

Jobs and Technology: Implications for Education and Skills Development*

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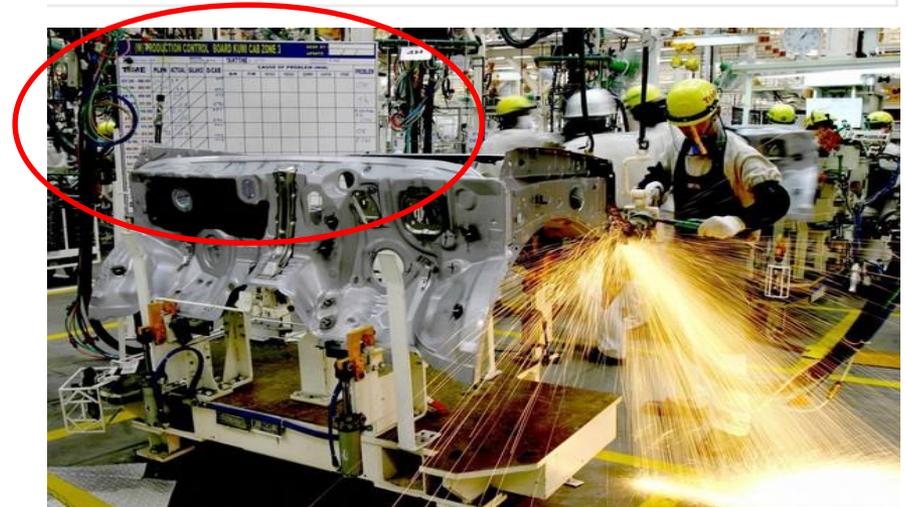
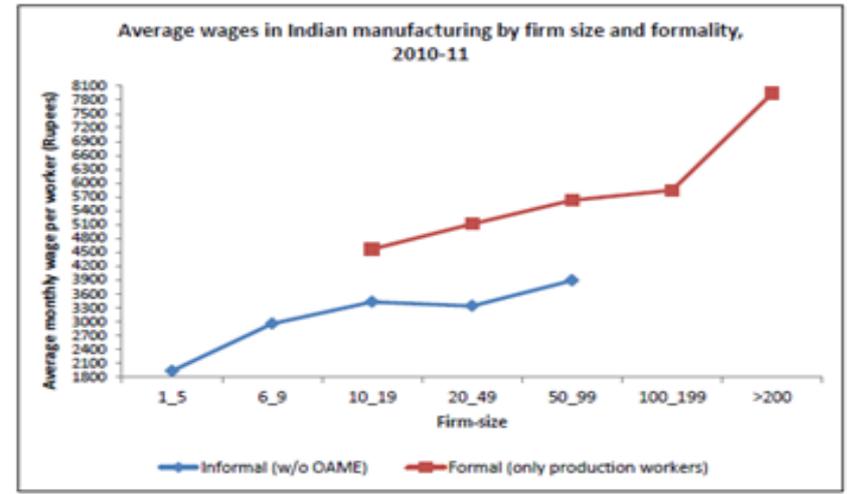
Note: This presentation draws upon ongoing research on labor markets in Asia and ADB (2015; *A Smarter Future: Skills, Education, and Growth in Asia*)

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What does it take to create more productive jobs?

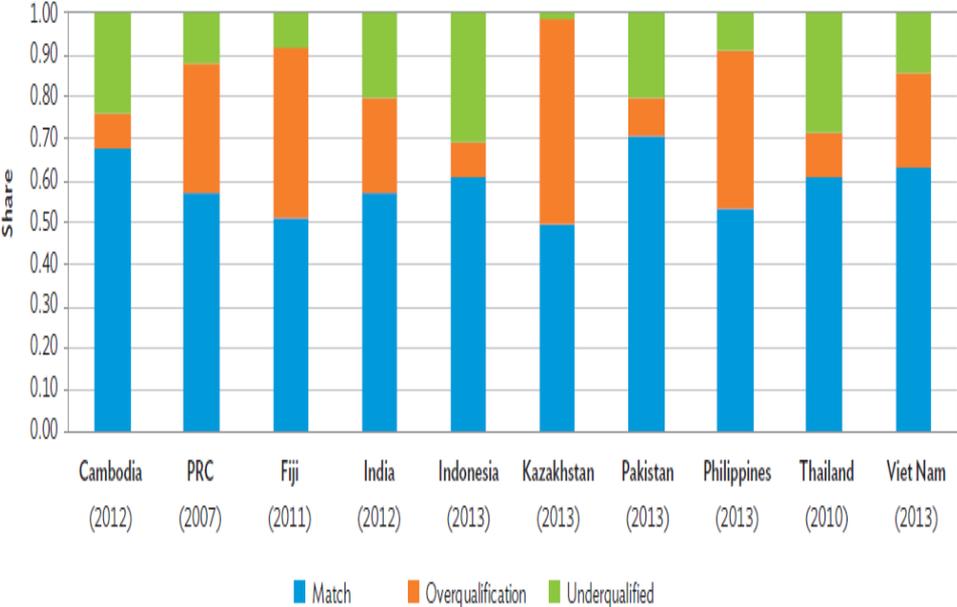
- Generate jobs in
 - higher productivity sectors
 - higher productivity firms (& farms)
- Ensure workers have the education and skills to carry out the tasks required in the modern workplace



