

NIIT Careers @ Campus

White Paper

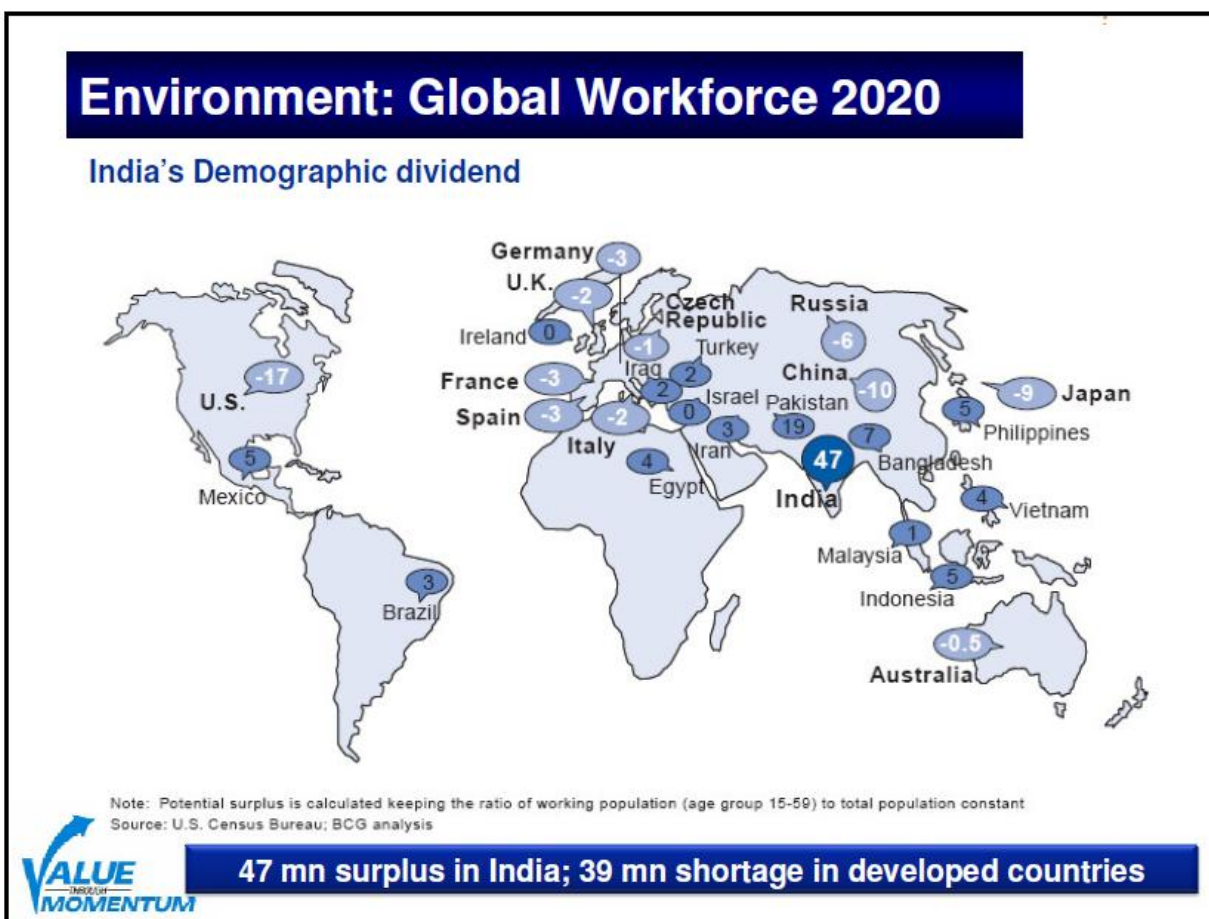
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GLOBAL DEMOGRAPHIC CHANGE

While India struggles with a burgeoning population of educated youth, the rest of the world, especially developed countries, faces a shortage of working-age people, caused largely by lower birth rates and an ageing working population. While the requirement for skilled workers in these markets is increasing in line with economic growth, the availability of skilled people simply isn't keeping pace. In professions like IT services, medicine, and education, the problems are already beginning to be felt.

A report by AIMA, CII and BCG projects that developed countries will have a shortage of 39 million working population in 2020 while India will have a surplus of 47 million people in working age group.



