



LinkedIn's Economic Graph: Data-driven insights for policy-making

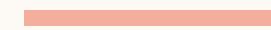
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January 25, 2019

International Labor Organization

“Create economic
opportunity for every member
of the global workforce.”



LinkedIn's Vision

The Economic Graph

Leveraging data from across the world



Advantages of LinkedIn Data



Global

Compare hundreds of countries and cities



Granular

Breakdown by location, industry, function, etc.



Real-Time

Members constantly update their profiles



Historical

Monitor data – like migration patterns – over time



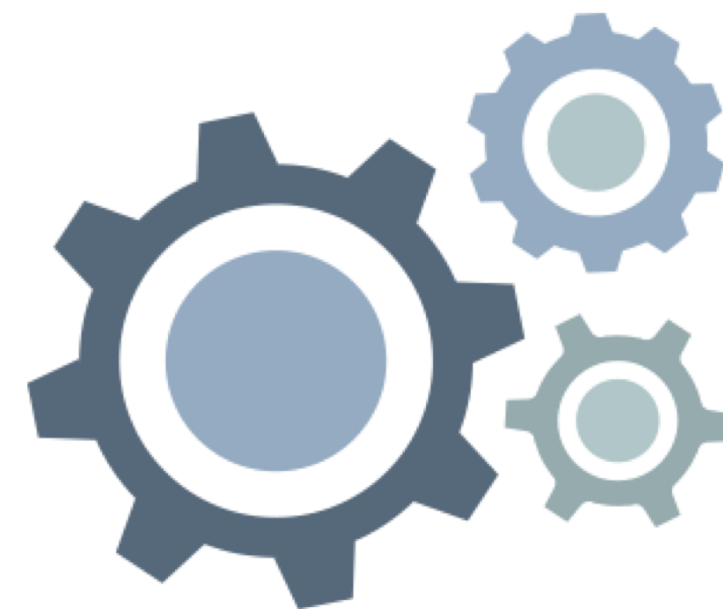
Future of Work

We are a leading voice on key public policy priorities



Career Pathing

Help policy makers
drive workforce
career preparedness
and progression



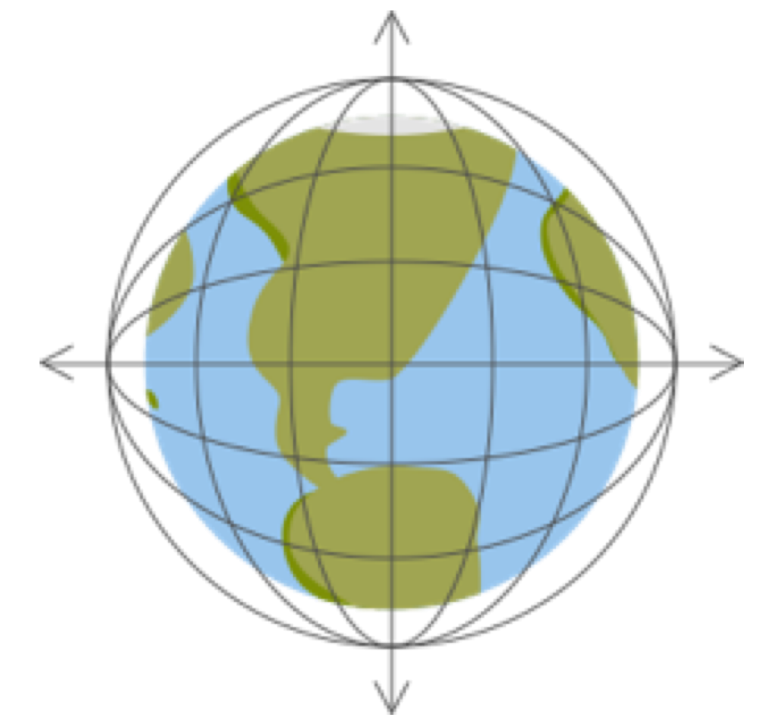
AI, Automation, & Emerging Tech

Help economies take
advantage of new
tech opportunities.



Entrepreneurship

Provide countries
intelligence about
their entrepreneurial
ecosystems.



Global Economic Integration

Help govs connect
talent and knowledge
to economic growth.

Career Pathing

Help policy makers drive
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progression

