



**The Value of Human Capital:  
Developing the Workforce of the 21<sup>st</sup> Century**

# U.S. science skills proficiency



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2009

- **Only 34% of 4th graders are “proficient” in science**
- **30% of 8th graders are proficient**
- **21% of 12th graders are proficient**

Source: U.S. National Center for Education Statistics.

# How 15-year-olds score in math



|                        |            |
|------------------------|------------|
| • <b>South Korea</b>   | <b>546</b> |
| • <b>Canada</b>        | <b>527</b> |
| • <b>Japan</b>         | <b>529</b> |
| • <b>Germany</b>       | <b>513</b> |
| • <b>OECD average</b>  | <b>496</b> |
| • <b>France</b>        | <b>496</b> |
| • <b>United States</b> | <b>487</b> |
| • <b>Spain</b>         | <b>483</b> |

# U.S. ranks 23rd in science worldwide



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|     |             |     |     |                     |            |
|-----|-------------|-----|-----|---------------------|------------|
| 1.  | Shanghai    | 575 | 11. | Netherlands         | 522        |
| 2.  | Finland     | 554 | 13. | Germany             | 520        |
| 3.  | Hong Kong   | 549 | 15. | Switzerland         | 517        |
| 4.  | Singapore   | 542 | 16. | United Kingdom      | 514        |
| 5.  | Japan       | 539 | 19. | Poland              | 508        |
| 6.  | South Korea | 538 | 20. | Ireland             | 508        |
| 7.  | New Zealand | 532 | 21. | Belgium             | 507        |
| 8.  | Canada      | 529 | 22. | Hungary             | 503        |
| 9.  | Estonia     | 528 | 23. | United States       | 502        |
| 10. | Australia   | 527 |     | <b>OECD average</b> | <b>501</b> |

Source: OECD.

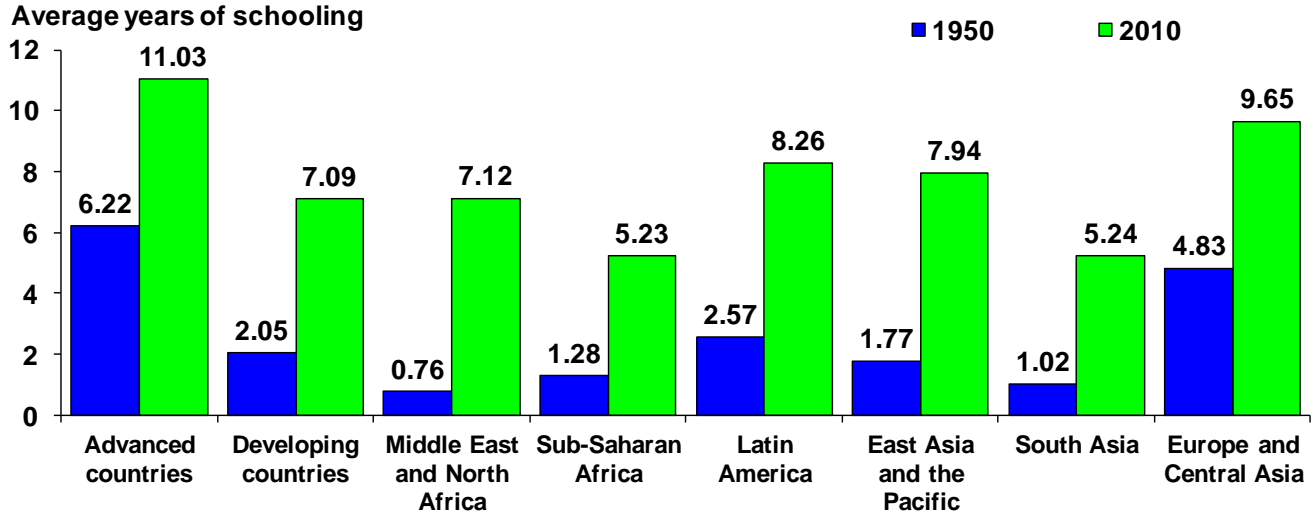


# International competition

- **India produces three times as many scientists and engineers as the U.S.**
- **China produces eight times as many**

