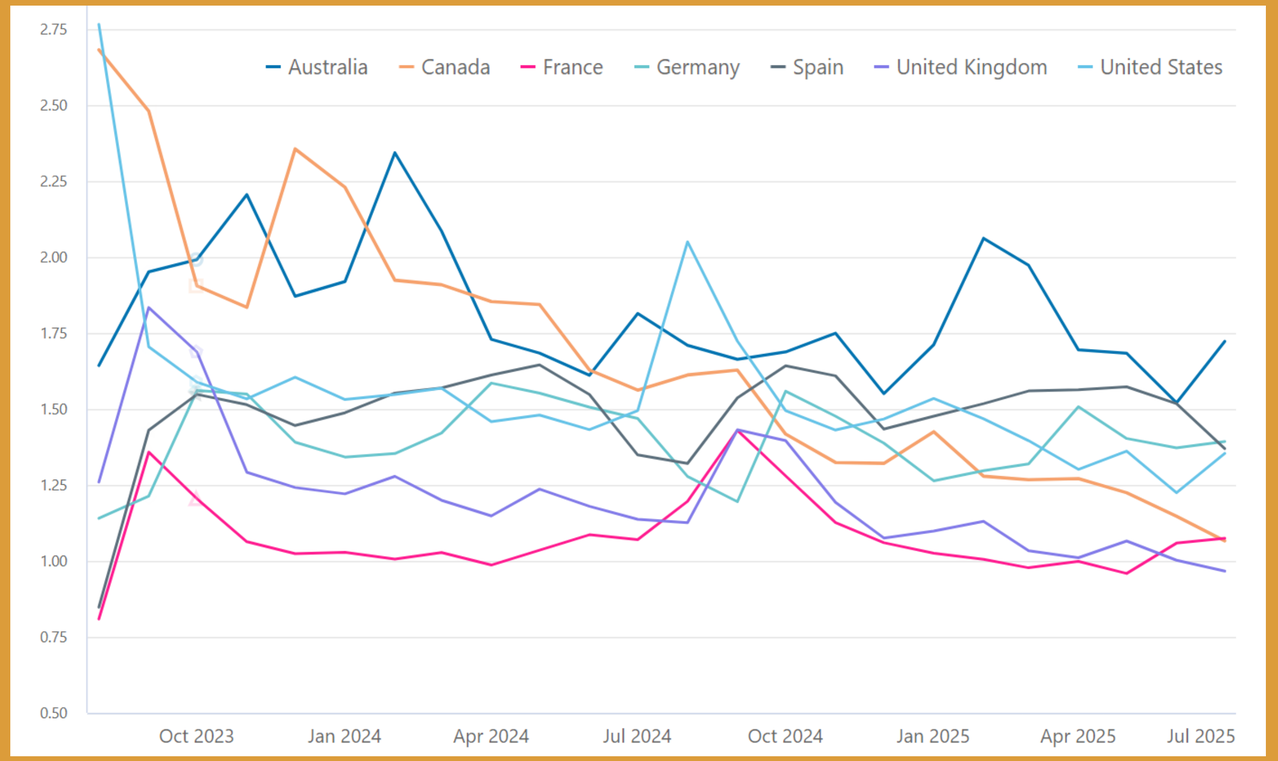
- Data shared with national governments seeking to increase workforce by recruiting talent from abroad.

Available Dimensions


National


Industry

Member Inflow-Outflow Ratio, by Country and Month



5. Company Foundation Index *(Monthly and 3-Month Average)*

Indicator Description

The Company Formation Index (CFI) is the 3 month average count of unique companies on LinkedIn, measured by the number LinkedIn members who added a new founder position to their profile. We only include LinkedIn members who added a founder position to their profile in the same month the new job began. This number is then indexed to the count in January 2016 which is set to 100; for example, an index of 105 indicates that company formation is 5% higher than in January 2016.

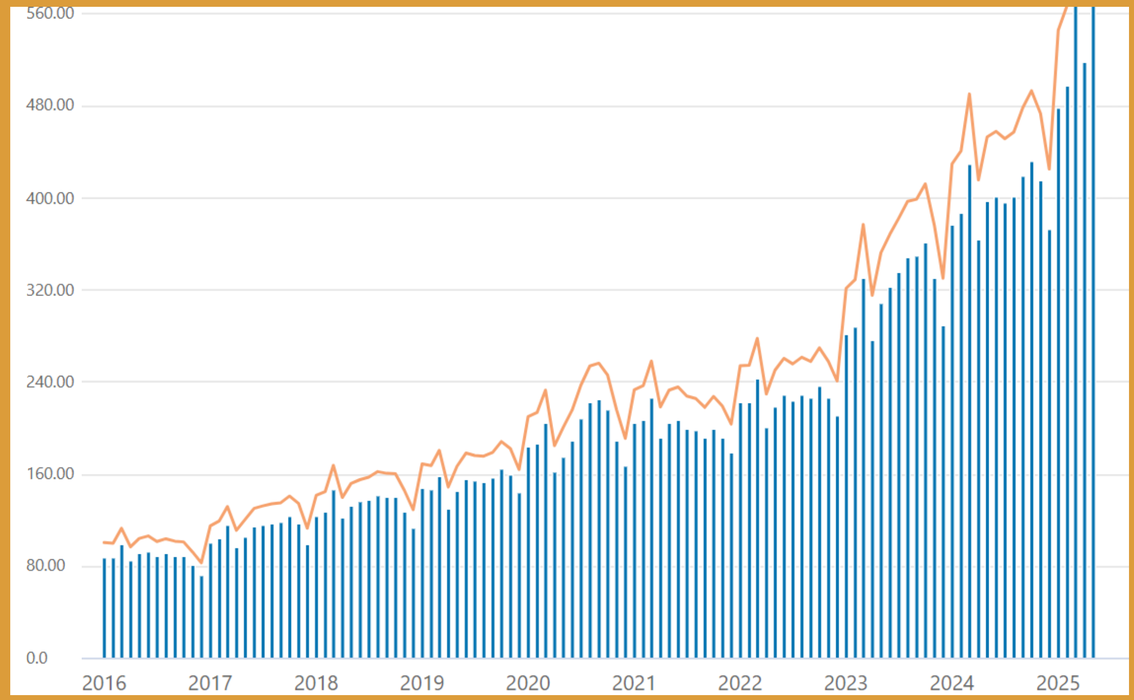
Use Cases

- Data shared with national governments to assess entrepreneurial climate and activity