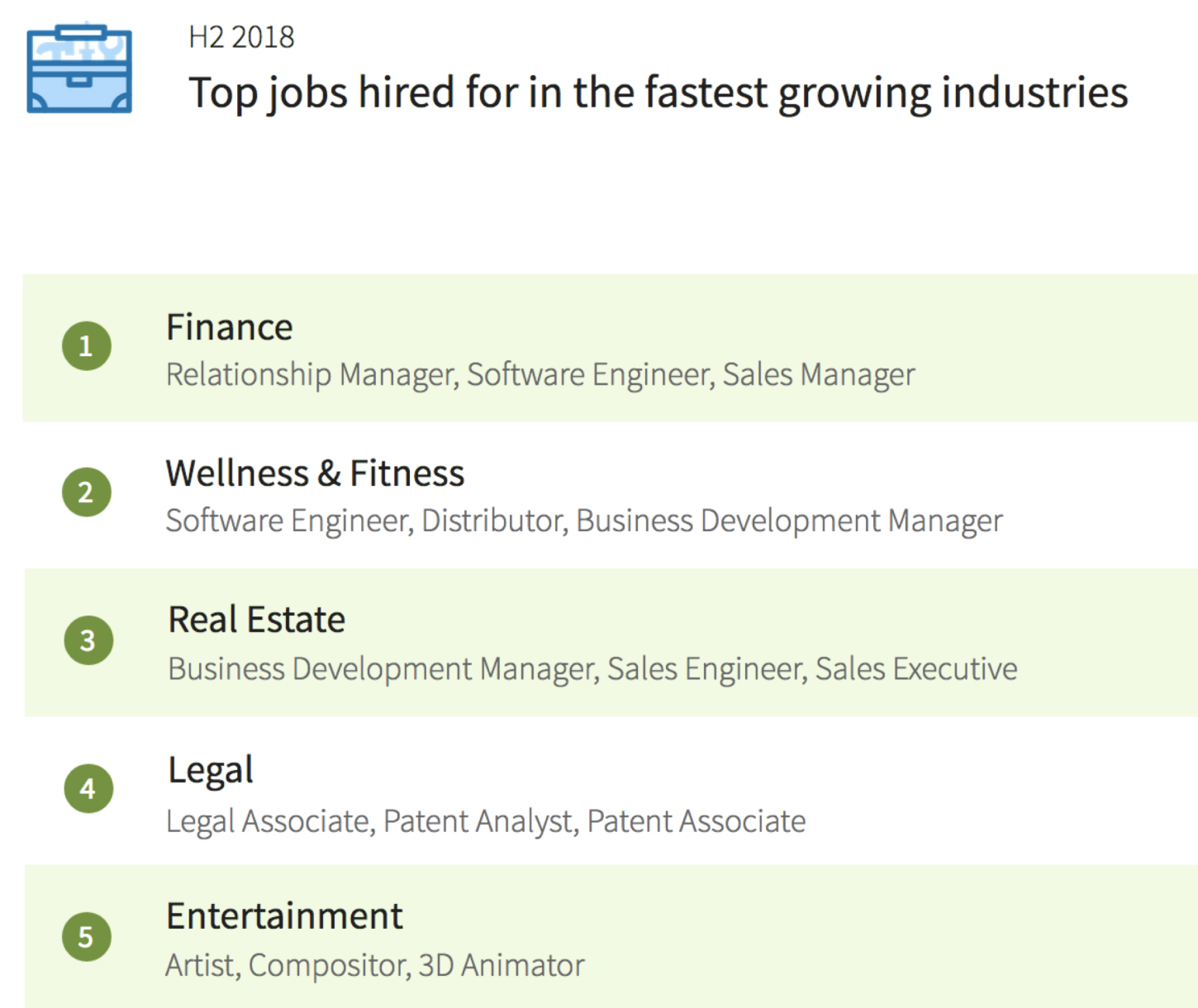


We observe that software engineers and business management professionals are in-demand in India

- In terms of volume of hiring, **Software engineer** is the leading position being hired for across India's principal industries (IT, Manufacturing, Finance).
- **Even** in the rapidly growing **Wellness & fitness industry**, particularly in online healthcare management systems and online pharmaceuticals, software engineers are in-demand.
- Other than tech related roles, **Business management jobs** such as business analysts and business development managers are **also in demand**.



"Jobs hired for" is the number of hires for that job divided by the total hiring in this industry. Only members who switched jobs within the period are counted. Members who move within their organization or move between a parent organization and a subsidiary are included. Members new to the platform are excluded from the measurement.



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Soft skills such as management, team mgmt and leadership, and tech skills such as SQL, Java and C are in-demand

- **Management, Team management and Leadership** continue to be the top 3 soft skills in demand in H2
- Tech skills like **SQL, JAVA and C programming language** are in demand particularly in the software & IT industry.



H2 2018
Top three skills in the largest industries

1	Software SQL, Java, C (Programming Language)
2	Manufacturing Management, Leadership, Engineering
3	Finance Management, Team Management, Leadership
4	Corporate Services Management, Leadership, Team Management
5	Education Management, Leadership, Team Management

For the largest industries (by size), the top 3 skills for successful hires into that industry. Top skills were calculated by looking at hires into those industries during the period and counting the most frequently observed skills.



H2 2018
Top three skills in the fastest growing industries

1	Finance Management, Team Management, Leadership
2	Wellness & Fitness Management, Team Management, Leadership
3	Real Estate Management, Team Management, Leadership
4	Legal Legal Research, Leadership, Management
5	Entertainment Adobe Photoshop, Management, Team Management

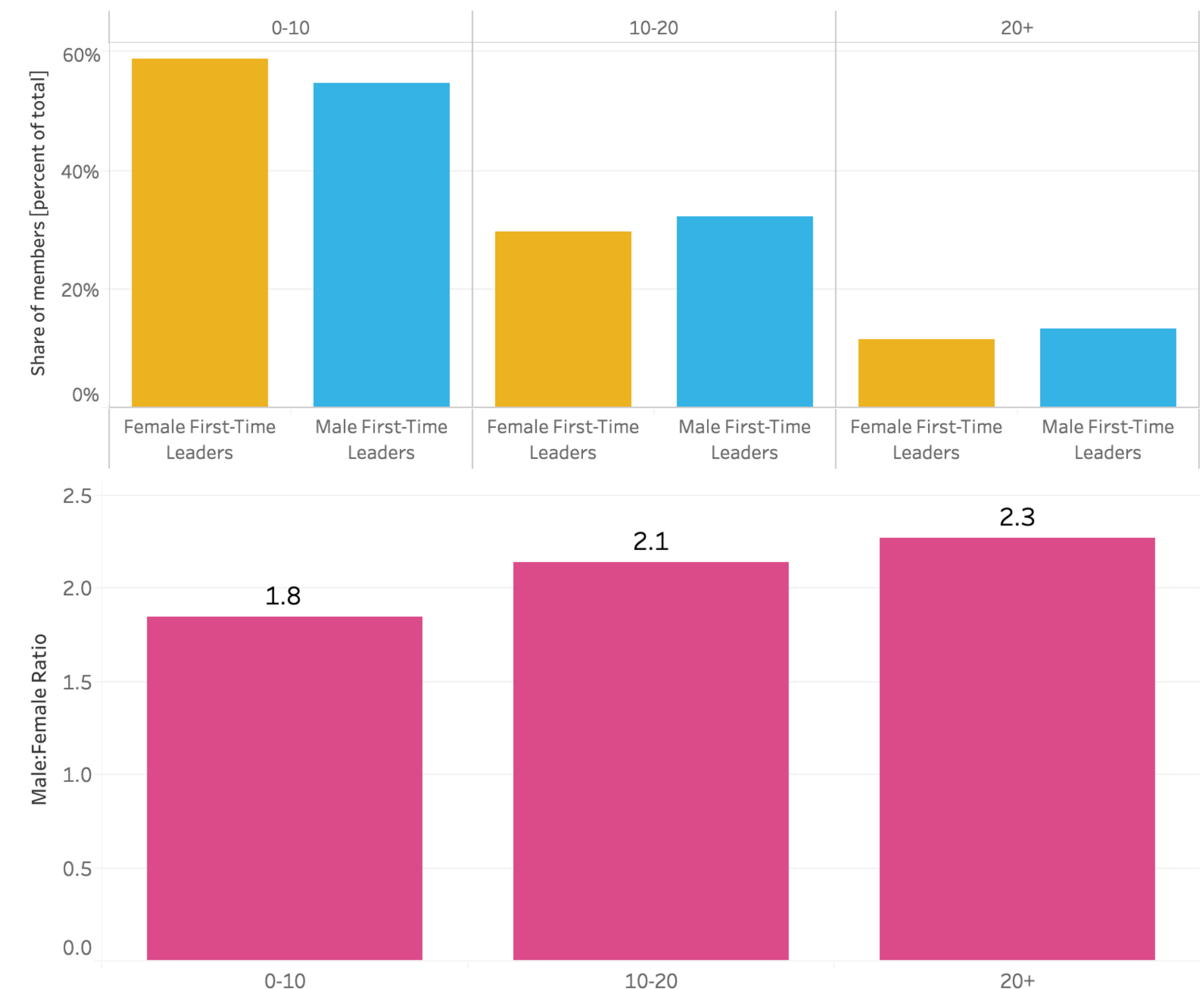
For the fastest growing industries (by net industry flow), the top 3 skills for successful hires into that industry. Top skills were calculated by looking at hires into those industries during the period and counting the most frequently observed skills.