**China and India are now preferred destinations for increasing numbers of multinational high-tech corporations.**

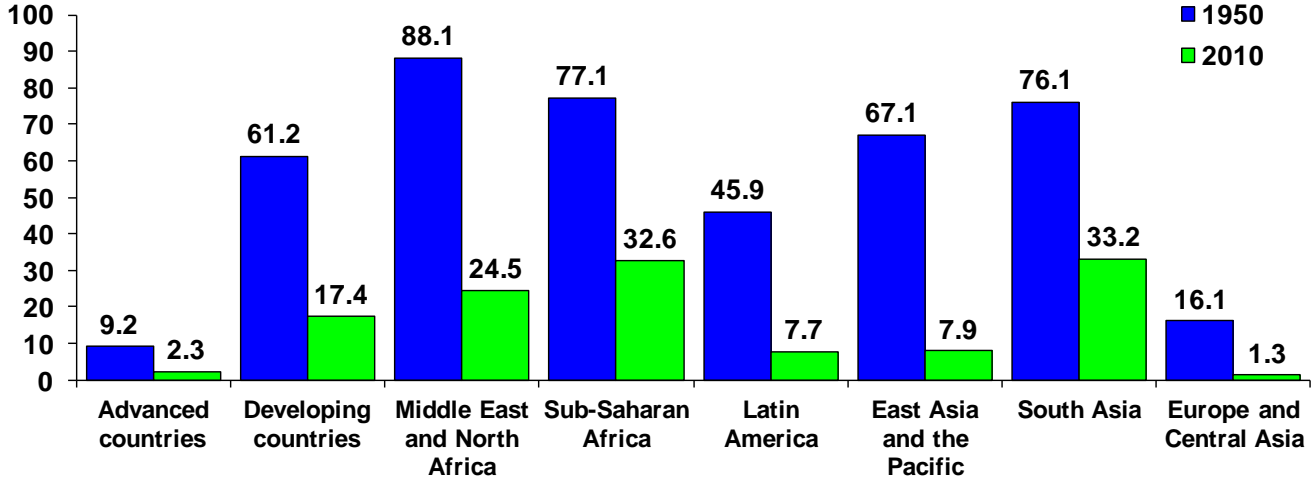
# Average years of schooling increased dramatically for developing countries in the past 60 years





