Education, Skills and International Competitiveness
In an Era of Soft Labor Demand

Aashish Mehta
University of California-Santa Barbara
15 October 2014
# The Skills Gap Cacophony:
Employers around the world report skill gaps

## India: Reports by sector skill councils

<table>
<thead>
<tr>
<th>Industry</th>
<th>Positions Listed</th>
<th>Positions deemed to suffer a skills gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leather</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>Textiles and Garments</td>
<td>32</td>
<td>30</td>
</tr>
<tr>
<td>Food Processing</td>
<td>38</td>
<td>38</td>
</tr>
<tr>
<td>Electronics</td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td>Auto accessories</td>
<td>62</td>
<td>62</td>
</tr>
</tbody>
</table>

## USA

*The U.S. Technology Skills Gap*

*What Every Technology Executive Must Know To Save America’s Future*

*Gary J. Beach*
... but something doesn’t seem right.

1. Why now? The world is overflowing with educated workers – many unemployed and underemployed.

2. Wage returns to secondary education have been falling.

3. Vocationally trained workers do not find jobs.

4. Employers often don’t act like there is a skill gap.

5. The high-employment tradable sectors are not very education-intensive....
...and they are getting smaller.

Joint work with Jesus Felipe (ADB) and Changyong Rhee (IMF).
What do employers mean by “skill”?

• Highly variable definitions of “skill” amongst Indian employers:

1. Curiosity, willingness to learn
2. Soft skills – communications, people skills.
3. Ability to work effectively with machines and technical processes.
4. Attitude: “ready to work”; flexibility (e.g. acceptance of night shifts); docility.
5. Availability of manpower at crunch times.
Policy Takeaway

• Confusion arises because:
  – Only some sectors are skill constrained. Others aren’t.
  – All claim to be ... so long as they don’t have to pay for skilling.

• Balance supply and demand:
  – Insufficient skill supplies hurt high-skill sectors.
  – Excess skill supplies hurt workers.

• How to do this?
  – **Fix the quality of basic education !!!**
  – Get the incentives for skill acquisition right.
  – Improve labor relations.

• Firms complaining of skill gaps often need something else.
**Skill:** The ability to execute a task efficiently

**Rudimentary Academic Skills:** Literacy, numeracy

**Foundational Skills:** Communication, interpersonal, critical, analytical, ability to learn

**Vocational Skills:** Industry/occupation-specific

**General Education**

- Quantity
- Quality

**Vocational / Technical Education**

**Learning / Training On the Job**
Singapore enjoys a brain gain...

... while Bangladesh suffers brain drain.

But the real value of education is in facilitating faster transitions into unfamiliar products. High quality education allows learning.

For more, see: Mehta and Felipe (2014). *Education and the Journey to the Core*
Why do real skill gaps happen?  
The core incentive problem

A. Skills are vested in workers, who are risk averse.

B. Effective skill delivery mechanisms involve employers.
   – Understanding of skill requirements.
   – Lower cost of training.

• **Contradiction:**
  – Employers reluctant to invest in human capital they cannot own.
  – Worker reluctant to invest without employment assurance.

• Contracts to bridge this gap are sometimes illegal.

• Less likely if: (i) labor relations are good, (ii) Unions act as honest brokers, or (iii) There is an anchor firm

Principles for Successful Skill Development

1. Determine whether to deliver vocational skills in-firm or pre-service based on cost and effectiveness.

2. High quality basic education is the key.

3. Get the incentives right.
   – Make it a good investment for workers.
   – Keep the costs down.
   – Employers “put their money where their mouth is”.
   – Training institutes accountable for quality.

4. Ensure conducive labor relations.
Violating the principles results in policy confusion: the Indian case

• Skill gaps defined by employers’ in terms of their private costs and benefits.
  – “I cannot find skilled workers at wages I can afford to pay.”
• A competitive firm’s labor budget:

  \[(\text{Affordable CTC}) \times L \equiv P \times Q - \text{Other Input Costs} - \text{Fixed Costs}\]
• “Skill gap”:

  \[\text{Affordable CTC} < \text{Skilled Workers Reserve Wage + Non-Wage Labor Costs}\]

• Employers more likely to report skills gaps when:
  – Firms are inefficiently small.
  – Globalization increases competition, driving down output prices.
  – Wages are lifted by growth, unions, safety nets or rising (!!) education levels.
Example 1: India’s (formal) apparel sector.
(Joint work with Rana Hasan and Nidhi Kapoor)

• Industry reports skill gaps in 8/9 positions.

• Yet, production workers (~90% of employees):
  – pick up required skills on the job in only 2-6 weeks
  – earned 2% returns to each year of lower secondary education.

• Low & variable retention rates.

• Firms with 10+ employees pay 30% higher wages than those with less than 6 employees.
  – Small firms report “poaching” of workers.

• Shortage of talented shop-floor managers is real, but demand driven (some left for Bangladesh and Sri Lanka).
Don’t worry so much about skill – fix the real problems!

• If skilling subsidies are used, they should go to smaller firms.
  – If they register, offer short contracts and improve conditions.

• Firms remain small, missing large scale basic cottons and winter exports.

• Cartel/trade restrictions in polyester fibre/fabric.
Example 2: A (formal) Indian auto parts firm

• Technical skills crucial for productivity, and expensive to learn. Most firms invest in them.
  – Most employees permanent, unionized.
  – Average 18 years of service.
  – Promotion to supervisor possible.

• But – problems with quality of pre-service training in basic machine skills.
  – Governance issues at training institutes.
  – Firms make it up, at high cost in foregone output.
Example 3: A Better (Chinese?) Model

- Government subsidizes training.
  - Worker invests time/effort in very short courses.

- Firms issue advance employment contracts, contingent on student passing test.

- Firms have tie-ups with multiple training institutes. Make them compete. (NB: Large firms required)

- Government publishes training institutes’ placement results and incoming student scores.
Policy Takeaway

• Confusion arises because:
  – Only some sectors are skill constrained. Others aren’t.
  – All claim to be ... so long as they don’t have to pay for skilling.

• Balance supply and demand:
  – Insufficient skill supplies hurt high-skill sectors.
  – Excess skill supplies hurt workers.

• How to do this?
  – **Fix the quality of basic education !!!**
  – Get the incentives for skill acquisition right.
  – Improve labor relations.

• Firms complaining of skill gaps often need something else.
Principles for Successful Skill Development

1. High quality basic education is the key.

2. Determine whether to deliver vocational skills in-firm or pre-service based on cost and effectiveness.

3. Get the incentives right.

4. Ensure conducive labor relations.
Messages

• Provide the right incentives to employers, workers and trainers to invest in the right skills in the right ways.

• When the incentives are wrong...
  – Many employers report skill gaps where there are none,
  – and others cannot get their skill problems resolved.

• To be truly internationally competitive, focus relentlessly on high quality basic education.