During the course of their careers, women become less and less likely to break into leadership roles

- Overall, there are 2.0 men for every woman who reached a leadership position over the course of their career.
- This gap is lower in the first 10 years and increases as women spend more time in the workforce.
 - For example, this figure is lower for those who reach leadership positions earlier in their career (1.8 man for every woman who becomes a leader with <10 years of experience).
 - For those who became leaders after gaining 20 or more years of experience, the figure rises to 2.3 men for every woman leader.

Aggregated data from Germany, India, Italy, Norway, US

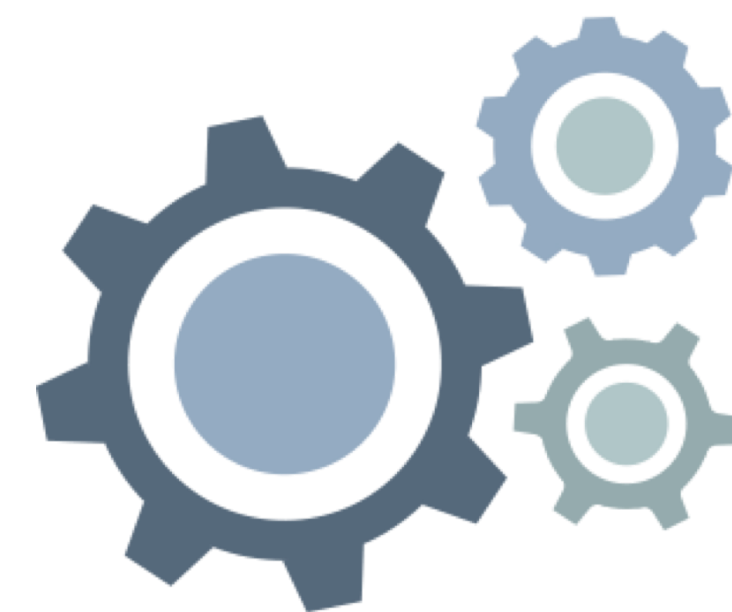
Men vs. Women by Years before 1st Leadership Role