Available Dimensions



Company Foundation Index, by Month or 3M Avg (United States)



Appendix B
Advancing Productive Labor Markets



1 **Women's Representation**

2 **Skill Genome**

3 **Skill Penetration**

4 **Career Explorer**

5 **Reallocation Radar**

1. Female Representation
(Monthly or Annual)

Indicator Description

- Share of members inferred as female, overall and by seniority, by country and industry
- Share of hires inferred as female, overall and by seniority, by country and industry

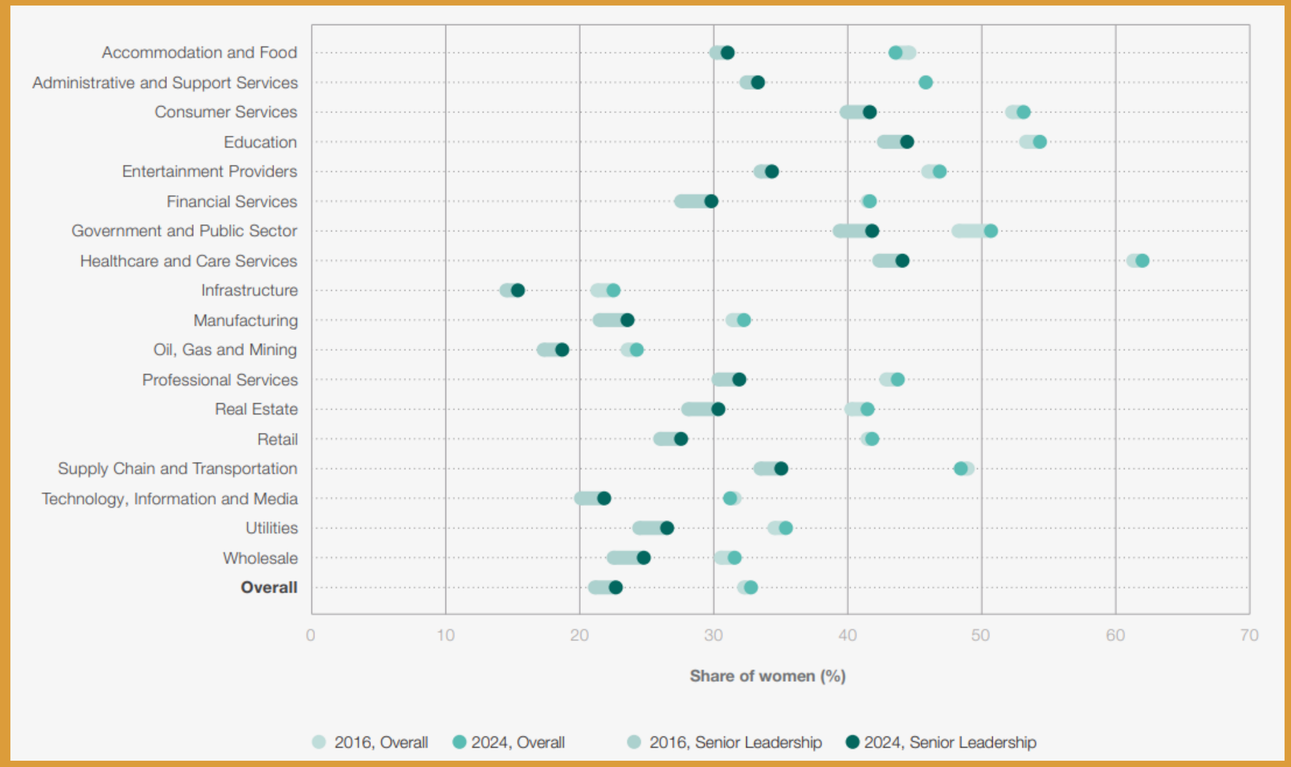
Use Cases

- 2024 Global Gender Gap Report by the World Economic Forum – here
- Analysis of gender diversity in the green economy by the Inter-American Development Bank – here
- European Bank for Reconstruction and Development inclusive green strategy – here

Available Dimensions

National Industry Skill Groups

Women's workforce and senior leadership representation, by industry (2016 – 2024)



2. Skill Genome
(Annual)

Indicator Description

An ordered list of the 'most characteristic skills' of a country, industry, or occupation. Pooled data draws from skills added across years, while flow data draws from skills added during the specified year. See the World Bank-validated methodology in the appendix and here.

Use Cases

- World Bank investment planning for Argentina focused on women's career advancement – here
- UN and World Bank design of digital training programs in MENA – here
- ILO and Microsoft's design of training programs for Women in Digital Business – here

Available Dimensions


National


Industry


Occupation
(pooled only)

Skills Genome Examples

Women in the ICT sector have more non-technology skills than men

Top 10 most characteristic skills in Argentina's ICT sector, 2021

Women	Men
Spanish	Scrum*
Scrum*	SQL*
Agile Methodologies*	Git*
Jira*	JavaScript*
SQL*	MySQL*
Can-do approach	Microsoft SQL Server*
Interpersonal relationships	Node.js*
Portuguese	Agile Methodologies*
Liability	React.js*
Microsoft SQL Server*	Spanish

Source: LinkedIn. **Note**: The "*" indicates a technology skill.

FIGURE V-6:

Most-Representative Skill Groups for the Online Media Industry Globally

1. **Social Media**
2. **Journalism**
3. **Editing**
4. **Writing**
5. **Digital Marketing**
6. **Advertising**
7. **Graphic Design**
8. **Photography**
9. **Oral Communication**
10. **Digital Literacy**

Source: Authors' calculation using LinkedIn data.