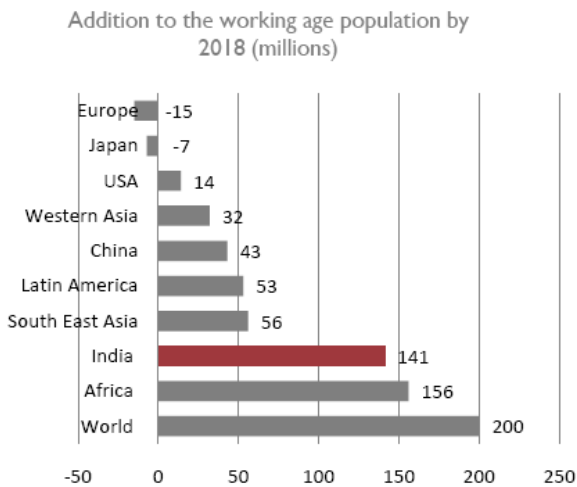
The challenge faced by other nations presents an opportunity for India. With its large population of educated youth, India can provide a host of services to such countries. These services fall into two broad categories:

1. Professional services to the world provided remotely from India - IT services, IT enabled services, telemedicine, e-learning, etc.
2. Customers serviced in India (import of customers) - special service tourism (health care, education services), leisure tourism, etc.

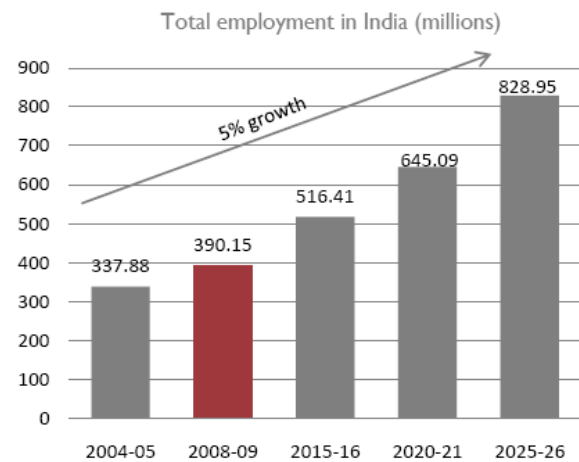
However to take advantage of this opportunity India would need to focus on education and training of its growing workforce.

INDIA OPPORTUNITY

Changing demographics: Rise in working population



Source: "India Economics," Morgan Stanley, 17 November 2009



Source: India Labour Report 2009

Source: *India - Economy and Trends, 2011 report by IBEF*

- India is among the world's youngest nations with a median age of 25 years as compared to 43 in Japan and 36 in the US.
- 13 million people enter India's urban work force each year.
- Total employment in India to reach 516 million by 2015-16