Source: WEF-LinkedIn Partnership

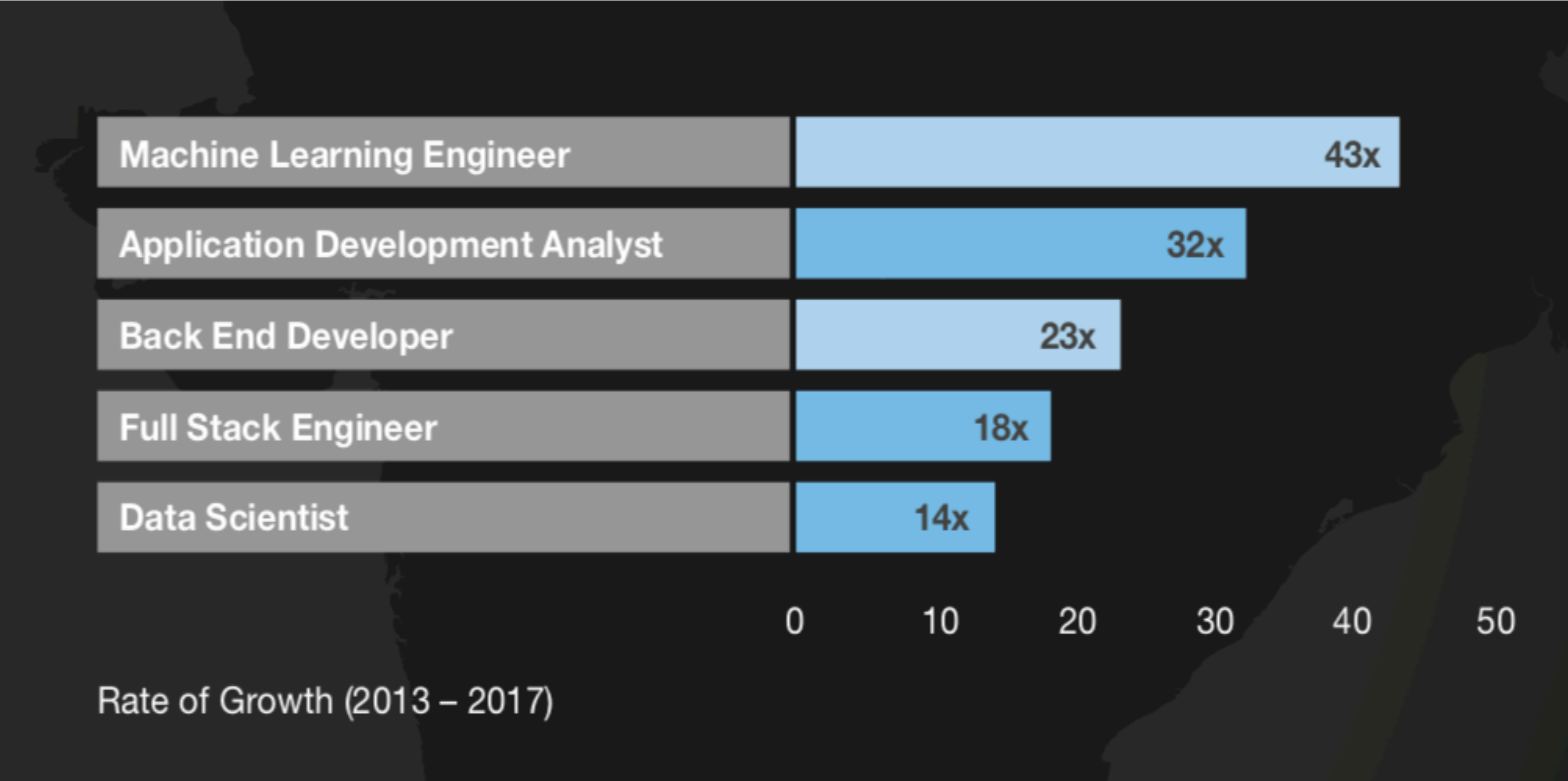
AI, Automation & Emerging Tech

Help economies take advantage of new tech opportunities, re-skill where appropriate, address gender gaps

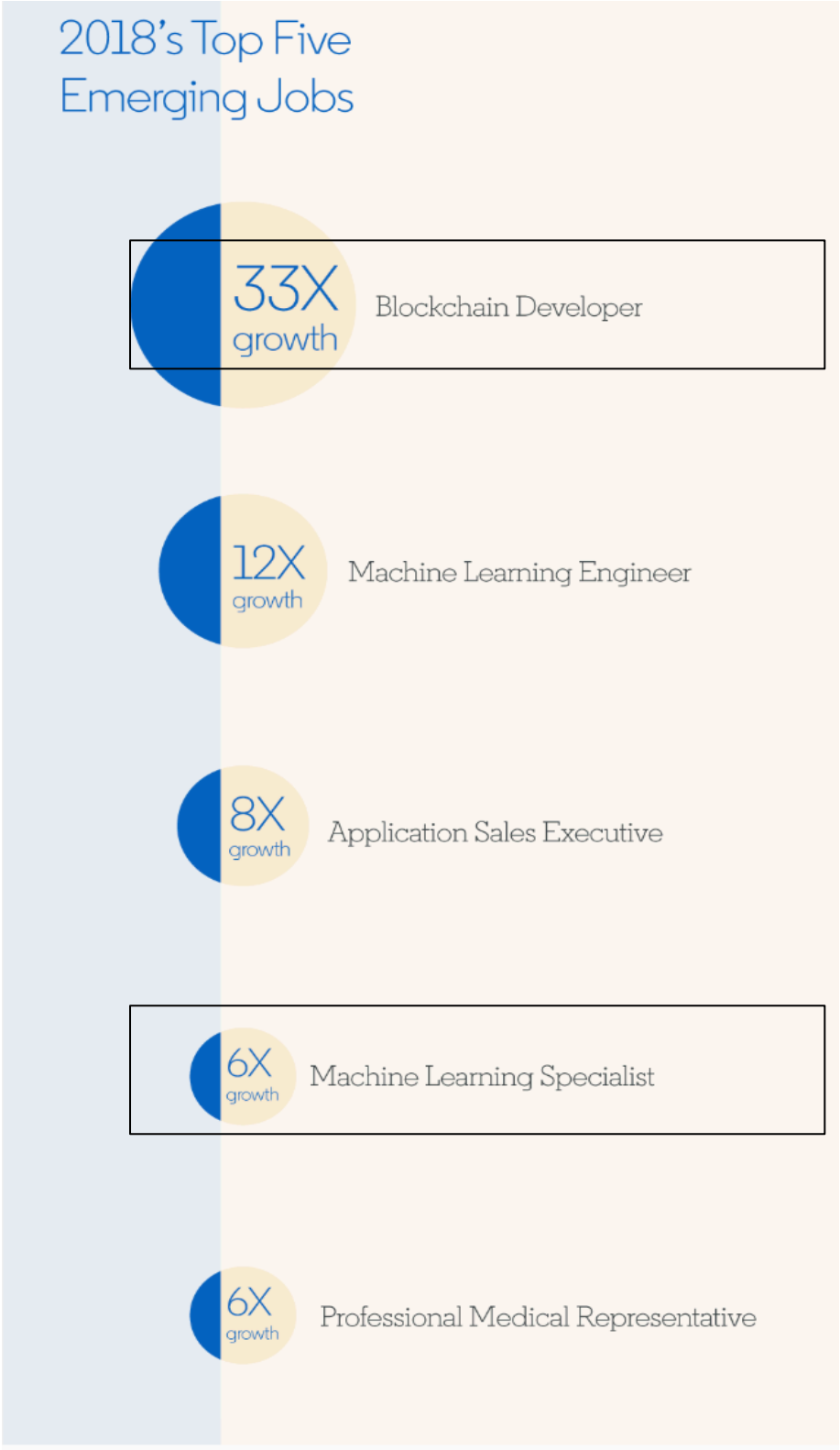


AI related jobs feature amongst the top 5 emerging jobs in US & India

India



US



Curriculum design should reflect key specialist skills relevant to these emerging jobs

MACHINE LEARNING ENGINEER

- Python
- Algorithms
- Data science
- Artificial intelligence
- Deep learning
- Analytics
- Data mining
- Nosql
- Big data
- Natural language processing
- Hadoop

DATA SCIENTIST

- Data science
- Machine learning
- Analytics
- Data mining
- Big data
- Hadoop
- Python
- R
- Management
- Statistical modeling
- Matlab
- Statistics
- Predictive modeling

Machine learning & Data Scientists India

What degrees does this talent have?



