Assessing Skills Mismatches A perspective from the Asia – Pacific Region

ILO Jobs & Skills Mismatches Conference

11-12 May, 2017

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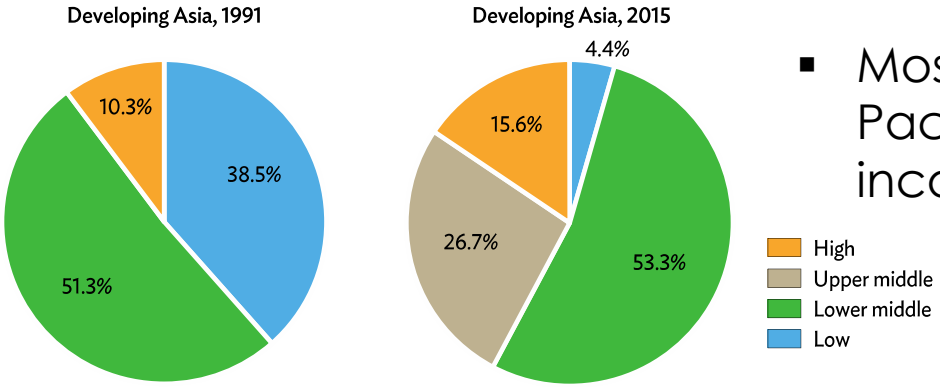
Outline

- A quick overview
- Some evidence of skills mismatches in developing Asia and Pacific
- Highlights from skills demand analyses in ADB education operations
- Looking ahead

Overview

Developing Asia-Pacific: a middle-income region

Developing Asia economies

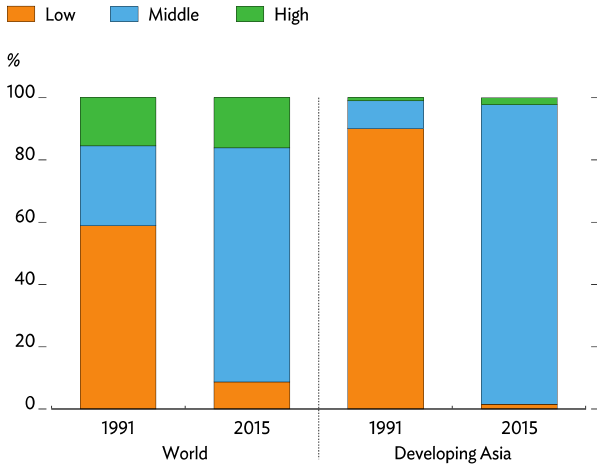


Source: Estrada et al., forthcoming.

- Most of the developing Asia and Pacific region has reached middle-income status

- More than 95% of developing Asia's population lives in middle-income economies

Population living in low, middle, and high income economies

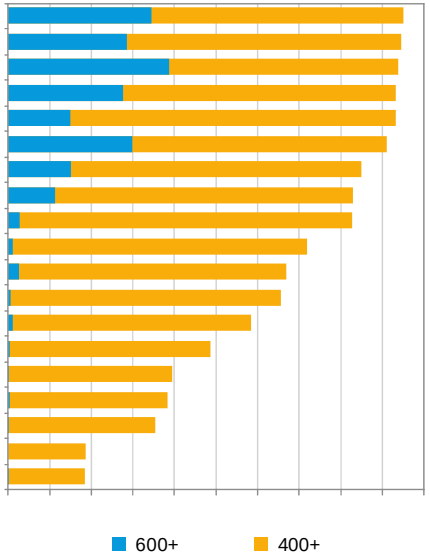


Source: Estrada et al., forthcoming.