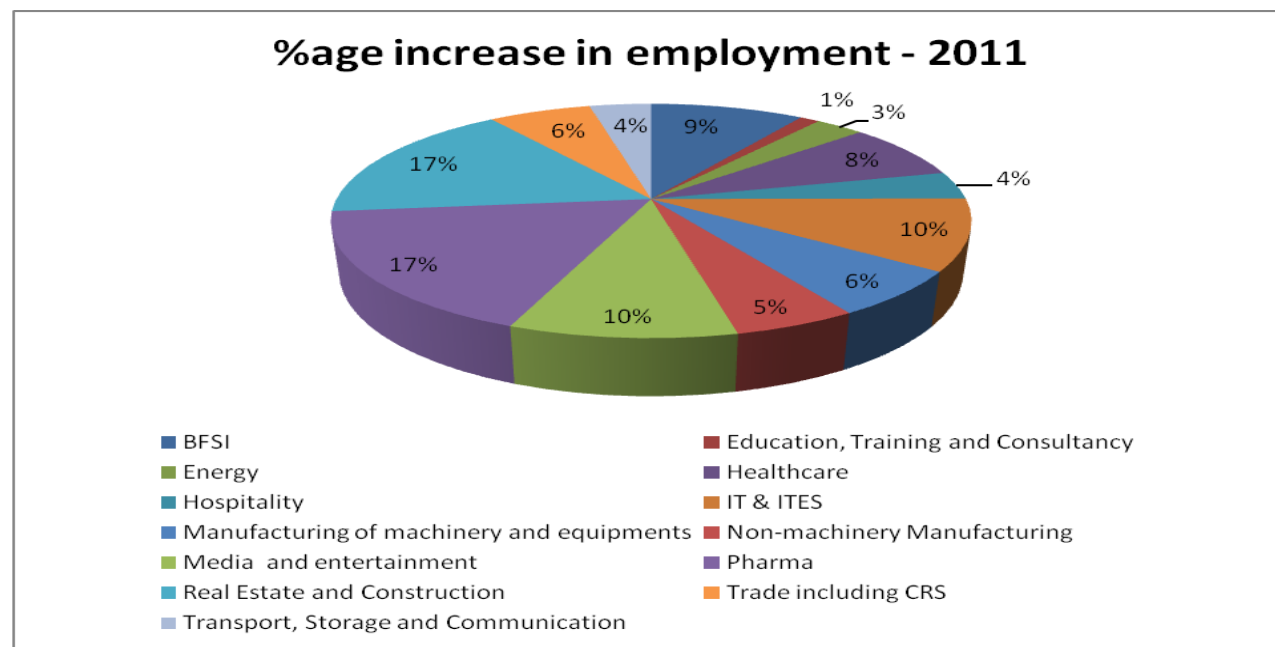
EMPLOYMENT GENERATION IN INDIA

ASSOCHAM study projects **87.37 million new jobs** will be created by 2015 in India with a very significant share of 32 percent by the manufacturing sector followed by the trade and construction.

- Employment in **IT and ITeS sector** is expected to grow very fast to increase from 1.62 million in 2007 to **3.28 million** by 2015.
- **Banking and Financial services** Industry is expected to almost double its employment size and employ **2.97 million** people by 2015 with 3.4% share in total employment.
- The **BPO industry** is expected to grow at 8-12% over next 3 years and an addition of around **0.22 million hires including 0.15 million fresh hires** is projected in 2012 in BPO/KPO industry. Also the hiring is expected to be at the same rate for next 3 years.

SECTOR WISE EMPLOYMENT GENERATION IN 2011

| Expected Employment Increase in Different Sectors | | | | | | | |
|---|----------------------------|--|-------------------------------|--------------------------------|-------------------------------|--------------------------------|-------------------------------|
| Sectors | Employment June 2011 | Expected increase in Employees 2011 | Increase in Employment | | | Per cent increase | |
| | | | Jul - Sep 2011 Expected | Jul - Sep 2011 Estimated | Oct - Dec 2011 Expected | Jul - Sep 2011 Estimated | Oct - Dec 2011 Expected |
| BFSI | 939,800 | 80,700 | 15,300 | 14,800 | 11,900 | 1.57 | 1.27 |
| Education, Training and Consultancy | 9,839,200 | 107,500 | 24,500 | 21,600 | 20,700 | 0.22 | 0.21 |
| Energy | 910,100 | 24,900 | 7,900 | 7,500 | 6,600 | 0.82 | 0.73 |
| Healthcare | 3,492,700 | 248,500 | 63,800 | 60,400 | 58,700 | 1.73 | 1.68 |
| Hospitality | 6,205,600 | 218,200 | 54,400 | 48,400 | 41,600 | 0.78 | 0.67 |
| IT & ITES | 2,010,000 | 183,000 | 55,500 | 46,600 | 41,600 | 2.32 | 2.07 |
| Manufacturing of machineries and equipments | 1,164,600 | 68,400 | 14,500 | 13,800 | 14,000 | 1.19 | 1.20 |
| Non-machinery Manufacturing | 4,589,100 | 223,400 | 36,100 | 36,500 | 38,300 | 0.80 | 0.83 |
| Media and entertainment | 1,413,000 | 126,100 | 31,300 | 30,900 | 32,800 | 2.19 | 2.32 |
| Pharma | 309,000 | 49,400 | 11,300 | 12,600 | 12,800 | 4.08 | 4.14 |
| Real Estate and Construction | 934,300 | 144,700 | 29,600 | 30,700 | 26,200 | 3.29 | 2.80 |
| Trade including CRS | 671,500 | 38,600 | 10,800 | 9,700 | 9,900 | 1.44 | 1.47 |
| Transport, Storage and Communication | 2,709,500 | 93,300 | 14,200 | 12,500 | 11,300 | 0.46 | 0.42 |



Source: METS (Ma Foi Randstad Employment Trends Survey) Wave 3 report - 2011.

- There has been 10% increase in employment in IT & ITeS sector between Jan-Oct 2011 and another 41,600 jobs are expected to be added in Oct-Dec 2011.
 - 30% of the recruits were freshers (<1 year experience)
 - 9% of the recruitments were campus recruitment
- There has been 9% increase in employment in BFSI sector between Jan-Oct 2011 and another 11,900 jobs are expected to be added in Oct-Dec 2011.
 - 32% of the recruits were freshers (<1 year experience)
 - 5% of the recruitments were campus recruitment

Source: METS (Ma Foi Randstad Employment Trends Survey) Wave 3 report - 2011.