3. Skill Penetration
(Annual)

Indicator Description

The share of the most representative skills that come from a specific skills group. Pooled data draws from skills added across years, while flow data draws from skills added during the specified year. See the World Bank-validated methodology in the appendix and here.

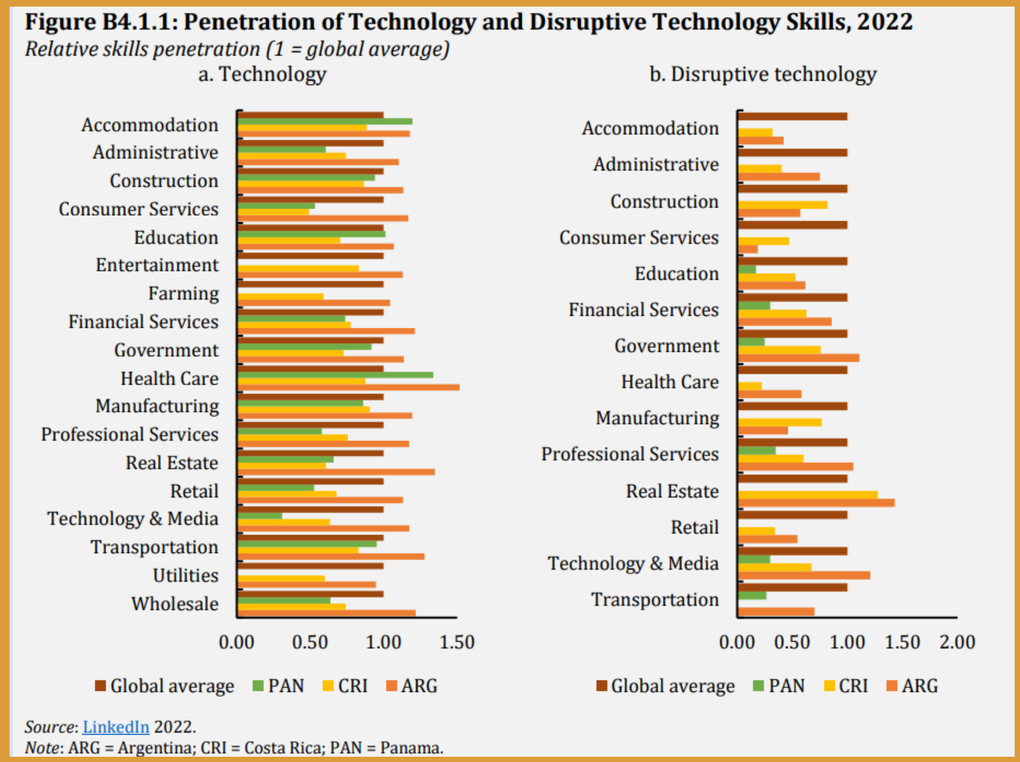
Use Cases

- Inter-American Development Bank assessed firm use of digital technologies by country – here
- World Bank strategic investment planning in Panama and Costa Rica – here

Available Dimensions

National Industry Skill Groups

Skill Penetration Examples



5. Reallocation Radar
(Semi-annual, Select economies)

Indicator Description

The Reallocation Radar, developed with leading German labor market think tank IAB, maps cross-industry job transitions by averaging:

- Current switches: the current ratio of people changing to a new job in a different industry
- Future switches: the current ratio of applications for jobs in a different industry relative to total applications