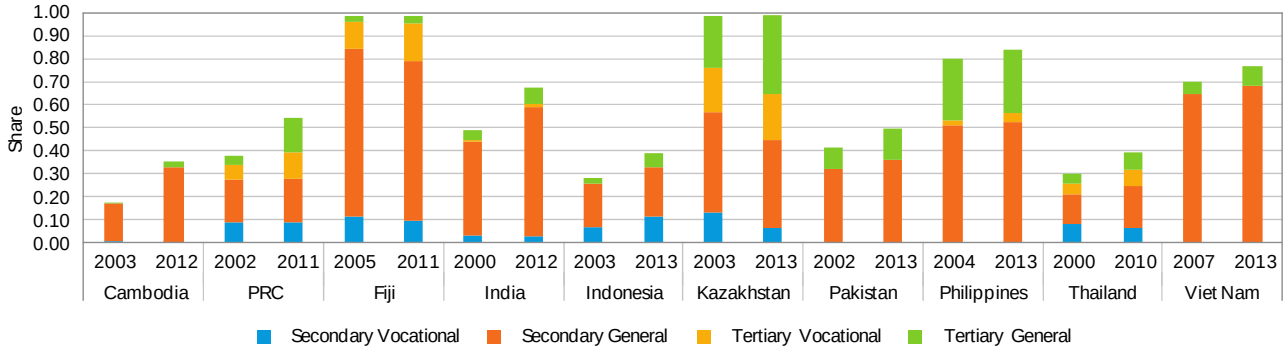
Improved access to education, but quality remains an issue

- Educational attainments have improved steadily
  - Gross enrollments in secondary and tertiary education are increasing
  - Average years of schooling has doubled from 4 in 1970 to 8 in recent years
- But
  - Disparities remain, both between and within countries
  - Quality and relevance are a major concern

Test scores across Asian and OECD economies



Youth with secondary education and above (age 15-29)



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

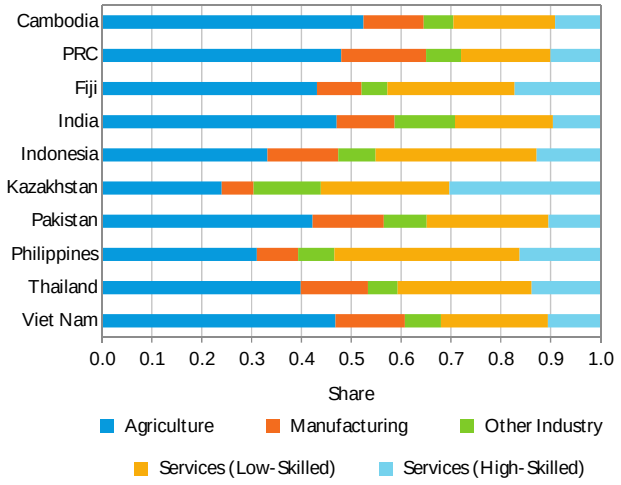
Megatrends & challenges faced by developing Asia and Pacific

- Developing Asian and Pacific economies face specific challenges linked to their recent transition to middle-income status…
  - Drivers of growth and employment need to evolve, to focus more on improving productivity and promoting innovation
- … and must deal with global megatrends affecting all regions
  - Fast-evolving technologies
  - Globalization and shifting trade patterns, including global value chains
  - Demographic trends – urbanization, aging
  - Climate change and exposure to disasters

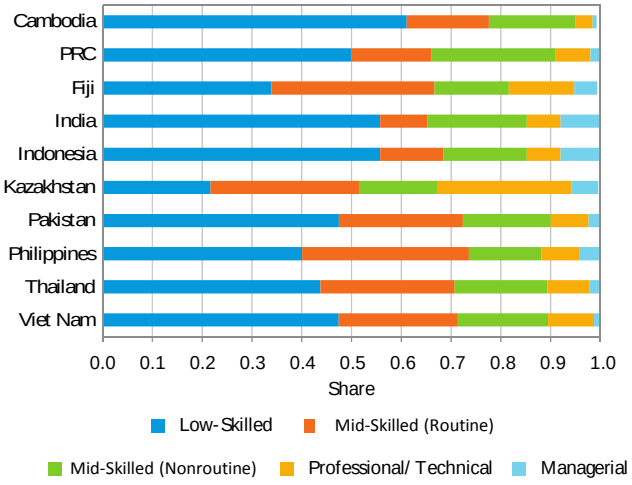
Skills mismatches in developing Asia-Pacific economies