Total professionals

- Bachelor's Degree **48%**
- Master's Degree **37%**
- Master of Business Administration **11%**
- Administration **4%**



New graduates

- Bachelor's Degree **51%**
- Master's Degree **32%**
- Master of Business Administration **14%**
- Others **4%**

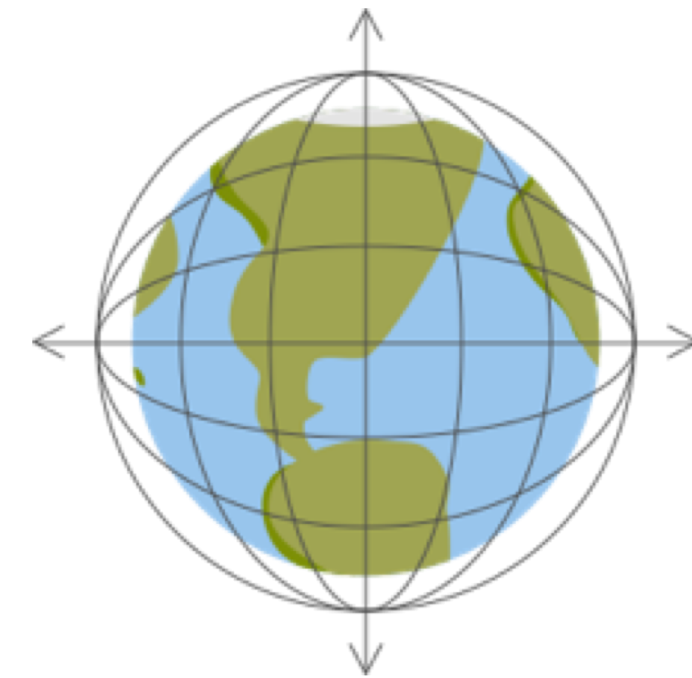
Moreover, policy needs to recognize and address AI gender gaps

- Significant gender gap in AI professionals. Only 22% of AI professionals globally are female
- There are no signs that this gap is closing. Men and women have been adding AI skills to their profiles at a similar rate so while women aren't falling further behind, they also aren't catching up
- Female AI professionals are more likely to work in “traditionally female” industries - such as the non-profit, health care, and education sectors
- Women with AI skills are more likely to work in the use and application of AI, while men are more likely to work in the development of the technology itself



Global Economic Integration

The measurement of how products, services, labor, knowledge, and capital can be exchanged or transacted across political boundaries

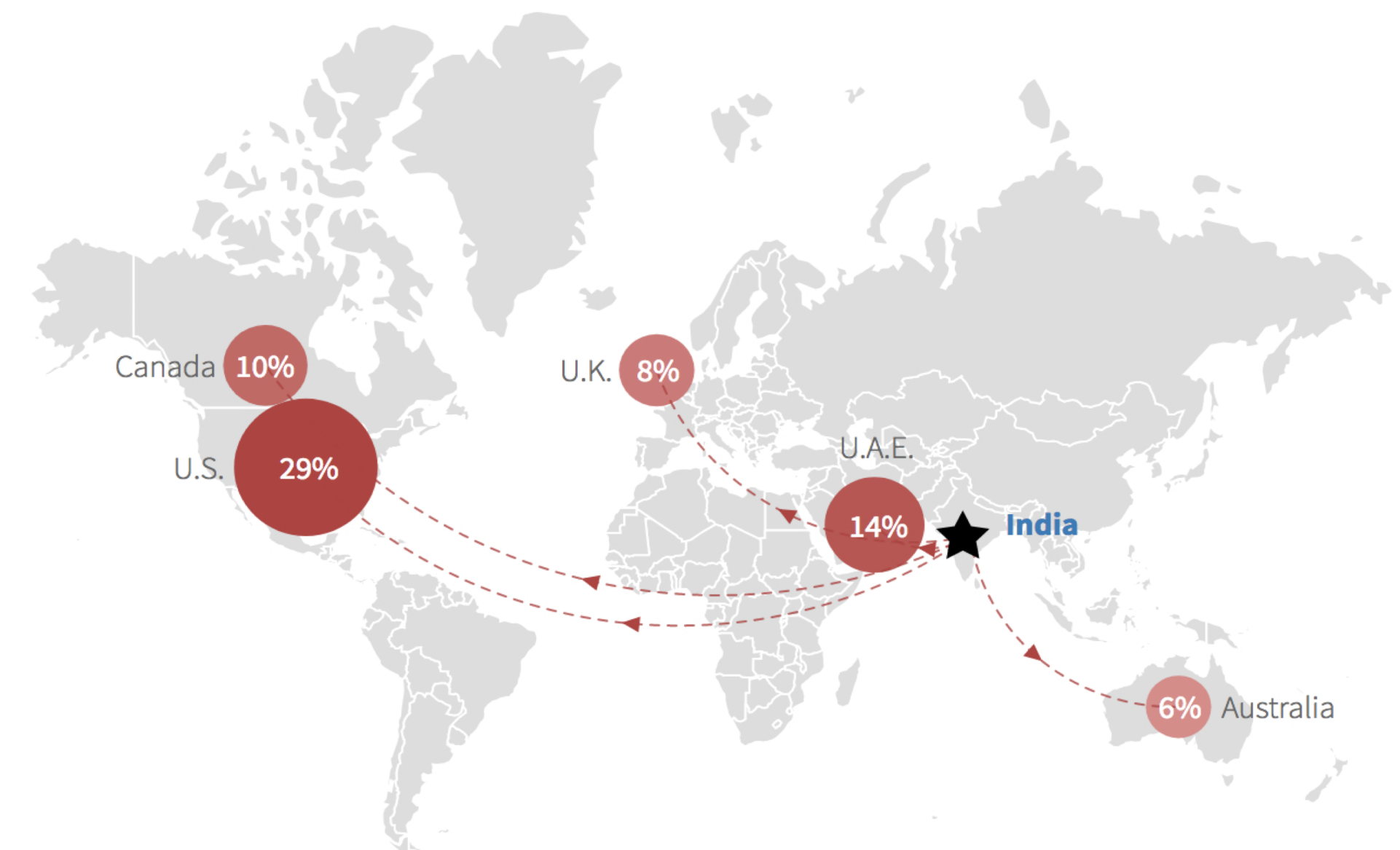


United States is the top destination for talent migrating outside India

- 1 out of every 3 emigrants moving out of India take up a job in United States establishing it as the top destination for international talent migration.
- Other preferred destinations are UAE, Canada, UK and Australia.
- Together, these top 5 destinations account for almost 70% of migrants from India.

H2 2018

Top international destinations for talent
[% share of outflow volume]



We define migration as a member changing their location on their LinkedIn profile. This chart shows the top 10 destination countries that receive migrants from India based on the volume of members migrating out of India. The percent share of migrants going to each destination country over the base of total migrants who move out of India is also calculated.

