What the leaders have to say about tech talent migration?

"For us to be successful, Best innovations come from the most surprising places. Emerging Europe has enormous innovative potential. We are looking for ways to keep talented people in their home countries. We believe that the countries of Central and Eastern Europe, thanks to a very good education system, talented staff and openness to new technologies, are in a particularly privileged position to develop the potential of the digital economy."

-Sundar Pichai, CEO of Google

"As a company, Microsoft believes in a strong and balanced high-skilled immigration system. We also believe in broader immigration opportunities, like the protections for talented and law-abiding young people under the Deferred Access for Childhood Arrivals (DACA) Program, often called “Dreamers”. As an immigrant and as a CEO, I’ve both experienced and seen the positive impact that immigration has on our company, for the country, and for the world."

-Satya Nadella, CEO of Microsoft

"If I were a world leader, my goal would be to monopolize the world’s talent. I’d have a very aggressive plan, not to just let a few people in, but I’d be recruiting. Apple believes deeply in the importance of immigration -- both to our company and to our nation’s future. Apple would not exist without immigration, let alone thrive and innovate the way we do."

-Tim Cook, CEO of Apple

"We know at this point that brilliance is pretty evenly distributed around the world, but access to that talent and the ability for that talent to tap into the global ecosystem is very, very different. Having the best engineer on their team be a 26-year-old woman from Nairobi is a really effective way to help [the tech industry] see that the world looks a little bit different than they may have imagined and that’s OK."

-Jeremy Johnson, CEO of Andela
GLOBAL TALENT MOVEMENT MYTHS AND TRENDS

MYTHS

“In United States, West Coast attracts top tech talent”

“Tech talent quality in Tier 2 locations is not catching up with respect to Tier 1 locations”

“Tech talent in China is migrating towards further West”

“Talent migration towards Eastern Europe is not significant”

TALENT MOVEMENT TRENDS

➢ 58% of total international migrants belong to middle income group, whose population size is growing at an accelerated pace. Better lifestyle, education of future generations and upgraded lifestyle are few major push factors for middle income group shifting abroad.

➢ Knowledge walls are breaking across borders with increase in online learning platforms and high flow of students to pursue higher education abroad. ~81Mn registered students on online learning platforms (MooCs) globally in 2018. ~1.8 Mn International Students studying in USA, UK, Australia, Canada, Japan globally in 2018.

➢ US Tier-2 and Tier-3 locations are experiencing high tech talent growth due to expanding footprint by Tech giants, start-ups and other Fortune 500 companies

➢ A number of US companies are expanding their operations in Canada, where hiring foreign nationals is much easier. Majority of US Tech talent is migrating to Canada with the US restrictive approach towards issuing visas

➢ UK and Ireland are seeing the highest decline in inbound tech talent with the headcount reducing by 3.4% and 2.8% respectively

➢ Germany’s sharp rise in developers, outstripping UK, is a combination of STEM students and immigration. It is pumping venture money into its fast-emerging tech ecosystems

➢ Netherlands and Spain has caught up in terms of education of entrepreneurship, software engineers boosting tech ecosystem

➢ Limited tech talent movement is seen in Western regions and high movement within emerging “Megalopolis” regions near inland areas of East-Coast Tier-1 cities. This is primarily due to increasing land cost in East coast region

➢ In India, Vadodara and Ahmedabad together account for 49% installed tech talent among Tier-II cities, given that many GICs are setting up centres and start up ecosystem is also growing
Tech Talent Migration: Europe and Canada are seeing major tech talent inflow from Asia, Africa and North America

**ASIA**
- Protectionist mentality of US, Australia and Singapore, majority of tech talent from India is moving to Canada, Europe, Middle East and Japan
- Centre of China and Globalization is implementing policies such as guaranteed loan for start-ups, lowering threshold for IP financing etc for its Chinese residents to return back to country

**EUROPE**
- Tech Talent is migrating from UK to Germany after Britain exit from European Union
- IT talent in Ukraine is relocating to USA & Canada due to territorial complicacies in Ukraine
- French President Macron’s recently asked its IT specialists to relocate to Paris

**NORTH AMERICA**
- US is protecting innovation through strong IP laws.
- Majority of US Tech talent is migrating to Canada with the US restrictive approach towards issuing visas
- Canada’s "Express Entry" programme allows skilled workers to apply to immigrate to Canada.