Routine and low-skilled occupations still predominate

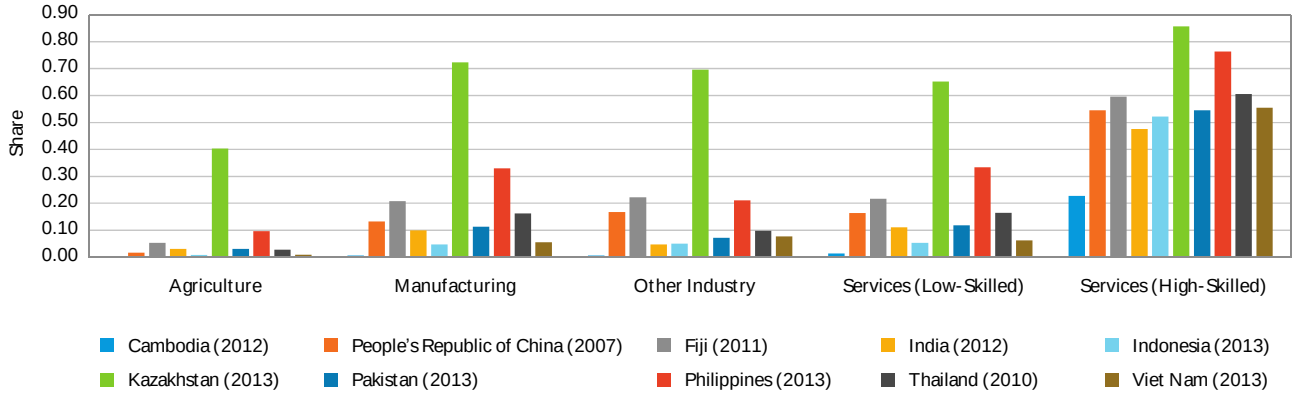
Employment by sector



Employment & skills content



Share of employed workforce with secondary or tertiary education, by sector



PRC = People's Republic of China.

Notes: Only latest survey year available for each country is used. ISIC Rev. 4 industry groups. Agriculture = 1–3; Manufacturing = 10–33; Other Industry = 41–43; Services (Low-Skilled) = 49–56, 94–98; Services (High-Skilled) = 58–93, 99.

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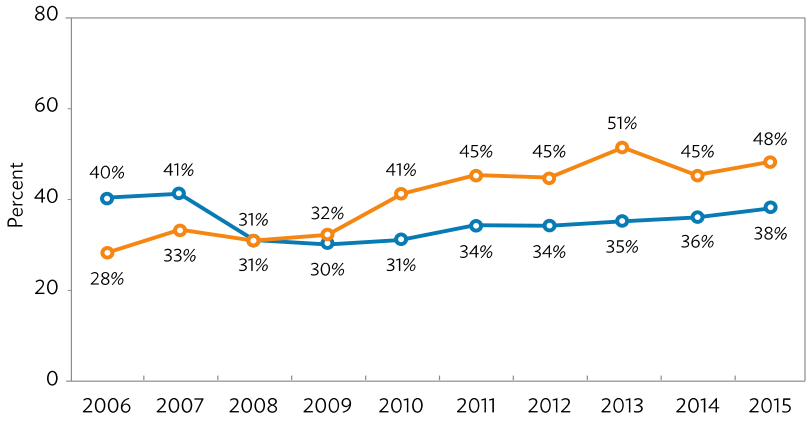
Source: ADB estimates using labor force surveys. Data for the PRC is based on published survey results from the Tabulation on the 2010 Population Census of the People's Republic of China.

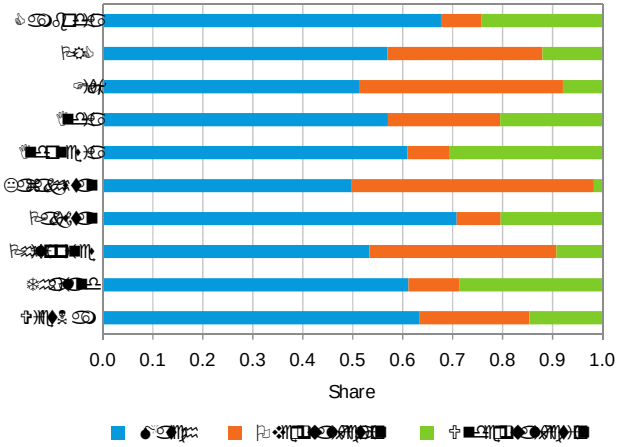
Employers in Asia and the Pacific report difficulties in filling vacancies

Difficulty filling vacancies in Asia and the Pacific (in %)



Source: 2015 Talent Shortage Survey (ManpowerGroup 2015).