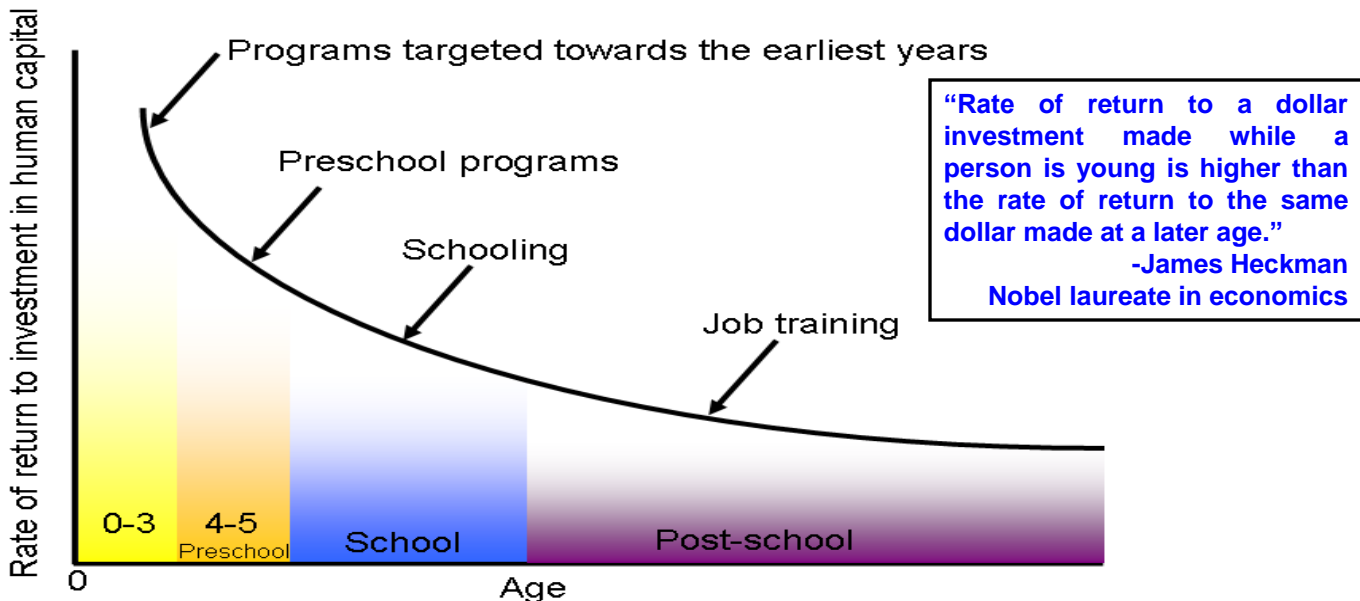
# The education gap across regions

Population with no schooling, percent of population aged 15 and over



Source: Robert Barro and Jong-Wha Lee (2010).

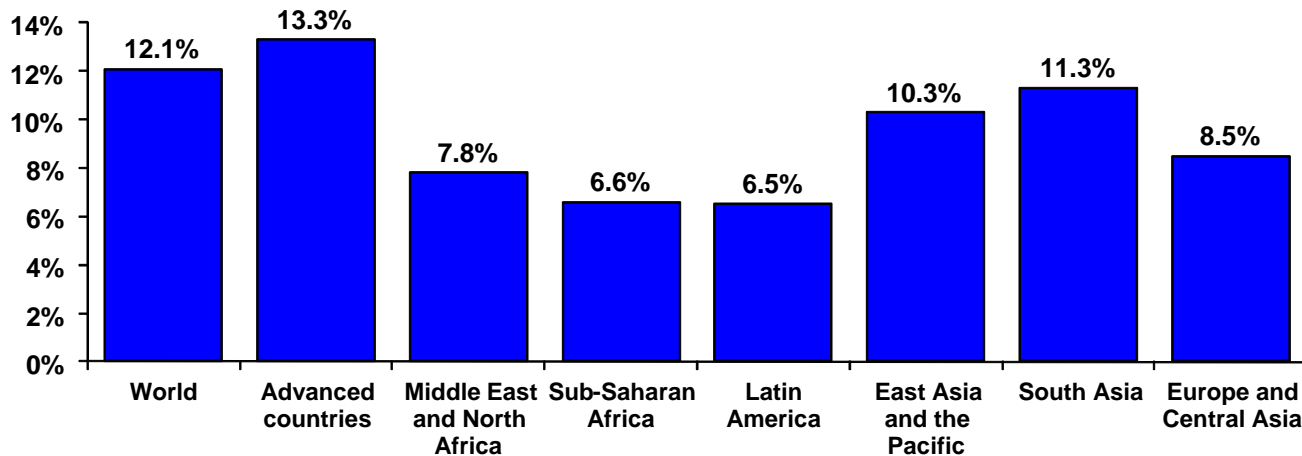
# Returns on early childhood education





# Return on human capital

Rate of return on an additional year of schooling, percent



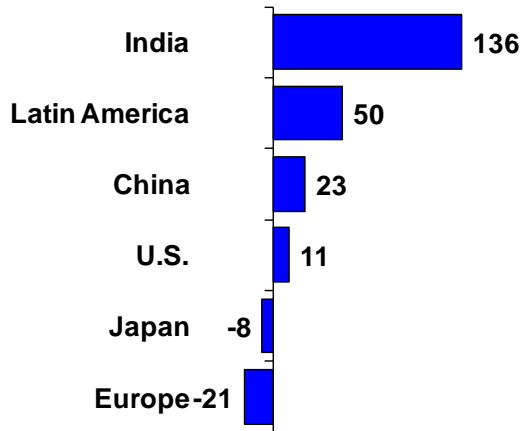
Source: Robert Barro and Jong-Wha Lee (2010).