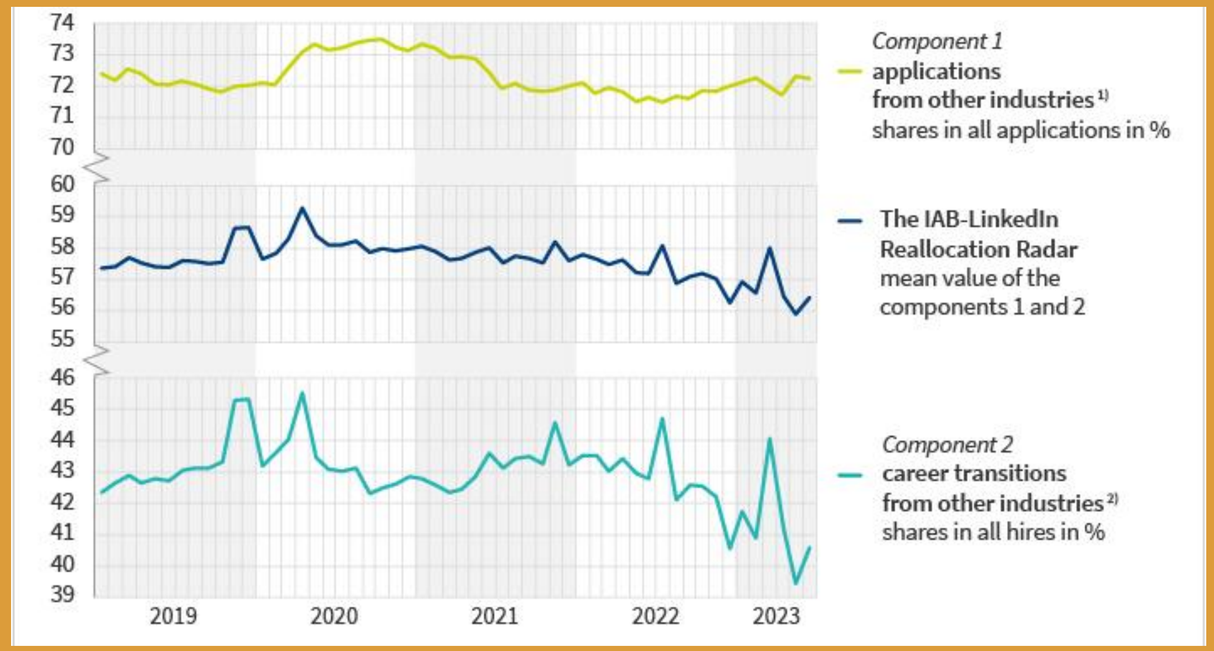
Use Cases

- IAB German Reallocation Radar – here

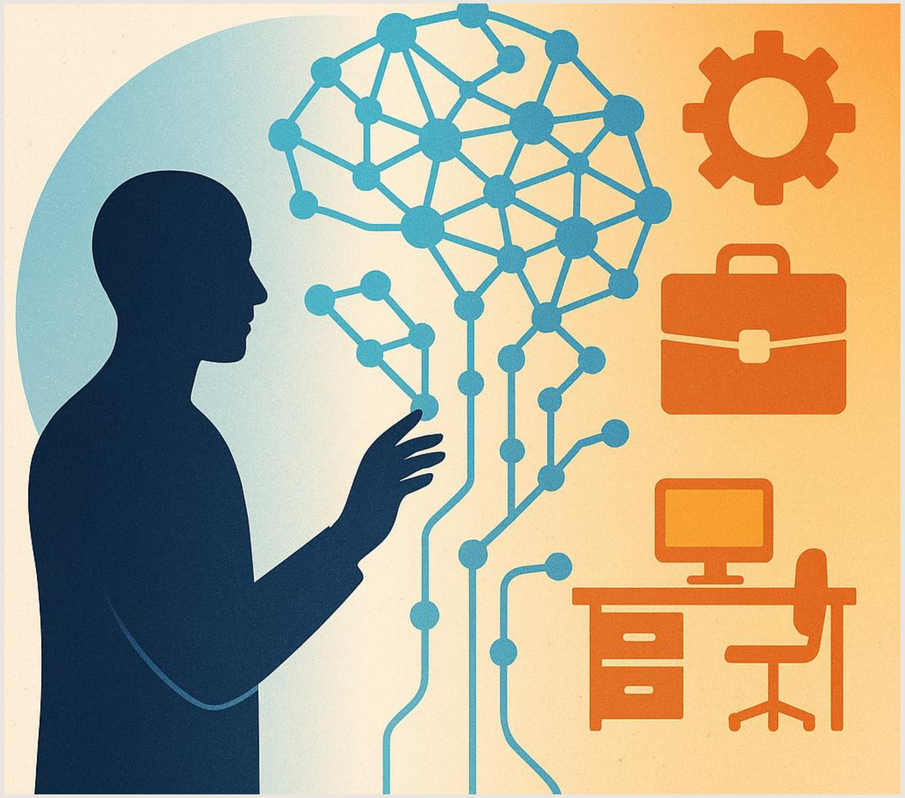
Available Dimensions

National

Reallocation Radar by Month (Germany)



Appendix C
Understanding AI's Impact on Work



1 **AI Engineering Skills**

2 **AI Literacy Skills**

3 **Tech Talent Shifts**

4 **Skill Mismatch**

1. AI Engineering Talent
(Monthly or Annual - varies)

Indicator Description

The share of LinkedIn members with AI Engineering skills. See full methodology here.

In some cases, *hiring rates* and *job posting rates* with these skills are also available.

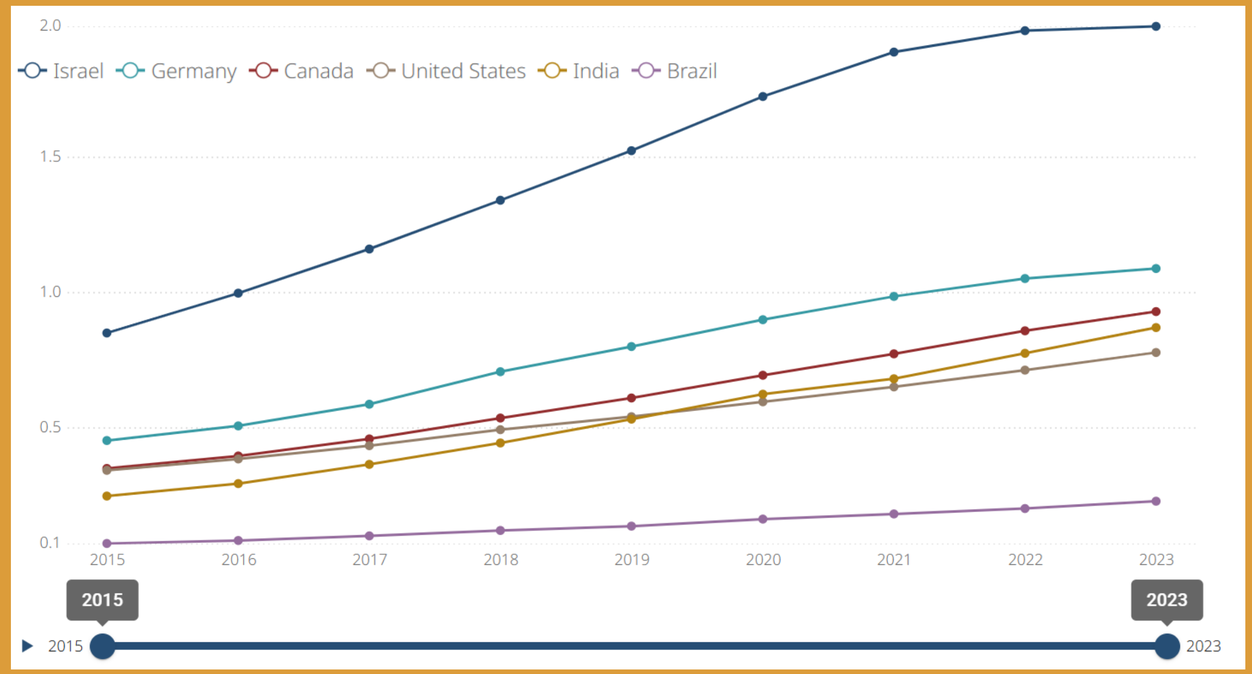
Use Cases

- Analysis AI skill growth across the labor force in OECD's 2024 Digital Economic Outlook – here
- IMF research into likely shifts in financial systems due to the increased use of AI systems - here

Available Dimensions

National Industry Gender

AI Engineering Talent Concentration by Country and Year



2. AI Literacy Talent
(Monthly or Annual - varies)

Indicator Description

The share of LinkedIn members with AI Literacy skills. See full methodology here.

In some cases, *job posting rates* with these skills are also available.