Germany, US & UK are top partners for in-demand migration

- Germany, followed by US, UK, Australia and Canada have the highest in-demand migration i.e. highest % share of migrants from India taking up a job which features amongst the top 10 jobs by volume being hired for in the destination country.
- 1 of every 5 Indians migrating to Germany is taking up an in-demand job such as software engineer, project manager, or research assistant.

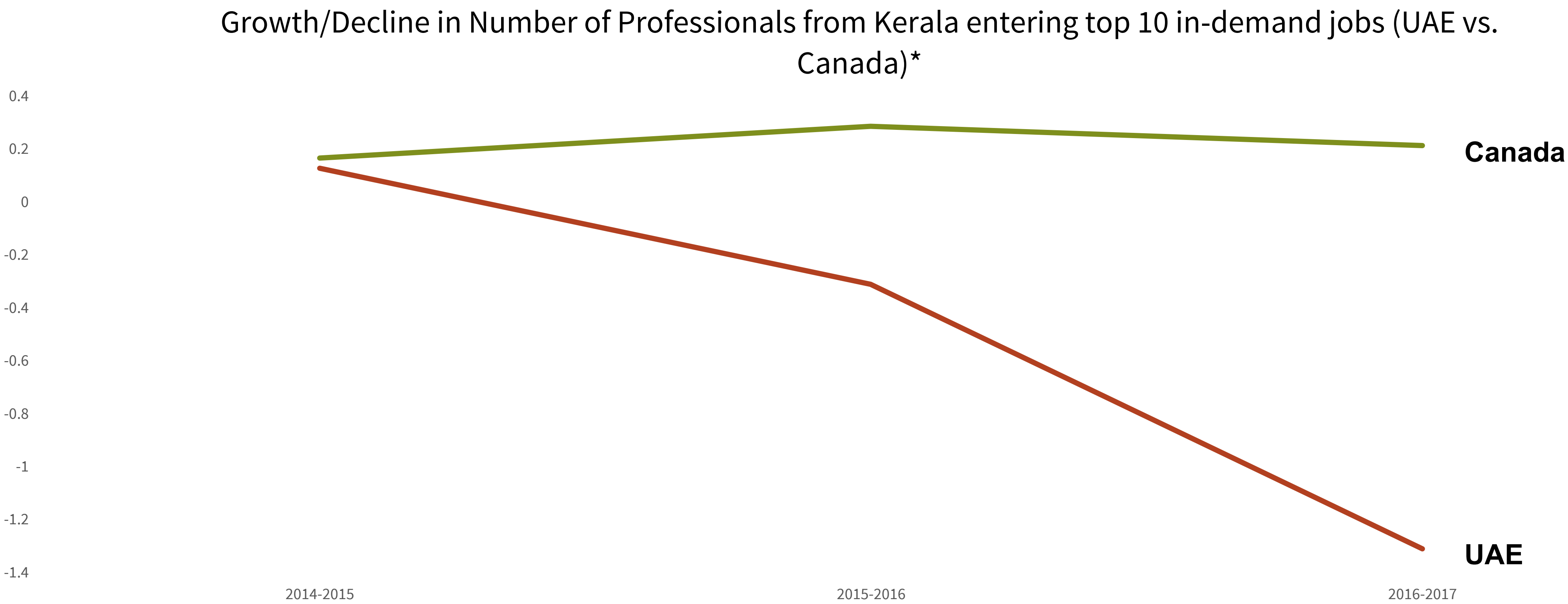
H2 2018

Top destination countries for in-demand migration



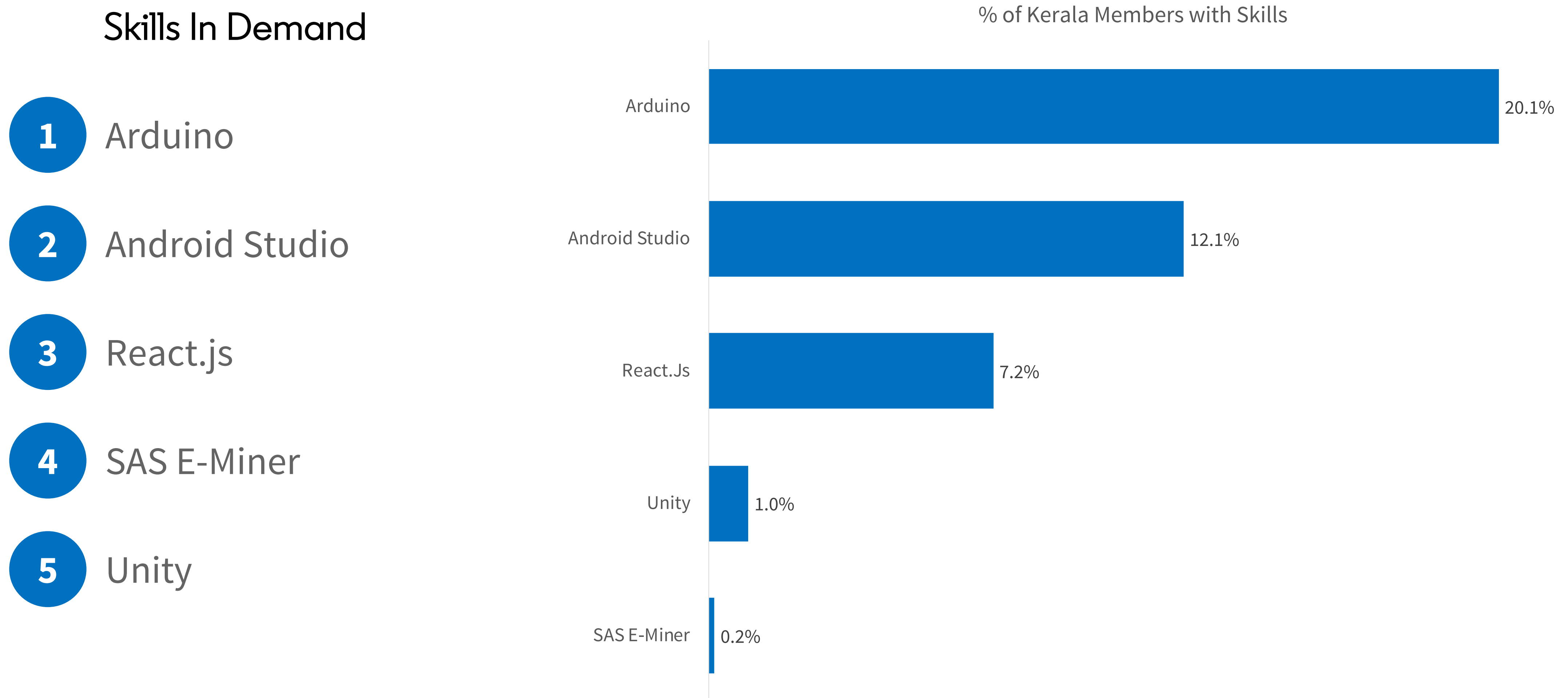
We define migration as a member changing his/her location on his/her LinkedIn profile. This chart shows the top 5 destination countries that receive migrants from India into one of the in-demand jobs (i.e., top-10 jobs most hired for in that destination country). In addition, this chart also lists the top 5 in-demand jobs hired for in each destination country. In-demand jobs taken up by migrants from India are indicated in red.