# Working-age population grows rapidly in India

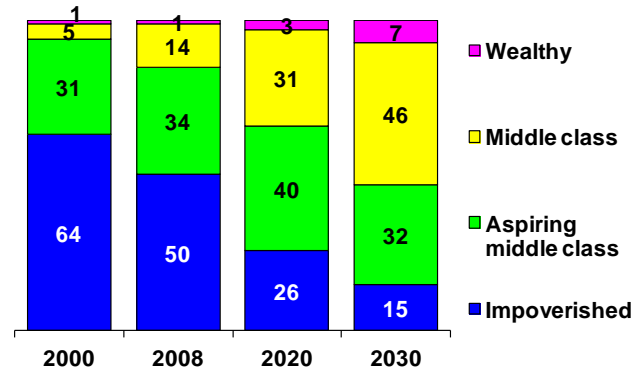
Over the next 10 years, India will add over 5 workers for every 1 worker added by China...

...with the world's largest addition of people to the workforce, it is estimated that over 100 million households will join the middle class

Addition to working-age population 2010-2020  
(in millions)



Number of Indian households (in millions)  
% by annual income



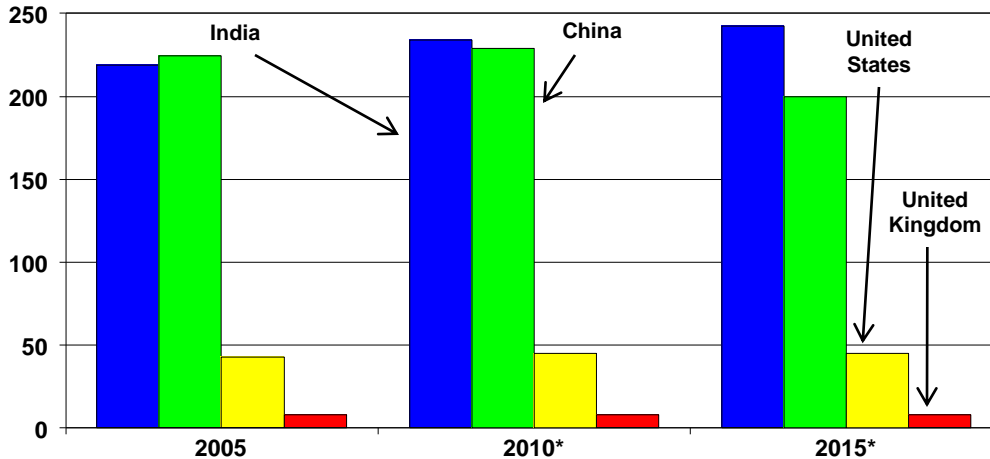
# India and China have relatively young population

Age 15-24



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Millions



\* estimated

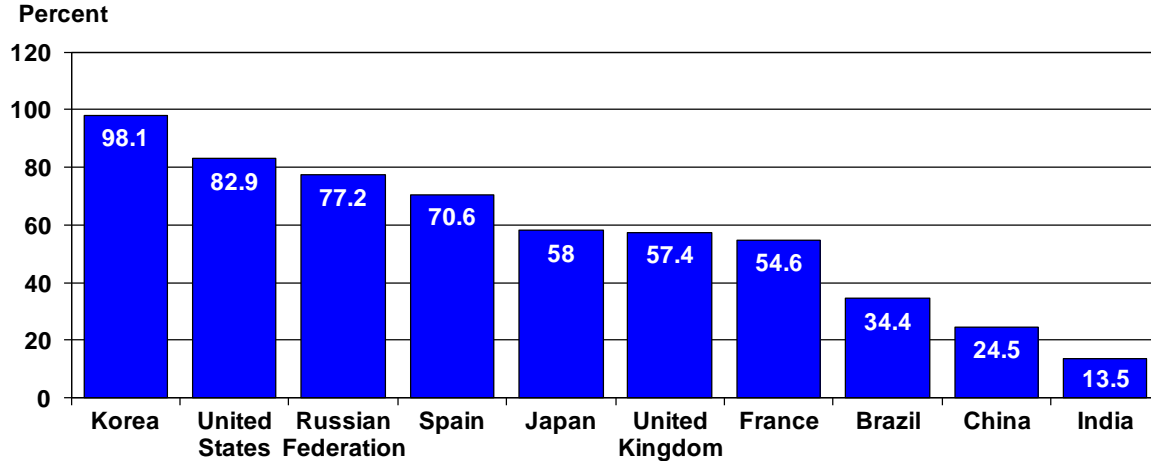
Source: United Nations.