Qualification mismatches



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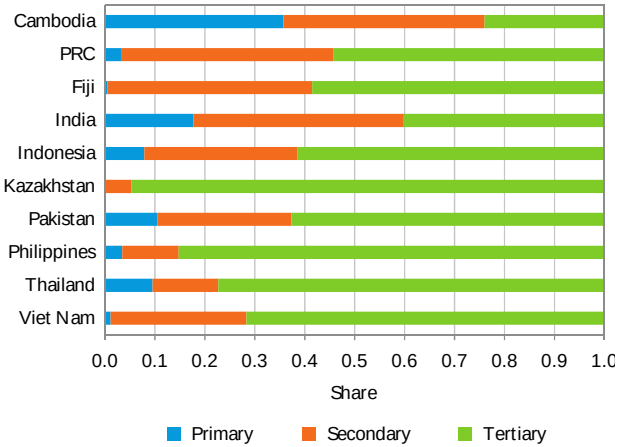
Educational attainments in high-skilled occupations



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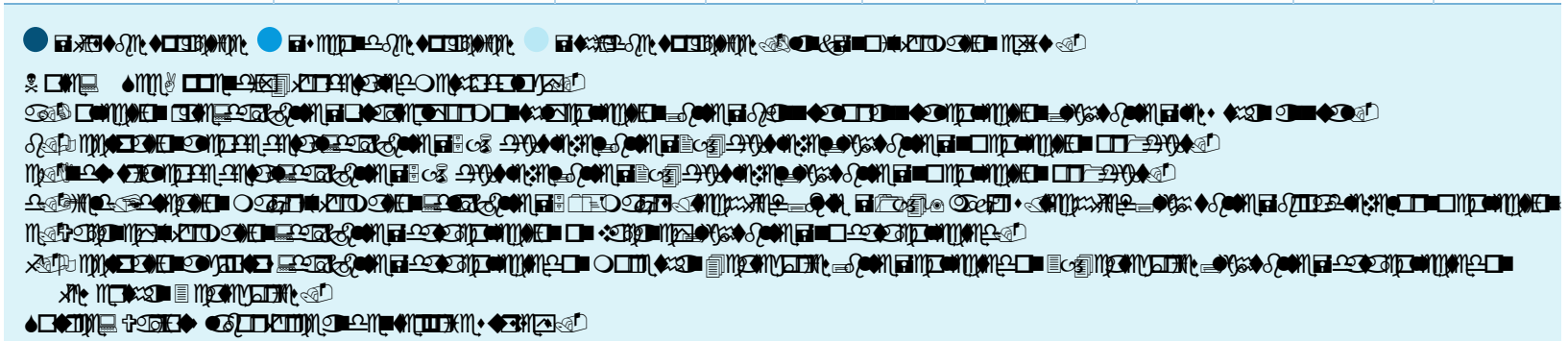
Source: ADB estimates using data from labor force surveys.

Assessing skills mismatches

Data collection across selected countries

	Labor force data				Enterprise data				
	Collection rate[a]	Occupational code detail[b]	Industrial code detail[c]	Field/ Education major information[d]	Collection rate[a]	Vacancy information[e]	Occupational code detail[b]	Occupation groups[f]	Industrial code detail[c]
United States	●	●	●	○	●	●	●	●	●
Republic of Korea	●	●	●	●	●	●	○		●
Armenia	●	○	○	○	●	○	○		●
Cambodia	●	●	●	○	○	○	○	●	●
China, People's Rep. of	●	●	●	●					
India	○	●	●	●	●	○	○	●	●
Indonesia	●	●	●	●	●	○	○	●	●
Pakistan	●	○	○	●	○	○	○	●	●
Philippines	●	○	○	●	●	●	○	●	●
Thailand	●	●	●	●	●	○	○	●	●
Viet Nam	●	●	●	○	●	○	○	○	●



Highlights from ADB's project preparatory documents

Nepal – Skills development project

Sample size: 306 employers
Geographical coverage: 9 industrial hubs
Sectoral coverage: 3 sectors – construction, services, manufacturing