**AUSTRALIA**
- Australia’s managed migration programme targets people with certain demonstrable skills and grants them permanent residency in the country
- 56% of Australia PR immigrants are from Asia

**AFRICA**
- Companies like Andela, trains software developers and then places them in salaried position in firms across Asia, Europe, the Middle East, and US.

**LATIN AMERICA**
- Latin America government is making huge efforts to become and IT outsourcing hub with programmes such as Program AR, Plan Vive Digital etc
Tech Talent Movement: Canada, Germany, UK, France, Australia are few top countries with positive net migration of tech talent

NYC and Boston
• Top representation from Indian and Chinese students in Pursual of higher education in instate such as MIT, Harvard and NYU
• Global FinTech hub in NYC and mature research ecosystem for high end engineering in Data science, Biomedical in Boston attract global talent

Austin, Dallas and Charlotte
• Local talent movement is driven largely due to American tech giants, Banking giants and retailers expanding product development and IT teams in Austin and Dallas
• Indian SPs have expanded near shore talent due to cost advantage and post implementation of HI-B Visa

Amsterdam
• Amsterdam is emerging as a tech hub. Many of the Silicon Valley companies including Google, Uber, Salesforce, and Cisco have setup centres in the city. In 2018, city’s start-ups received funding of €194m - which is 76% of the Netherlands’ total start-up funding.

Berlin and Munich
• Tech Talent is migrating from United Kingdom to Munich & Berlin after fall of pound value & Britain exit from European Union.
• Berlin’s sharp rise in developers, outstripping UK, is a combination of STEM students and immigration.

Ontario and Toronto
• With the expansion & establishment of offices of Tech Giants Google, Microsoft, and Uber at Ontario and Toronto, Tech Talent started to migrate to Canada.
• Advanced Tech courses & collaborations between universities are attracting Tech Talent from China & India.

Sydney & Melbourne
• Sydney & Melbourne have thriving start-up ecosystems in FinTech & AdTech space. Microsoft brought its intensive program for start-ups to Sydney.
• Australia is among top-5 countries in blockchain & AI-related patents & the New Global Talent Visa Scheme is attracting tech talent from India.

Paris
• Introduction of Immigration visas (uncapped) for Tech workers to assist in the growth of start-up ecosystem.
• The onset of Brexit in 2018, has resulted in Paris becoming the single biggest technological hub in EU

Chongqing and Hubei
• Megalopolis and emerging Tier 2 city clusters like Chongqing, Hubei, Dongguan in proximity of top tech cities are causing talent migration towards west.
• Companies Such as Huawei, Foxconn, Xiaomi are setting up centers in Tier 2 cities influencing the talent to relocate
Factors affecting talent migration: Democratization of innovation, government policies & socio-economic factors are primarily affecting internal & external migration

**FACTORS**

- **Democratization of Innovation**
  - e-learning, Exchange programmes, MooCs
    - Ex: ~7mn online enrolments from India in 2017
  - Scholarships to International Students
    - Ex: Rhodes Scholarship

- **Govt. Policies & Political Scenario**
  - Stringent Visa & Work-permit rules
    - Ex: New H-1B rules in the US
  - Exit from Regional Blocs
    - Ex: Brexit
  - Political unrest & instability
    - Ex: Middle-east

- **Socio-economic Factors**
  - High income-tax rates
    - Ex: In Norway, Australia, Canada, UK
  - Higher wages
    - Ex: Migration from India to US, UK, Canada, etc