# Tertiary education enrollment rate

2008



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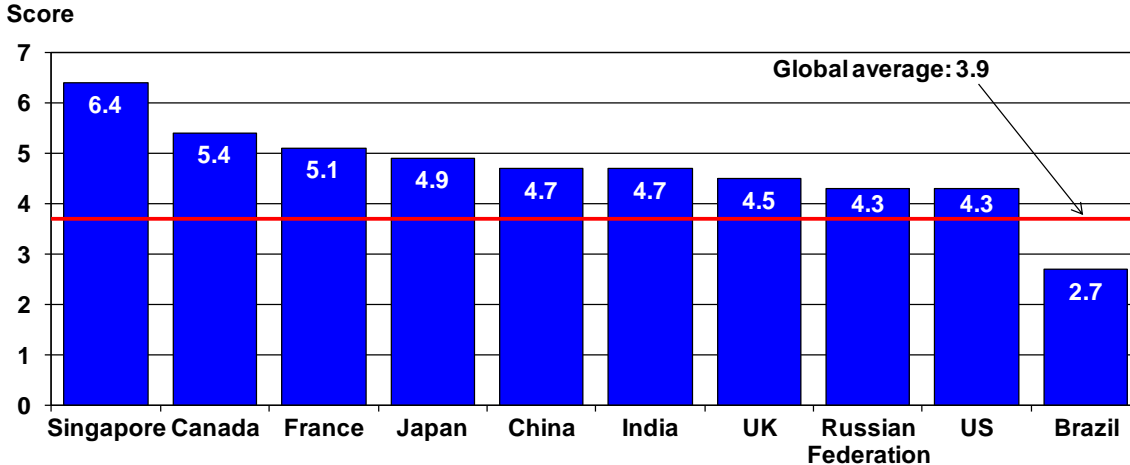
Source: The World Economic Forum.

# Quality of math and science education

2010-2011 weighted average, 1=poor; 7=excellent



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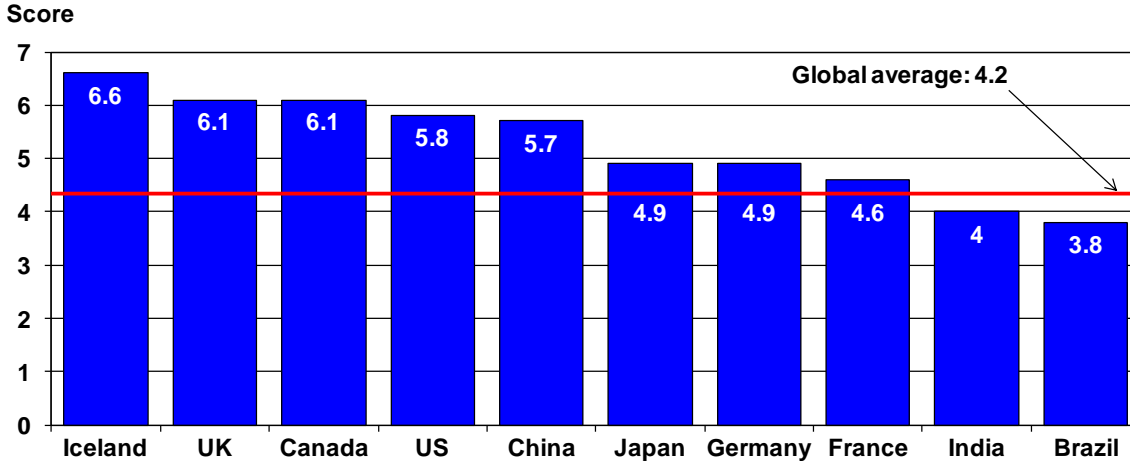
Source: The World Economic Forum.