Source: Top: Staff estimates; Below: Nick Bloom

Challenges: Traditional and emerging

Qualification Mismatches

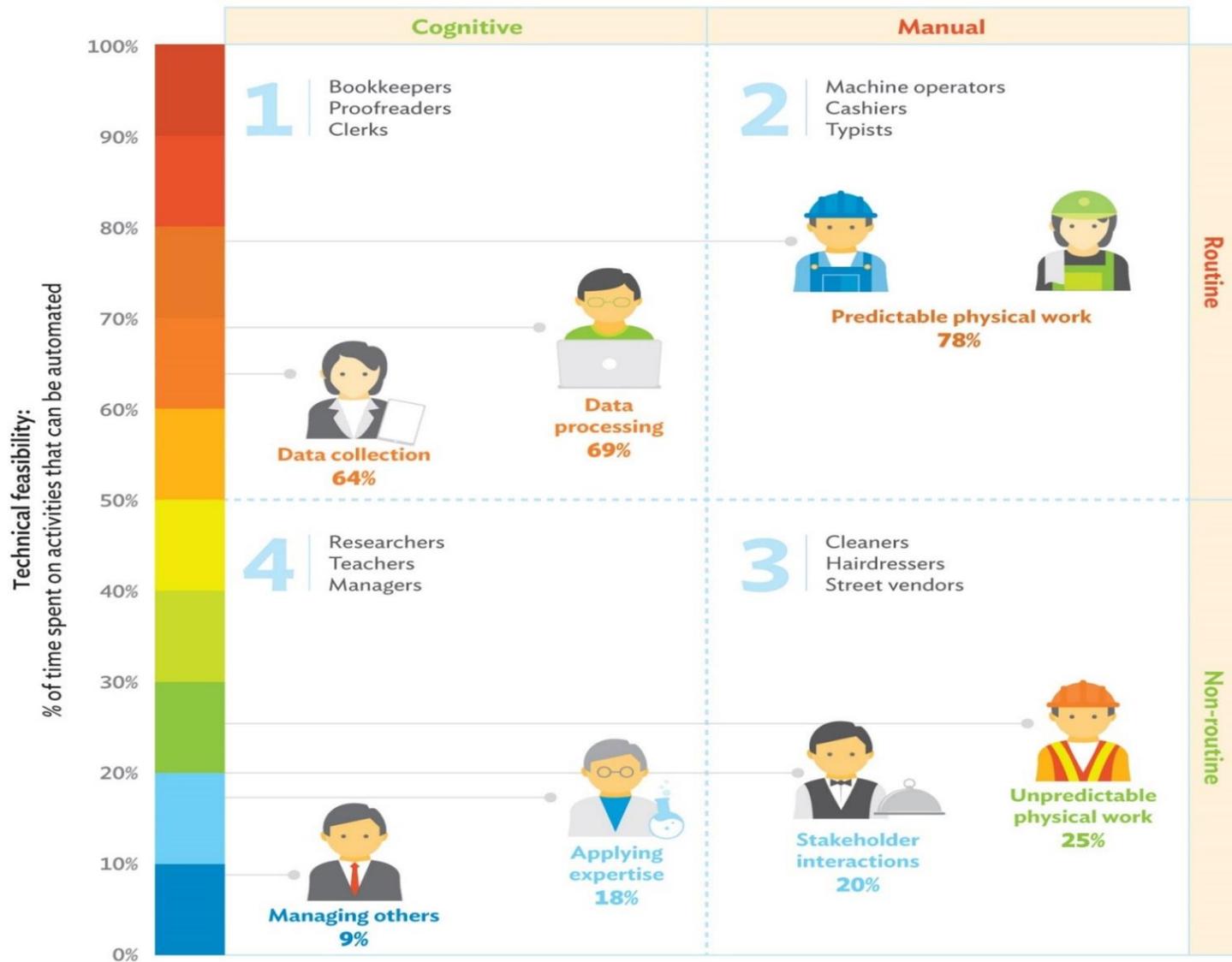


PRC = People's Republic of China.
Source: ADB estimates using data from labor force surveys.