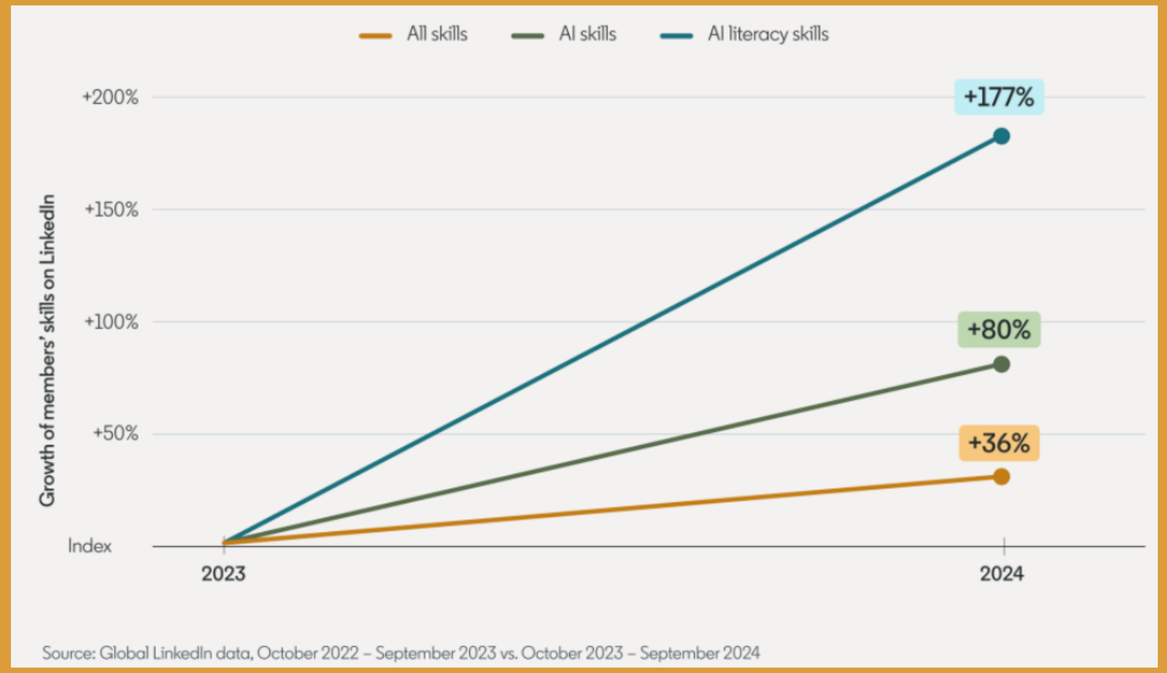
Use Cases

- Assessment of AI adoption across national economies and within specific industries

Available Dimensions

National Industry Gender

Growth of LinkedIn members' skills by type and year



Source: Global LinkedIn data, October 2022 – September 2023 vs. October 2023 – September 2024

See the Work Change Report for full context

3. Tech Talent Shifts
(Annual, Select economies)

Indicator Description

Analyses of hiring, job posting, and other trends related to tech talent: members working in research, engineering, or IT functions, regardless of industry.

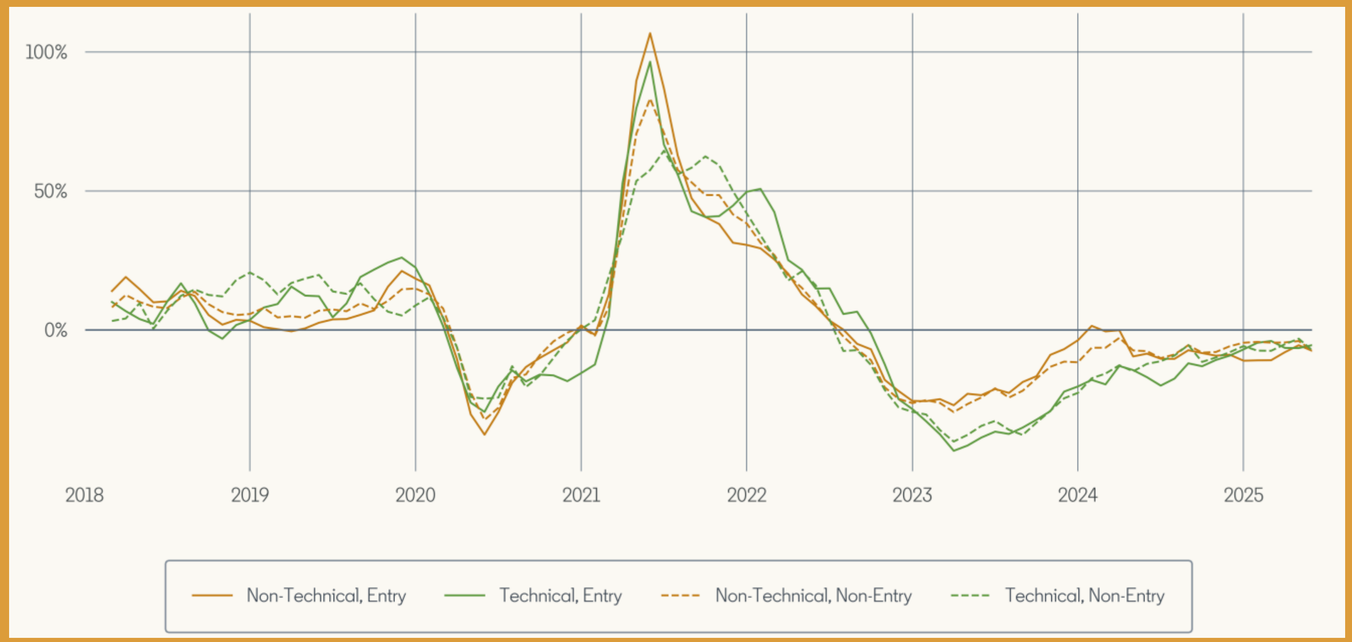
Use Cases

- Workshop led by New York City's Tech Talent Pipeline and the Mayor's Office of Talent and Workforce Development – here
- Discussions on training and workforce development planning with municipal leaders

Available Dimensions

National Industry Gender

Monthly LHR (Y/Y) for Austin, by Tech Talent Status and Level



See Decoding Tech Talent for full context

4. Skills Mismatch
(Annual, Select economies)

Indicator Description

A measure of alignment between skill supply and skill demand, derived by comparing the skills that show up in job postings to those that appear on members' profiles. Data can be split by occupation within countries, by occupation across countries, and within countries writ large. See the methodology here.