**GEOGRAPHICAL IMPACT**

- Many prestigious universities such as Stanford, Princeton, University of Michigan are offering courses online. MOOCs has helped in addressing the quantity and quality education gaps by supporting and replacing traditional classrooms. India has the second largest MOOC user base after the US. The talent pool thus upskilled is moving from Tier-II cities to Tier-I cities.
  - Countries such as USA, UK and Australia are attracting international students by providing government-funded & university-specific scholarships.
- Canada, under its more flexible Global Talent Stream system, is attracting immigrant talent from the US. Major US tech firms like Amazon, Microsoft, Salesforce, Uber, etc are expanding into Canada to accommodate their international talent.
  - As the UK is tightening its immigration policy, Germany, France and the Netherlands are increasing their share in attracting non-European tech-talent. Germany is the top destination for intra-European tech talent, followed by Spain, France & Switzerland
  - Political instability in the Middle-east accelerated the migration of talent pool. More than 50% of Arab tech talent has moved to OECD countries (as of 2018)
- USA has lower tax rates compared to other developed countries- this acts as a major pull factor for talent pool to prefer working in the US (esp. from Canada near by)
  - Developed countries (US, UK, Germany, Australia, etc.) offer salaries that are 2-4 times the income earned in India for similar roles. Higher wage is a pull factor for tech talent migration from developing countries to developed countries
Democratization of Innovation: Around 2020, the middle class population, which is increasingly contributing to the migrant talent across the globe, will become majority of global population for the first time ever.

- **Growing global middle class population**
  - 2017: 3.8 Bn
  - 2030: 5.3 Bn

- **Accelerated remittances growth to middle income countries (2018)**
  - Remittances to Middle Income countries: 4%
  - $147 Bn
  - Major remittance recipients: China & India

- **58% of total international migrants belong to middle income group**

- **2018**
  - 88 percent of the next billion entrants into the middle class will be in Asia
  - 130 Mn in Rest of the World
  - 210 Mn in Rest of Asia
  - 350 Mn in China
  - 380 Mn in India

- **Better career opportunities**
- **Better education for future generations**
- **Upgraded lifestyle and experience**

- The rise of middle class was a factor allied to the IT revolution in developing countries.
- Prime technology related educational opportunities had become too expensive from premier universities. So, a lot of smaller institutes as well as online educational forums mushroomed across countries with a promise of lucrative jobs abroad and bring back money to home country.
- Mutual funds, retail equity trade and other non-banking financial instruments has seen a phenomenal growth, so has the consumerism culture of the country.
- Growth in disposable income and credit culture put televisions, mobile devices, automobiles, real estate etc. well within the reach of the masses thus stimulating demand.
**Democratization of Innovation**: Knowledge walls are breaking across borders with increase in registration of students in online learning platforms (MooCs) globally in 2018

<table>
<thead>
<tr>
<th>MOOCs Global Enrolments (2011-2018)</th>
<th>Highest Enrolments from India</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>81M</strong> Enrolments Globally</td>
<td><strong>Coursera</strong></td>
</tr>
<tr>
<td><strong>30%</strong> Enrolments in 2018 alone</td>
<td>30 million</td>
</tr>
<tr>
<td><strong>800+</strong> Universities</td>
<td><strong>India</strong></td>
</tr>
<tr>
<td><strong>9,400</strong> Courses</td>
<td>14 million</td>
</tr>
</tbody>
</table>

**Top 5 Countries by learners base**

<table>
<thead>
<tr>
<th>Country</th>
<th>Enrolments</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>~7.8 Mn</td>
</tr>
<tr>
<td>China</td>
<td>~2.3 Mn</td>
</tr>
<tr>
<td>Mexico</td>
<td>~1.7 Mn</td>
</tr>
<tr>
<td>Brazil</td>
<td>~1.6 Mn</td>
</tr>
<tr>
<td>India</td>
<td>~3.4 Mn</td>
</tr>
</tbody>
</table>