Automation and the future workplace

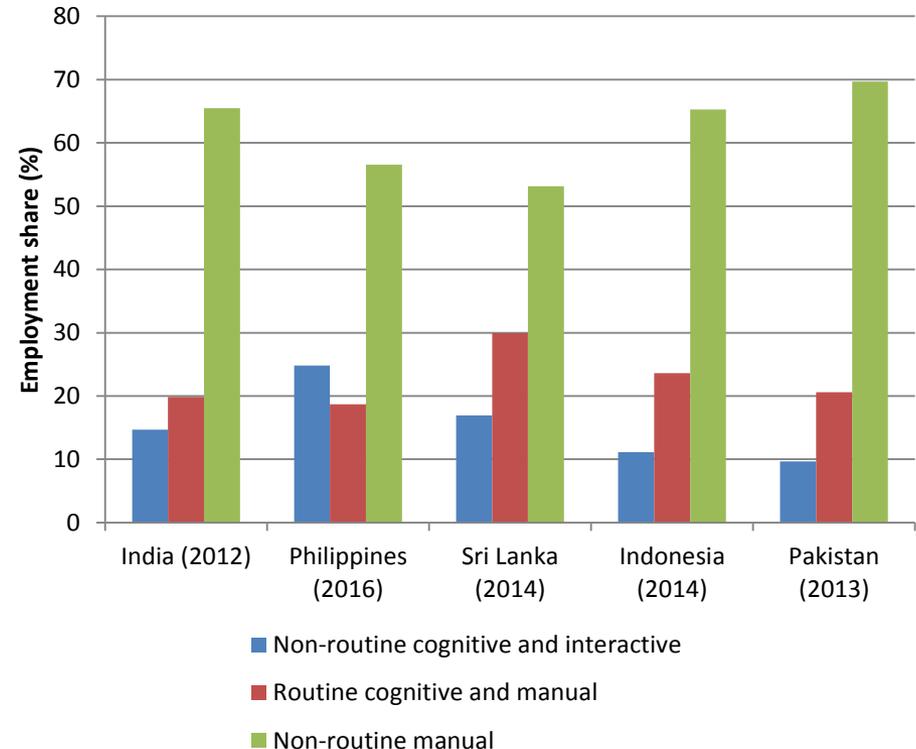


Impact of automation: Routine jobs are at risk



Preparing for non-routine jobs

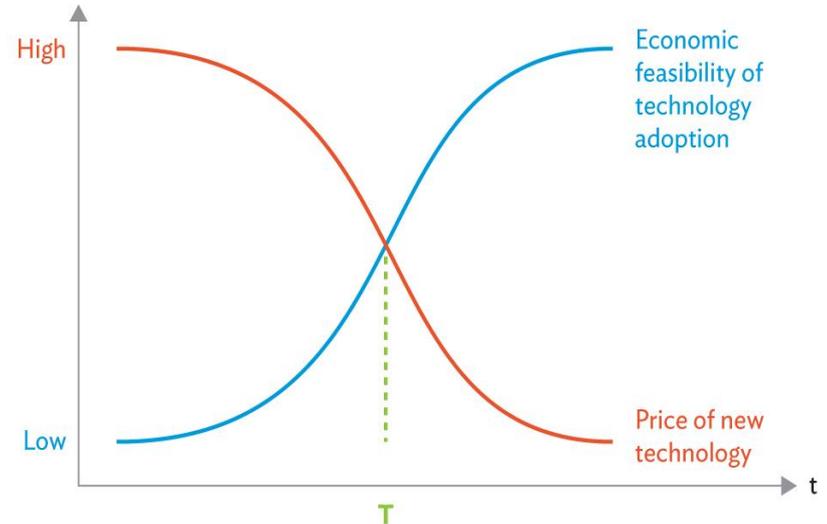
- Workers need a solid foundation of cognitive and noncognitive skills
 - Adapt to new technologies
 - Acquire new technical skills