Use Cases

- Identifying critical training pathways to meet skill demand at the country and international level

Available Dimensions



National

Skills Mismatch for Software Engineers, by Country (2024)

Country	Potential skill shortages	Potential skill surpluses
Australia	1. Kubernetes 2. Full-Stack Development 3. DevOps 4. Apache Kafka 5. Test-Driven Development	1. React.js 2. .NET Framework 3. Node.js 4. SQL 5. Python
India	1. Kubernetes 2. Full-Stack Development 3. Apache Kafka 4. Microsoft Azure 5. Microservices	1. HTML 2. Node.js 3. C++ 4. React.js 5. C#

Appendix D
Training the Workforce of Tomorrow



1 **Digital Skills**

2 **Green Skills**

3 **In-Demand Jobs and Skills**

4 **Fastest Growing Jobs and Skills**

1. Digital Skills
(Monthly or Annual - varies)

Indicator Description

The share of LinkedIn members in a country and/or industry with Cybersecurity or Crypto skills.

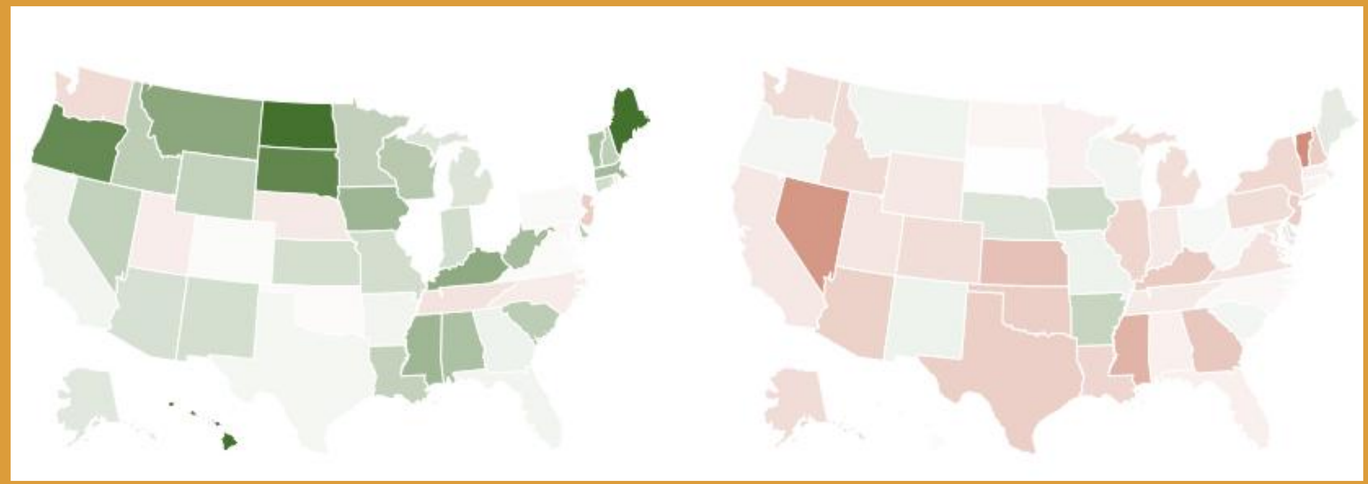
Use Cases

- US National Science Foundation efforts to expand the cybersecurity workforce – here

Available Dimensions



Y/Y% Change in Oversight and Governance Cybersecurity Job Postings v. Workforce (April 2024)



See Regional Shifts in Cybersecurity Talent for full context

2. Green Skills
(Monthly or Annual - varies)

Indicator Description

The share of LinkedIn members in a country and/or industry with Green or Electric Vehicle skills. See more information on Green Skills Methodology here and Electric Vehicle Skills monitoring here