# Internet access in schools

2010-2011 weighted average, 1=poor; 7=excellent



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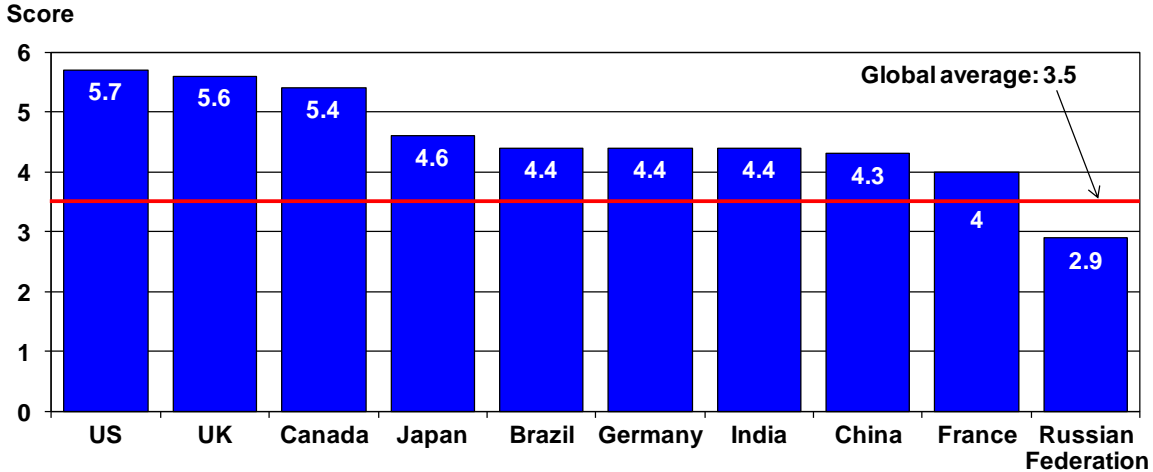
Source: The World Economic Forum.

# Ability to retain and attract talent

2010-2011 weighted average, 1=poor; 7=excellent



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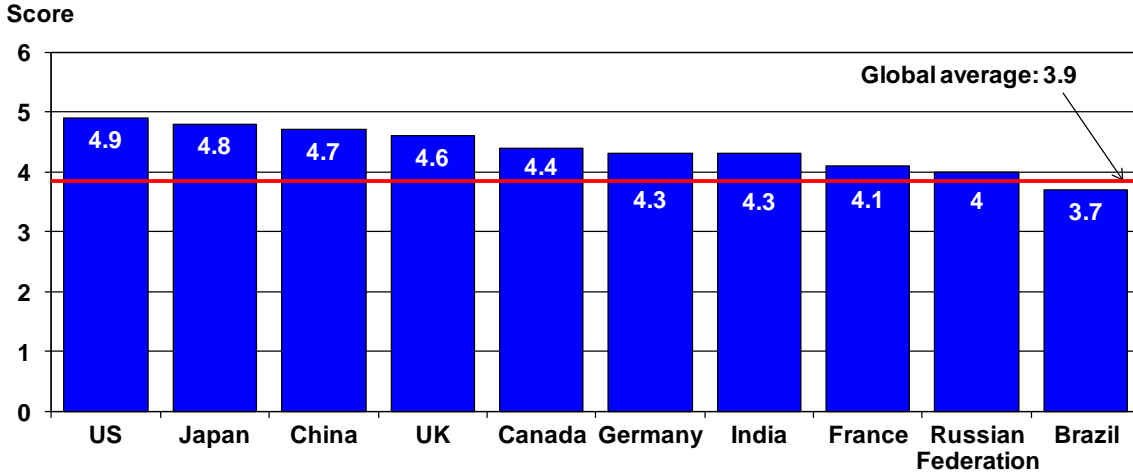
Source: The World Economic Forum.

# Relation of pay to productivity

2010-2011 weighted average, 1=low; 7=high



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Source: The World Economic Forum.