Source: ADB staff estimates using LFS data

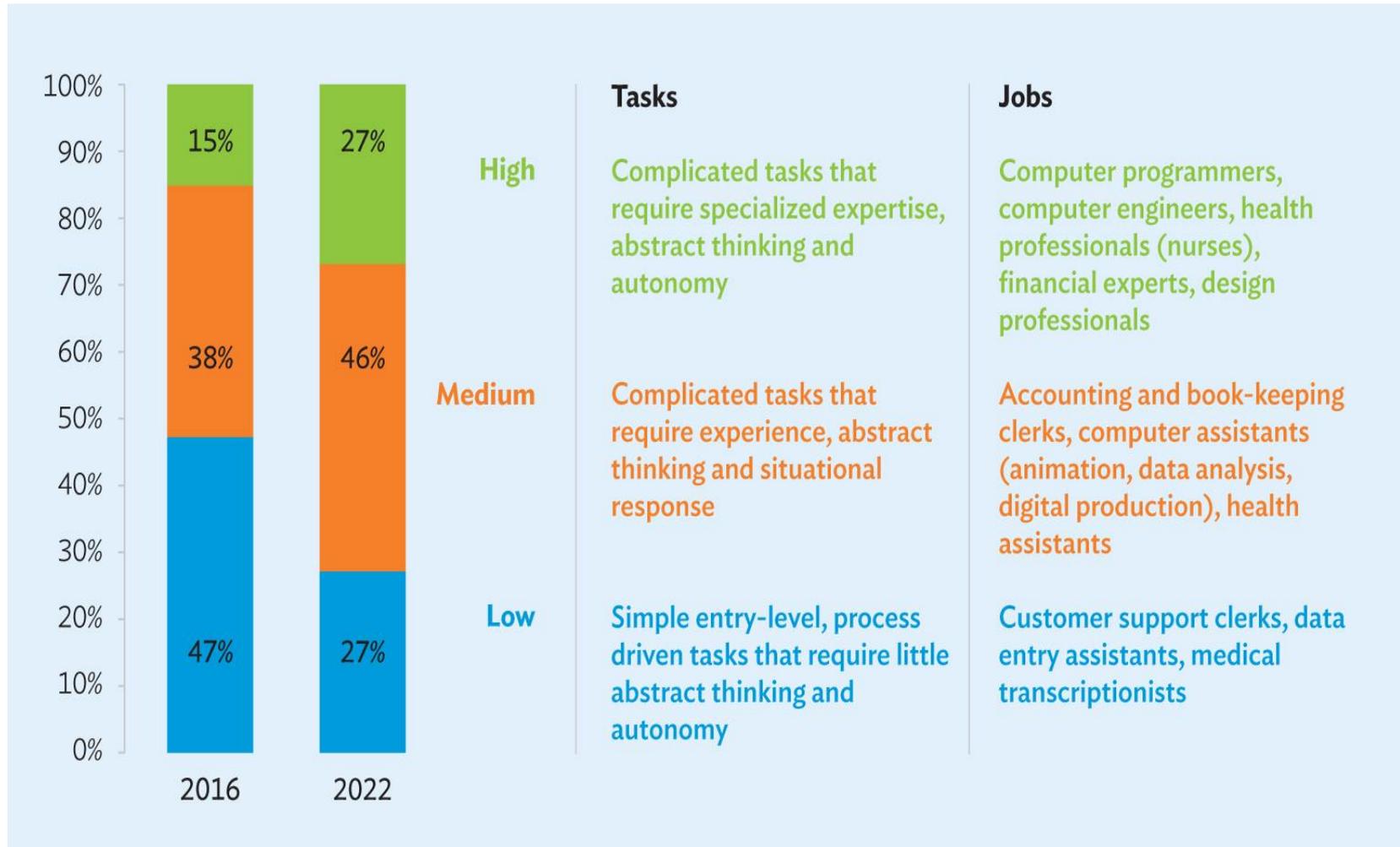
Case study: IT-BPO sector

- According to various studies, 50+ percent of jobs in the BPOs sector could be risk of automation (Credit Suisse, ILO, McKinsey).
- **But, there is a gap between “what could be automated” and “what is being automated”.**
- Impact will vary depending on the skill composition of the BPO sub-sectors and how firms respond.