Charles Severance, Professor, Coursera
University of Michigan School of Information

“I graduate about 900 new python programmers every week and 20% of them are in India. That means I personally graduate 180 new python programmers every week in India.”
Democratization of Innovation: ~1.8 Mn International Students studying in USA, UK, Australia, Canada, Japan globally in 2018

1.8 Million International Students

**UNITED KINGDOM**
- University of Nottingham
- Imperial College
- University of Birmingham
- IISC
- MIT

**JAPAN**
- Beijing Jiotong University
- IISC
- Setsunan University

**UNITED STATES**
- University of Florida
- University of Windsor
- IIT, Bombay
- Monash University
- Concordia University

**CANADA**
- University of Waterloo
- IIT, Madras
- Concordia University

**AUSTRALIA**
- Penking University
- University of Melbourne

**CHINA**
- Beijing Jiotong University
- IISC
- Setsunan University

**INDIA**
- IIT, Madras
- IISC, Bengaluru
- Center for Sensorimotor Neural Engineering, Seattle

**MEXICO**
- University of Florida

~1.8 Million International Students

**Top Destinations**
- USA: ~216K
- INDIA: ~94K
- CANADA: ~20K
- MEXICO: ~12K
- CHINA: ~380K
- JAPAN: ~133K
- UNITED KINGDOM: ~700K
- AUSTRALIA: ~351K
**Democratization of Innovation**: Top leadership in majority of tech giants is from immigrants

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**Immigrant Executives**

- More than half of heavily funded U.S unicorns have an immigrant as a founder or CEO
- ~43% of companies in the 2017 Fortune 500 (List) were founded or co-founded by an immigrant or the child of an immigrant
- Over 25% Immigrants Form new U.S. businesses, driving entrepreneurship in major States

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### Immigrant Executives

- **Sundar Pichhai**
  - CEO, Google; Board member of Alphabet
  - Driving major AI innovations such as Google Home, Google Duplex, Google AI, Tensor etc

- **Satya Nadella**
  - CEO, Microsoft
  - Satya transformed AI, VR landscape by innovations such as Holoportation, Microsoft Pix, Skype Translator

- **Safra Catz**
  - CEO, Oracle
  - Santa aims to initiate innovations in Cloud Technology such as Oracle Autonomous Database Cloud, & Oracle Infinity

- **Jeff Bezos**
  - CEO, Amazon
  - Redefining Tech landscape by new initiatives such as Amazon Flex, Autonomous Car, Amazon Prime Air, Amazon Locker

- **Steve Chen**
  - Co-Founder, Youtube, AVOS
  - Steve spearheads AVOS, a Technology company driving innovation in developing Apps in real-time.
Govt. Policies & Political Scenario: Favourable ‘Immigration policy changes’ for techies and entrepreneurs are highly impacting talent mobility in countries like Canada and France

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**Favourable VISA Policy**

**POLAND**

“Start in Poland” Program: A simplified Visa route for foreign tech startup Entrepreneurs with special legal, administrative, and financial benefits

**FRANCE**

French Tech Visa: Fast-track procedure for international tech talent to obtain a residence permit known as the “Passeport Talent” (“Talent Passport”)

**ESTONIA**

Startup Visa: Initiative to establish startup in Estonia by Non EU tech migrants with a chance of Permanent residency without any “65,000” investment required in Estonia according to general “Schengen” VISA scheme

**UNITED KINGDOM**

UK Startup Visa: Faster Visa process for tech entrepreneurs and their families coming to UK with a provision of permanent residency upon 5 year completion

**CANADA**

Express Entry program: Smooth and hassle free application process for tech immigrants for Permanent residency in Canada

**NEW ZEALAND**

Global Impact Visa (GIV): A three-year work visa that offers a path to permanent residency for entrepreneurs, investors and tech start-ups