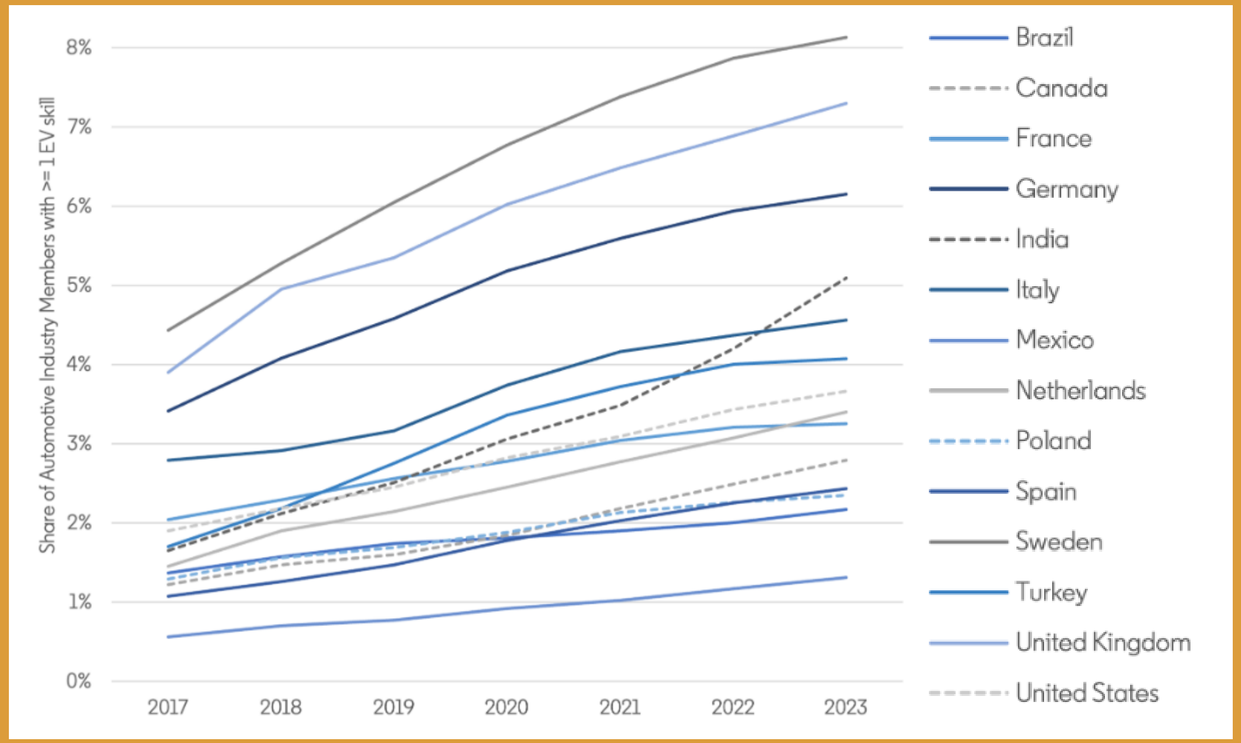
Use Cases

- Development of youth trainings for electric vehicle production in Mexico – here
- IMF's Climate Change Indicator Dashboard - here

Available Dimensions



Share of Members with Electric Vehicle Skills, by Country and Year



See Accelerating the Transition to Electric Vehicles for full context

3. In-Demand Skills and Jobs *(Semi-Annual or Annual)*

Indicator Description

Ranking of skills of members that have been hired recently, that attract recruiter In-Mails, and listed in paid job postings.

Alternatively, ranking of jobs by job posting volume.

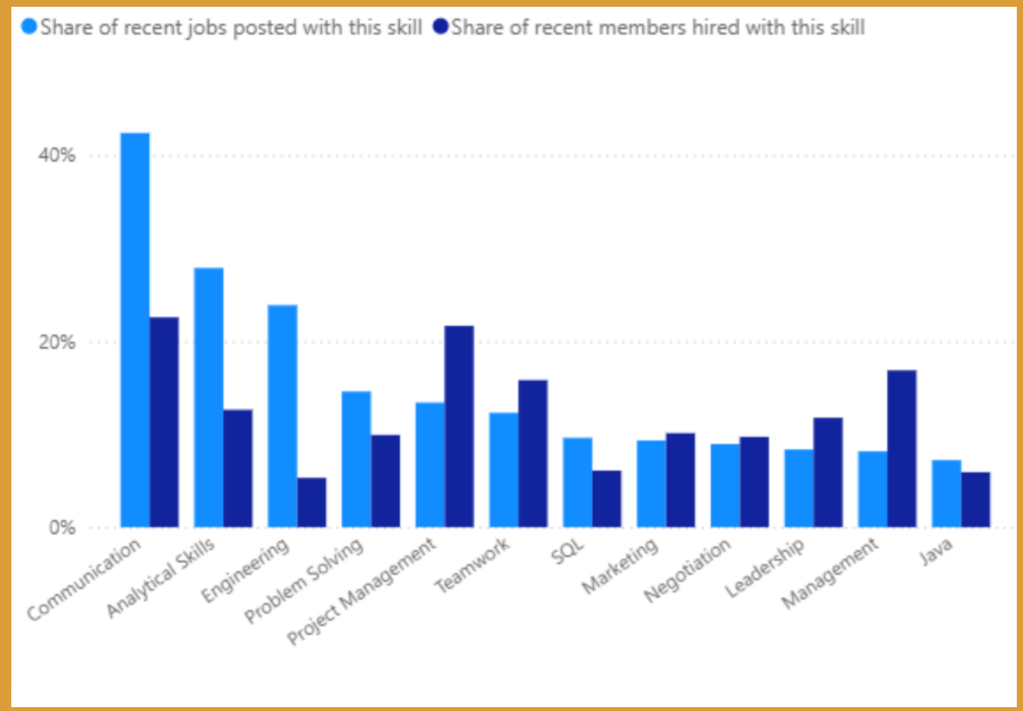
Use Cases

- Design of training programs to address climate and economic shocks

Available Dimensions

National Industry

In-Demand Skills in Morocco, 2024



4. Fastest Growing Skills and Jobs *(Annual)*

Indicator Description

Ranking of skills with greatest year-over-year growth on platform, by country and industry.

Alternatively, ranking of jobs by greatest year-over-year growth in volume.

Use Cases

- Prioritization of skills critical to enhance student and trainee resilience

Available Dimensions



National

Fastest Growing Skills by Country (2025)

Australia	Brazil	France	Germany
AI Literacy	AI Literacy	Customer service management	Client management
Communication	Communication	Data analysis	AI Literacy
Strategic thinking	Strategic thinking	Communication	Strategic thinking
LLM proficiency	Customer retention	AI Literacy	LLM proficiency
Adaptability	Trade policy	Adaptability	Stakeholder management

Appendix 2: Methdological Notes

Specialized Skill Categories

Skills are annotated as pertaining to specific skill categories, which can be applied as indicator dimensions

Skill Group Category	Description
Soft Skills	Non-cognitive skills or personality traits valued in the labor market but not assessed by achievement tests. IQ or achievement tests cannot predict these skills.
Business Skills	Knowledge and skills required to start or operate an enterprise. Examples include Business Management, Project Management, Entrepreneurship.
Tech Skills	Defined as a range of abilities to use digital devices, communication applications, and networks to access and manage information. They enable people to create and share digital content, communicate and collaborate, and solve problems.
Disruptive Tech Skills	Skills associated with developing new technologies that are expected to impact labor markets in the coming years. Examples include Robotics, Genetic Engineering, and Artificial Intelligence. Artificial Intelligence can be isolated as a skill group category itself (see OECD.AI).
AI Skills (Engineering and Literacy)	AI skills are technical skills that are used in building AI technologies. Can also be referred to as "AI Technical Skills" and "AI Engineering Skills". AI Literacy skills are applied in using AI technologies. Can also be referred to as "AI Aptitude Skills".
Green Skills	Green skills are those that enable the environmental sustainability of economic activities. See more on our green skills methodology here.