Kerala talent entering in-demand jobs in the UAE had seen a decline while in-demand migration to Canada had been steadily increasing.



* Data has been normalized for growth/decline in migration | For calculating all growth rates, 2014 numbers are taken as the base

We identified that Kerala's skills supply could meet game development skills (Unity) demand in Malaysia – diversification to high-value and growing markets would help the state



Time for a live-demo

For example: World Bank Dashboard

Link: <https://linkedindata.worldbank.org/data>

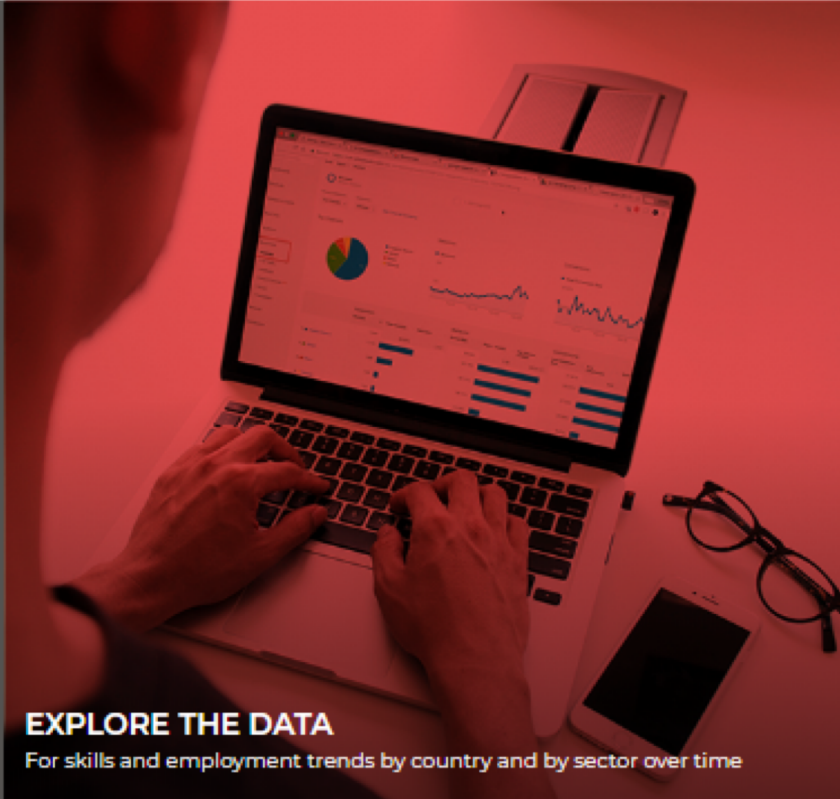
Welcome to our beta site [Click Here for Feedback](#)

Industry Jobs and Skills Trends
DIGITAL DATA FOR DEVELOPMENT

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LinkedIn



EXPLORE THE DATA
For skills and employment trends by country and by sector over time



METHODOLOGY
Learn more about the methodology behind the metrics



BLOGS
On latest news & country stories



ABOUT
The Collaboration

The World Bank Group and LinkedIn share a commitment to helping workers around the world access opportunities that make good use of their talents and skills. The two organizations have come together to identify new ways that data from LinkedIn can help inform policymakers who seek to boost employment and grow their economies.

This site offers data and automated visuals of industries where LinkedIn data is comprehensive enough to provide an emerging picture. The data complements a wealth of official sources and can offer a more real-time view in some areas particularly for new, rapidly changing digital and technology industries.

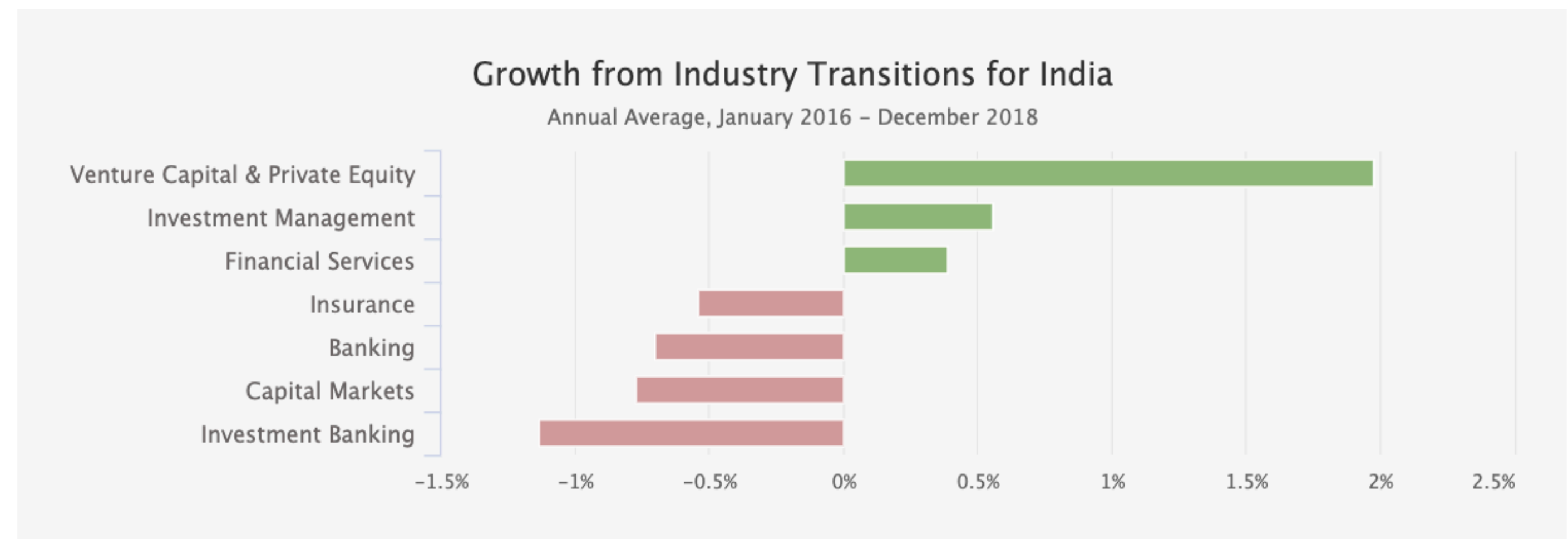
The data shared in the first phase of this collaboration focuses on 100+ countries with at least 100,000 LinkedIn members each, distributed across 148 industries and 50,000 skills categories. In the near term, it will help World Bank Group teams and government partners pinpoint ways that developing countries could stimulate growth and expand opportunity, especially as disruptive technologies reshape the economic landscape. As LinkedIn's membership and digital platforms continue to grow in developing countries, this collaboration will assess the possibility to expand the sectors and countries covered in the next annual update.