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**Affects / Outcomes**

Estonia had received 325 applications from 47 countries in 2017 alone by Non-EU nationals to work for the Estonia’s startups

Canada Express Entry profile submissions increased from 200 K to 600 K in past 3 years

GIV spots in New Zealand increased from 100 to 400 in last 3 years

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**Tech Talent Migration Index**

Note: ‘Tech talent Migration index’ indicates the net influx of talent to the countries depending on impacting factors like attractive government policies, faster and better visa approvals and location preference of ‘Immigrants’ for better sustainability and opportunities
United States: US Tier-2 and Tier-3 locations are experiencing high tech talent growth due to expanding footprint by Tech giants, start-ups and other Fortune 500 companies.

Tech Talent growth across top tier-1 cities is very low due to maturing ecosystem of Start-ups and Tech giants. Tier-2/3 locations are experiencing high growth due to expanding footprint of Software and IT centres and hitech start-ups.

Top 10 Locations

<table>
<thead>
<tr>
<th>Location</th>
<th>Avg. growth rate for Top 10 locations</th>
<th>0.9%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bay Area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New York</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Washington</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dallas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seattle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chicago</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atlanta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Los Angeles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boston</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Denver</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tier 2/3 locations and Long Tail

<table>
<thead>
<tr>
<th>Location</th>
<th>Avg. tech talent growth rate for Tier-2 location and long tail</th>
<th>3.5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bay Area</td>
<td>Employed tech Talent</td>
<td></td>
</tr>
<tr>
<td>New York</td>
<td>% Positive Net Migration rate</td>
<td></td>
</tr>
<tr>
<td>Washington</td>
<td>% Negative Net Migration rate</td>
<td></td>
</tr>
</tbody>
</table>
| Tier 2/3 locations are experiencing high growth due to expanding footprint of Software and IT centres and hitech start-ups.

Available tech talent count (2018)

Net Migration rate

% Positive Net Migration rate

% Negative Net Migration rate
US -Tech Giants Migration: Tech companies such as Google, Microsoft and Amazon are optimizing engineering teams by distributing product development in Tier-2 cities and sustaining high end engineering talent in West-Coast.

- **Austin**
  - Facebook employed 700 employees for its new centre in Austin.
  - Apple is spending $1 billion to build its new campus and planning to hire 10,000 employees.
  - Walmart has opened an engineering hub to develop emerging technologies to use across the company’s global operations.

- **Chicago**
  - Facebook is planning to open its new office in Chicago and it is expected to hire 500 employees.
  - Amazon is planning its second headquarters in Chicago and it is planning to hire 50,000 employees.

- **Boston**
  - Amazon is starting its 4th centre in Seaport District and it is planning to hire 2,000 employees by 2021.
  - VMware has leased 37,948 sq. at the Lafayette City Centre in Boston.

**Net Inflow Migration**

**Net Outflow Migration**

*Note*: DRAUP’s proprietary talent module was used to analyse jobs by job roles and skill type across locations.
US - BFSI Technology Talent Migration: Finance companies are migrating their Technology Talent from cities like New York & Chicago to cheaper Tier 1 & Tier 2 cities like Jacksonville, Salt Lake city, Chandler (Mid and Back-office functions)

**Top locations for BFSI companies to open their Technology centres**

- **Austin**: 2.9%
- **Chandler**: 0.1%
- **Salt Lake City**: 0.1%
- **Durham/RTP**: 1.5%
- **Jacksonville & Tampa**: 1.5%

**Note**: DRAUP’s proprietary talent module was used to analyse jobs by job roles and skill type across locations.
US - Millennial migration patterns also show the movement towards Tier 2 locations such as Tempe, Dallas, Minneapolis, Nashville.
Europe: UK and Ireland are seeing the highest decline in inbound tech talent with the headcount reducing by 3.4% and 2.8% respectively.