EDUCATION SPACE IN INDIA

While availability of a large, well-qualified human resource pool is definitely an advantage, winning in the competitive global marketplace would require several initiatives by India in the area of Education and training its increasing working population.

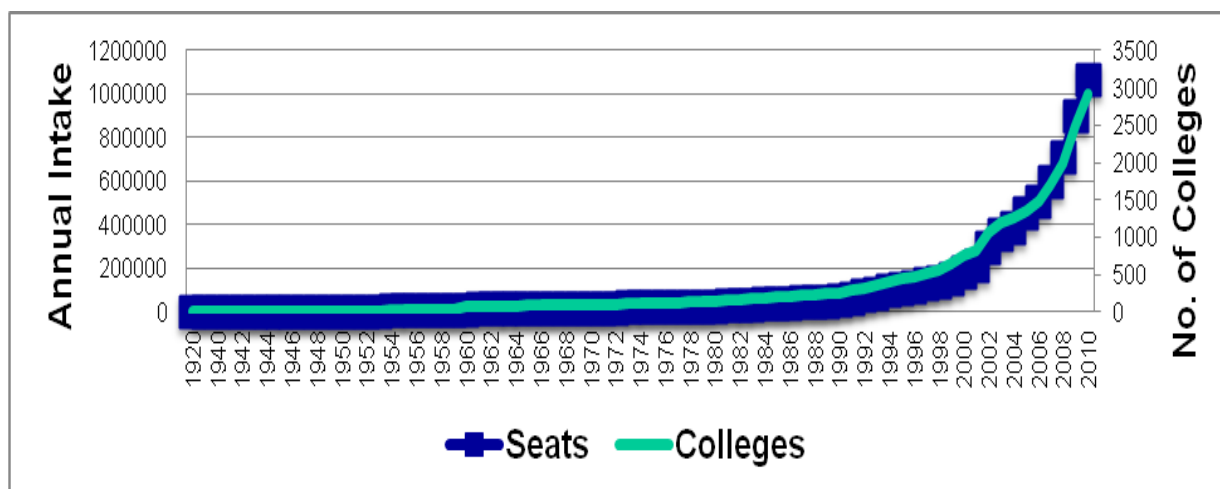
India has more than 15,000 colleges and just fewer than 10 million students. More than two-thirds of these colleges are classified by the University Grants Commission (UGC - the apex government regulatory body for higher education) as “Arts, Science, Commerce and Oriental Learning Colleges”. India’s higher education system contributes about 350,000 engineers and 2.5 million university graduates annually to our workforce. *(Source: FICCI report on Industry-Academia Convergence)*

There has been a rapid expansion in higher education, with **student enrollment growing at about 5 percent annually over the past two decades**. This growth is about two and a half times the population growth rate. The bulk of students (nearly two thirds) are enrolled in arts and science, with another 18 percent in commerce/management. *(Source: FICCI report on Industry-Academia Convergence)*

As per data from AICTE in 2009-10 India has around **3000 Engineering and Technology institutes** with an annual intake of **1 million students**. The no. of Engineering colleges has increased 6 times from 500 to 3000 in last decade and the annual intake of these institutes has increased 5 times from 0.2 million to 1 million.

| Degree Programs | # Institutions | Intake |
|--------------------------|----------------|------------------|
| Engineering & Technology | 2,906 | 1,065,174 |
| Architecture | 107 | 6,304 |
| MCA | 1,184 | 77,745 |
| MBA | 1,584 | 135,038 |
| PGDM | 380 | 43,425 |
| Total | 7,361 | 1,400,807 |

(Source: <http://www.aicte-india.org/adgeneral.htm>)



EMPLOYABILITY

Although India's higher education system contributes about 350,000 engineers and 2.5 million university graduates annually to our workforce, yet at any given time about 5 million graduates remain unemployed. *(Source: FICCI report on Industry-Academia Convergence)*

- A survey done by McKinsey Global Institute along with NASSCOM shows that multinationals find only **25% of Indian engineers are employable**.
- Joint survey by FICCI and the World Bank in Nov 2009 shows that **64% of surveyed employers were dissatisfied with engineering graduates' skills**
- Aspiring Minds study conducted in Aug 2010 with a sample size of 40,000 engineering students show poor employability %age of Indian engineers across all industries. Below are the results:

| IT/ITES Job Type | Employability % |
|-----------------------|-----------------|
| IT Product Cos. | 4% |
| KPO Firms | 10% |
| IT Services companies | 18% |
| Tech Support jobs | 26% |
| BPO | 38% |

While the university curriculum imparts great conceptual grounding employers expect knowledge and proficiency on new technologies as well as communication skills and personality development.