- T depends on:
- i) Type of technology
 - ii) Sector or industry where its used
 - iii) Labor cost
 - iv) Enabling factors (globalization, government policy, research and development)

Composition of the BPO workforce is likely to change



Source: ADB staff conceptualization based on IBPAP.

Fundamental questions

- What if the skills that graduates acquire have an expected shelf life of around 5 years?
- Implications:
 - Shift from narrow specialization to “learning to re-learn”
 - Training interwoven with full-time work
 - Safety net to help displaced workers transition to new jobs
 - Pathways from TVET into higher education and vice versa
 - Larger role for private sector?

Technology also presents solutions

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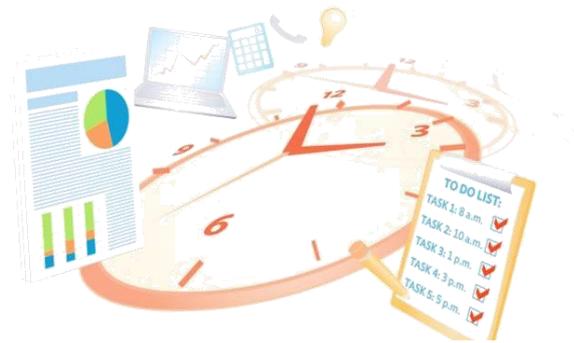
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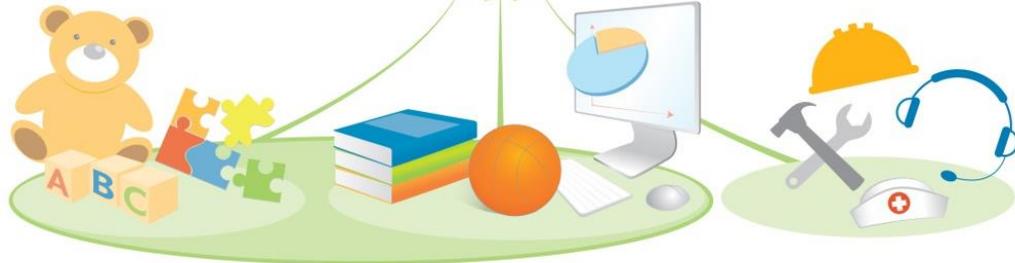
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Skills provide individuals the ability to carry out tasks effectively



Executing tasks efficiently

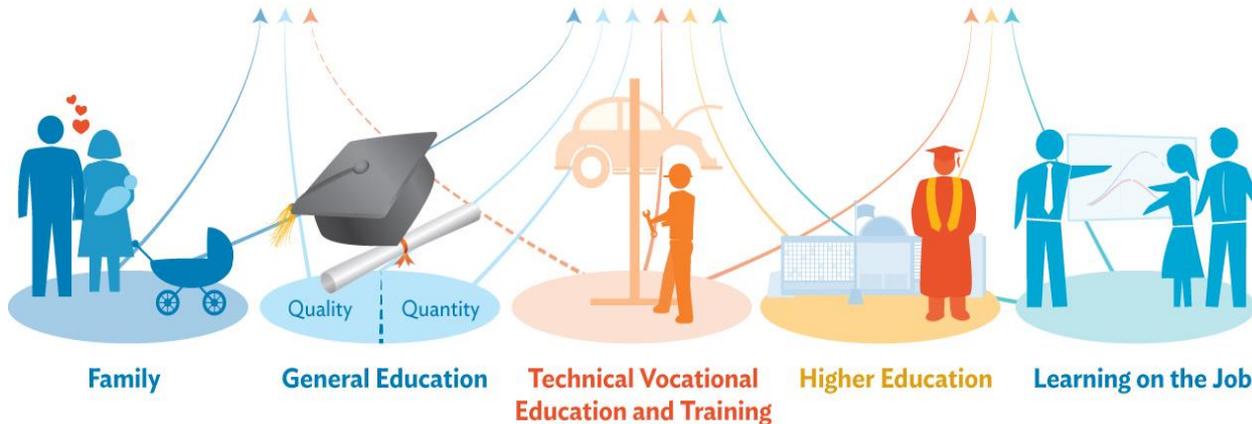
TRAINABILITY



Rudimentary Academic Skills:
Literacy, Numeracy

Foundational Skills
Cognitive and noncognitive

Technical Skills
Industry/occupation-specific



Family can account for up to 30% of all skills

Learning on-the-job can account for up to 20% of all skills