This site offers downloadable data, visualizations, and an expanding



Explore growth of industries in your country

In financial services sector, PE/VC space has grown rapidly in India during the last few years



Explore skills that are needed in each industry

The PE/VC industry shows demand for entrepreneurship, growth strategies and investment banking skills

Pick an Industry

Venture Capital & Private Equity ▾

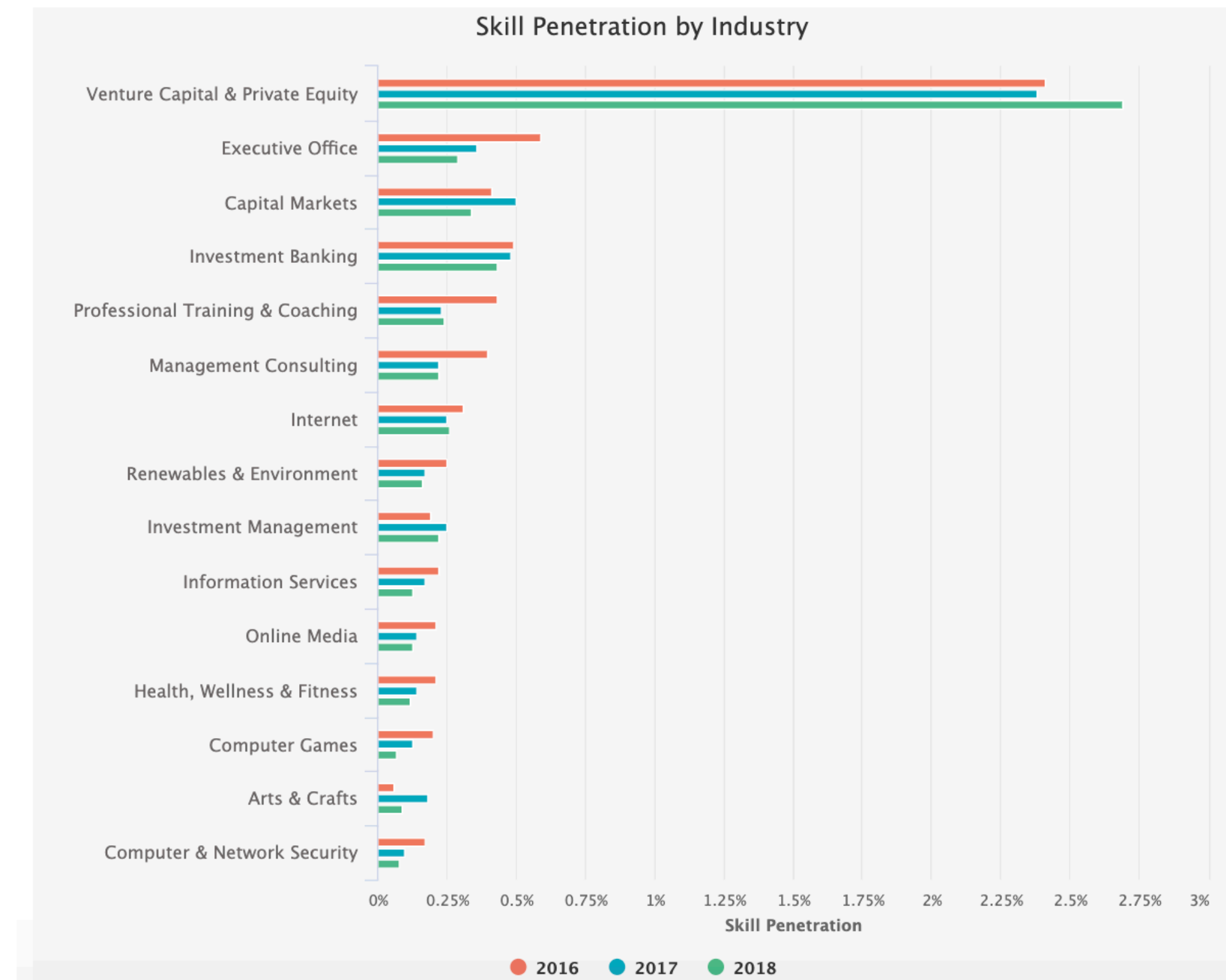
Industry Skills Needs for the Global **Venture Capital & Private Equity** Industry

Based on Skills Added by LinkedIn Members in 2018

1.	Entrepreneurship	6.	Economics
2.	Growth Strategies	7.	Financial Accounting
3.	Investment Banking	8.	Management Consulting
4.	Capital Markets	9.	Leadership
5.	Business Management	10.	Product Marketing

Explore how skills are spreading across industries

Skills in entrepreneurship have become increasingly relevant to PE/VC



Thank you