As per Joint survey by FICCI and World bank (2009):

- Top 3 most important specific skills expected by employers
 - Entrepreneurship, communication in English and use of modern tools and technologies
- IT companies expect from fresh hires
 - Advanced computer skills and Communication in English

The National Academy of Engineers has identified the following attributes for engineers of 2020:

- Strong analytical skills.
- Practical ingenuity - skill in planning, combining, and adapting.
- Creativity (invention, innovation, thinking outside the box, art).
- Communication.
- Business and management.
- Leadership.
- High ethical standards and professionalism.
- Dynamism, agility, resilience, and flexibility.
- Lifelong learners.

(Source: Research Paper at Journal of Information Technology Education by Sanjay Goel, HOD – CSE/IT at JIIT)

The following competencies are identified as necessary either for engineers in general or specifically for engineers and professionals in IT related disciplines by various agencies and researchers:

- Ability to apply knowledge.
- Design skills.
- Problem solving skills.
- Technical competence.
- Ability to work in multidisciplinary teams.
- Communication skills.
- Sensitivity towards global, societal, and environmental issues.
- Sensitivity towards ethical and professional issues.
- Readiness for life-long learning.

(Source: Research Paper at Journal of Information Technology Education by Sanjay Goel, HOD – CSE/IT at JIIT)

The current university curriculum fails to provide many of these key skills required by industry leading to a large employability gap.

CHALLENGES FOR INSTITUTION

With an exponential increase in the no. of institutions and consequently the intake number of students over last decade there are many challenges that these institutes face which provide obstacles in their path of becoming centers of excellence and supply “skilled” manpower to companies.

Following are some of the key challenges faced by institutions

- Getting and retaining good faculty
- Industry relevant curriculum - University prescribed curriculum is knowledge oriented and needs continued connect to ever-changing industry needs
- Attracting preferred employers for campus placement.
- Attracting students to fill seats
- Low placement %age
- Quality of students - low input profile leading to low employability.
- Cannot mandate any training

Suggested forward path for institutes:

| ISSUES | FORWARD PATH |
|-------------------------------|--|
| Quality Faculty | <ul style="list-style-type: none"> • Have a right mix of core to visiting/industry faculty – ideally around 50:50 • Selection of the faculty should be on basis of their ability to transmit new learnings, quality of industry exposure, passion for teaching and students. |
| Industry relevant curriculum | <ul style="list-style-type: none"> • Partner with an established training partner to supplement teaching on new technologies/communication skills/part of curriculum which is demanded by employers and not covered by university curriculum |
| Low seat occupancy | <ul style="list-style-type: none"> • Improve brand name by providing excellent learning environment and placement opportunities to students. |
| Low input profile of students | <ul style="list-style-type: none"> • Adopt training methodologies suited to low input profile of students. |
| Poor Placement record | <ul style="list-style-type: none"> • Offer placement oriented program to students providing them overview of different industries and educating them about various career options that they |

| | |
|--|--|
| | <p>can pursue in these industries. Also preparing students for recruitment process followed by major employers.</p> <ul style="list-style-type: none"> • Partner with Employers and encourage them to participate in campus recruitment process • Partner with Training and Placement providers having connect with employers. |
|--|--|

CHOOSING AN EFFECTIVE PARTNER

Following are the key things an institute should look for in a training partner:

- **Established brand in Training** - The training partner should have an established brand name in training space having expertise in learning content development, training delivery and education process management.
- **Industry Connect** - The training partner should have connect with industry majors in order to
 - Study Industry requirements and collaborate with Industry to develop in-demand curriculum and right pedagogy.
 - Involve industry in the sourcing process
 - Invites Industry Experts for Talks during the training
 - Demonstrates impact of learning through industry involvement in the design of assessments and projects.
- **Technology Partners** - The training partner should have alliance with major Technology vendors so that it is able to render training on diverse platforms and provide institutes access to relevant hardware and software needed for hands-on training.
- **Connect with Placement Partners** - The true measure of effectiveness of any employability enhancement training lays in the acceptance of its students by the industry i.e. placements. In order to cover this last leg the training partner should have connect with major employers of the industry so that it can help students find their dreams careers.