Variation in percentage intra-European migratory talent for the top 10 destinations – 2016 to 2018

<table>
<thead>
<tr>
<th>Country</th>
<th>2016 (% of talent)</th>
<th>2018 (% of talent)</th>
<th>Change in Inbound talent percentage for UK &amp; Ireland combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>12.8</td>
<td>14.6</td>
<td>+1.8%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>14.6</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>7.6</td>
<td>8.5</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>6.8</td>
<td>8.1</td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>6</td>
<td>7.7</td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>5.9</td>
<td>4.9</td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>4.2</td>
<td>4.9</td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>4</td>
<td>6.8</td>
<td>-6.2%</td>
</tr>
<tr>
<td>Sweden</td>
<td>2.6</td>
<td>3.4</td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td>2.8</td>
<td>3.2</td>
<td></td>
</tr>
</tbody>
</table>

Note: The represented data has been analysed using DRAUP Proprietary Talent Database.
Africa: Rapidly rising internet and mobile population, key global company collaborations and higher education opportunities have resulted in global tech movement outflow

10,000+
Software/IT developers migrated foreign countries in last 5 years

50,000+
African students migrated to US and UK alone for studies

Nigeria, Egypt
Export the highest number of students
South Africa, Egypt
Export the highest number of IT talent

400+
Migrated Employees are currently at VP or higher levels
Key examples of CXO level employees have been mentioned below

United States 23%
San Francisco, New York, Washington DC, Houston

United Kingdom 14%
Riyadh, Jeddah

Saudi Arabia 10%
London, Reading, Cambridge, Guilford, Edinburgh

Australia 9%
Sydney, Melbourne, Brisbane, Perth

UAE 9%
Dubai

Canada 8%
Toronto, Vancouver, Calgary, Montreal, Ottawa

Germany 7%
Berlin, Munich, Stuttgart, Frankfurt

Other Countries 20%
Cairo, Giza

Major Target Companies
Microsoft
IBM
Amazon
Google
Oracle
Accenture
Intel
SAP

Migration Factors
IT Service companies such as Andela partner with global technology companies to outsource African developers, some of who eventually end up migrating to the respective foreign company locations.

Students Migration major factors:
• Increased number of scholarship opportunities
• Higher number of exchange programs
• Leniency in Visa rules, particularly in Australia and Canada

IT talent migration major factors:
1. Higher pay scale
2. Quality of Life
3. Further Opportunities

Students Migration major factors:
• Increased number of scholarship opportunities
• Higher number of exchange programs
• Leniency in Visa rules, particularly in Australia and Canada

Note: The represented data has been analysed using DRAUP Proprietary Talent Database
China: Limited tech talent movement in Western regions and High movement within emerging “Megalopolis” regions near inland areas of East-Coast Tier-1 cities

**Past trend**
- Guangdong, Shanghai and Zhejiang provinces had the highest net “migrant” in China
- Talent moving to East coastal regions of China for better economic opportunities

**Future Scenario in China**
- Reduced inflow in eastern coastal cities in Future (2018-30)

**Key Drivers**
- Emerging new age technology hubs and industrial areas in Tier 2 regions
- Automation causing slow growth in Tier 1 cities
- Unfavourable government policies restricting talent flow in Tier 1 cities

**Key Insights**
- Reduced talent inflow in East coastal provinces
- Reduced talent outflow from Tier 2 locations

**Note:** The represented data has been analysed using DRAUP Proprietary Talent Database
India: Vadodara and Ahmedabad together account for 49% installed talent among Tier-II cities, given that GICs are setting up their centres and the start-up ecosystem is growing.

**Total GIC Tech talent**: 9,000

**Total GICs**: 72

CASE STUDIES

Nissan motors has opened a digital GIC in Thiruvananthapuram to further its global digital transformation agenda.

“We are building know-how and hope to be the global test factory for Allianz”, Ashish Patel, Head of Allianz India operations, Thiruvananthapuram

Xylem plans to deploy its locally developed technology solutions to solve local market challenges in Vadodara.