Specialized Skill Categories *Examples*

- Each of these categories have 1k+ skills and change over time as LinkedIn's skills taxonomy is updated.
- While we will not share the full skills list, we provide this illustrative list of examples from each category.
- AI skill lists are provided in *this report* but lists may change over time.

Soft	Business	Disruptive Tech	Digital	Green
Project-based Learning	TVC	Turbojet	Very-Large-Scale Integration (VLSI)	Sustainable fashion
Quick Study	Text Marketing	Turbomachinery	Virtuoso	Environmental Services
SCORM	Traditional Media	Unmanned Vehicles	VxWorks	Oil Spill Response
Self Learning	Transit Advertising	Wind Tunnel	X86	Climate
Service Orientation	Unica	Wind Tunnel Testing	Xilinx	Sustainable Growth
Social Learning	Video Advertising	A/B Testing	Xilinx ISE	Surface Water
Study Skills	Web Analytics	ANOVA	ZigBee	Occupational Safety and Health Advisor
eCollege	Web Strategy	Adobe Analytics	3GPP2	Sustainable Business Strategies
Advising People	WebTrends Analytics	Alteryx	802.11b	Solar Systems
Body Language	Webmaster Services	Analytics	802.1x	Sustainable Landscapes
Business Letters	comScore	Anomaly Detection	ATM Networks	ISO 14001
Client-focused	Acquisition Marketing	Apache Flink	Adobe Marketing Cloud	Solar Energy
Communication	Affiliate Management	Apache Mahout	Alcatel	Recycling
Conference Speaking	Affiliate Marketing	Apache Spark	Alteon	Renewable Energy
Diction	Affiliate Networks	Bayesian inference	Amazon CloudFront	Environmental Awareness

Skills Genome

Methodological Notes

Goal

Identify the most relevant skills for groups of members holding specific occupations in specific countries and specific geographies.

Challenge

A set of generic skills (such as Microsoft Office) often occupies the top spots in the skills vector for many occupations.

Solution

TF-IDF downweighs skills that are common across other occupations. The method is a combination of skill popularity and uniqueness.

Data Analyst Skills in Spain:
Popular *Vs.* Popular AND Unique (Skills Genome)

Popular	Popular AND Unique
Data Analysis	SQL
SQL	Tableau
Python	Python
Tableau	Data Analysis
Microsoft Excel	Hive
Microsoft Office	R
R	Machine Learning
Microsoft PowerPoint	Data Mining
Microsoft Word	Post-GRE SQL
Hive	Data Visualization

Interpretation

The most distinct skills claimed by LinkedIn members working as Data Analysts in Spain include SQL, Machine Learning, and Data Visualization.

Skills Penetration

Methodological Notes

Goal

Determine how many of the most distinct 50 skills, for each occupation in each country, belong to a given skill group (e.g. Tech Skills, Soft Skills, etc.).

Challenge

LinkedIn's occupational distribution and coverage varies by country, even within the same industry.

Solution

Compare each country's skill penetration to a global composite benchmark based on that country's occupational distribution.

Tech Skills in Healthcare Industry

Ctry	Industry	AVG SP	GLOBAL SP	RELATIVE SP
X	Healthcare	0.1	0.2875	0.3478
Y	Healthcare	0.3	0.3625	0.8276
Z	Healthcare	0.5	0.333	1.5015

Interpretation

On average, tech skills comprise 10% of the occupational skill genomes in Country X's Healthcare Industry. Holding constant for differences in occupational distributions, this penetration of tech skills is ~35% of the global average for this industry.

Skill Penetration (SP) Calculations

Methodological Notes

1. Start with Skills Penetration data at Country/Industry/Occupation level

*Tech Skills Penetration by Ctry/Ind/Occ**

Country	Industry	Occupation	Skill Penetration (SP)
X	Healthcare	Nurse	0.05
X	Healthcare	Accountant	0.15
Y	Healthcare	Nurse	0.25
Y	Healthcare	Surgeon	0.35
Z	Healthcare	Nurse	0.60
Z	Healthcare	Surgeon	0.50
Z	Healthcare	Accountant	0.40

2A. AVERAGE skill penetration based on occupations at country-industry level

AVG Tech Skills Penetration by Ctry/Ind

Country	Industry	Calculation	AVG SP
X	Healthcare	(0.05+0.15)/2	0.1
Y	Healthcare	(0.25+0.35)/2	0.3
Z	Healthcare	(0.60+0.50+0.40)/3	0.5

2B. Calculate GLOBAL industry skill penetration from occupational mix

Tech Skills Penetration by Ind/Occ (Global)

Country	Occupation	Calculation	Skill Penetration
-	Nurse	(0.05+0.25+0.60)/3	0.3
-	Accountant	(0.15+0.40)/2	0.275
-	Surgeon	(0.35+0.50)/2	0.425

GLOBAL Tech Skills Penetration by Ctry/Ind

Country	Industry	Calculation	GLOBAL SP
X	Healthcare	(0.3+0.275)/2	0.2875
Y	Healthcare	(0.3+0.425)/2	0.3625
Z	Healthcare	(0.3+0.275+0.425)/3	0.333

3A. Calculate RELATIVE industry skill penetration based on global SP

RELATIVE Tech Skills Penetration by Ctry/Ind

Country	Industry	Calculation	RELATIVE SP
X	Healthcare	0.1 / 0.2875	0.3478
Y	Healthcare	0.3 / 0.3625	0.8276
Z	Healthcare	0.5 / 0.333	1.5015

3B. Final Outputs are AVG, GLOBAL, and RELATIVE Skills Penetration by Ctry/Ind

All Tech Skills Penetration by Ctry/Ind

Ctry	Ind	AVG SP	GLOBAL SP	RELATIVE SP
X	Healthcare	0.1	0.2875	0.3478
Y	Healthcare	0.3	0.3625	0.8276
Z	Healthcare	0.5	0.333	1.5015

**Ctry is Country. Ind is Industry. Occ is Occupation.*

Thank you