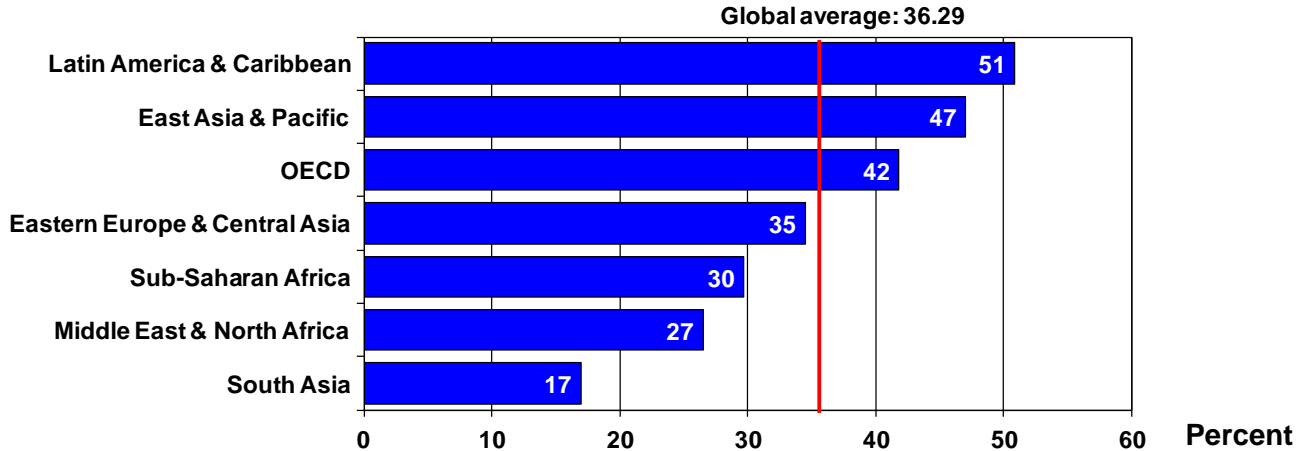


# Companies offering on-the-job training

*Percent, 2010*



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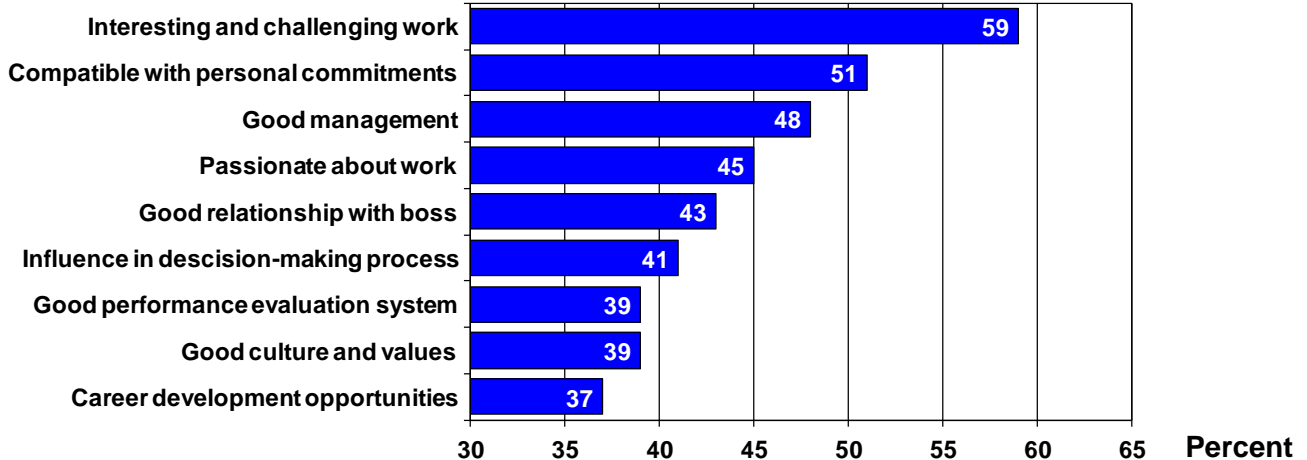
Source: The World Bank.

# “Critical” factors for job satisfaction

*Percent of mid-senior managers*



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# Examples of talent retention strategies



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## Siemens



- Enhance engagement
- Align interests

## Google



- Comfortable workplace
- Employees spend 20% of time on own pet projects
- Holiday bonus and company-wide salary hike

## Alibaba.com



- 0% interest on home loans
- Education funds for employee's family

A graphic element consisting of a yellow arc at the top and a blue arc at the bottom, both curving from left to right, framing the text.

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**GLOBAL**  
*conference*  
**2012**

# Fifteen years of Global Conference

Join us in 2012 for a  
milestone anniversary

April 29–May 2 | Los Angeles