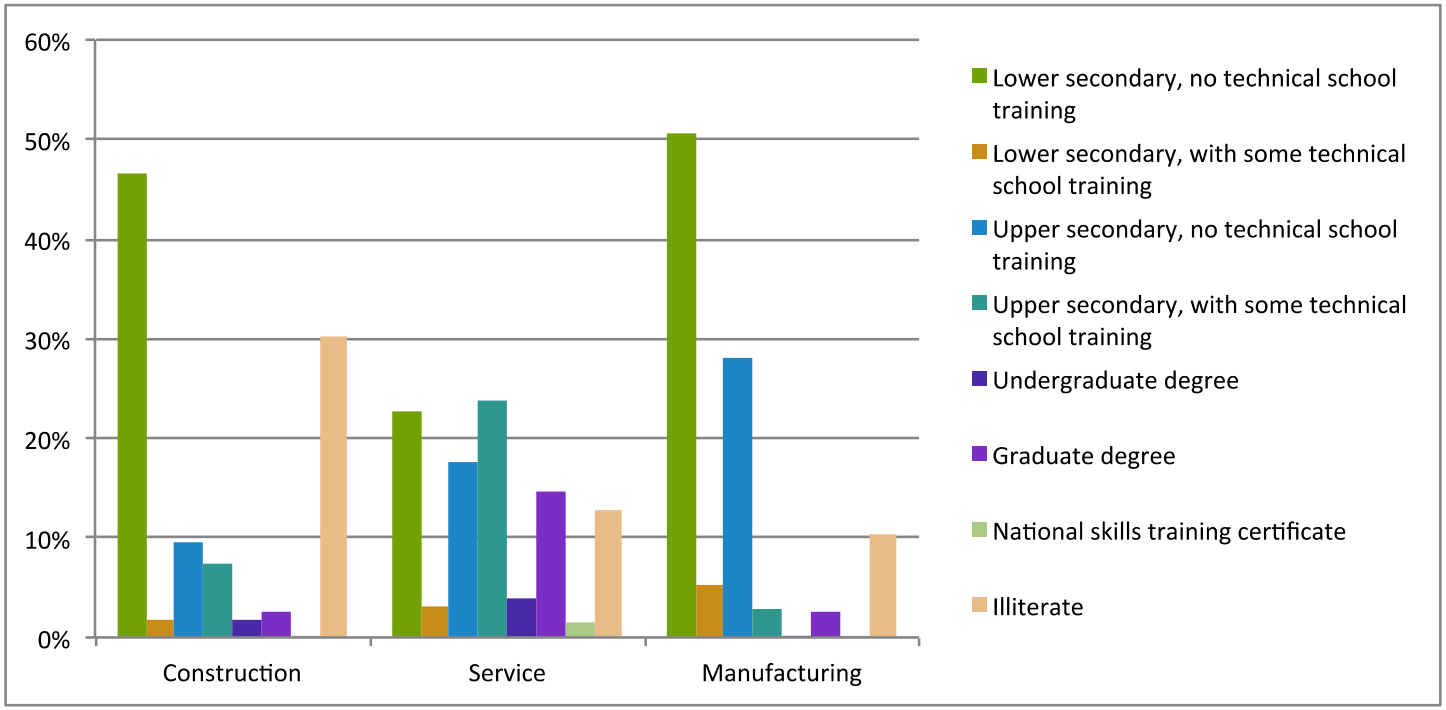
Research Tools Employed	Level of Analysis
Employer Survey, in selected provinces	1. Priority sectors (construction, services, manufacturing) in 9 industrial hubs 2. Focus on occupations in high demand a. *Construction*, e.g. overseers, special construction machine operators, masons b. *Services*, e.g. housekeepers, marketing and sales employees, IT support staff, chefs, waiters c. *Manufacturing*, e.g. steel industry occupations, garment workers, wood workers 3. Questions on technical and general skills needed

The survey included questions on employers' future occupations needs, specific skills needed in main occupations, assessment of the quality and relevance of current education and training programs, migrant workers, etc

Highlights from ADB's project preparatory documents

Nepal – Skills development project

Education and training in the construction, services and manufacturing sectors

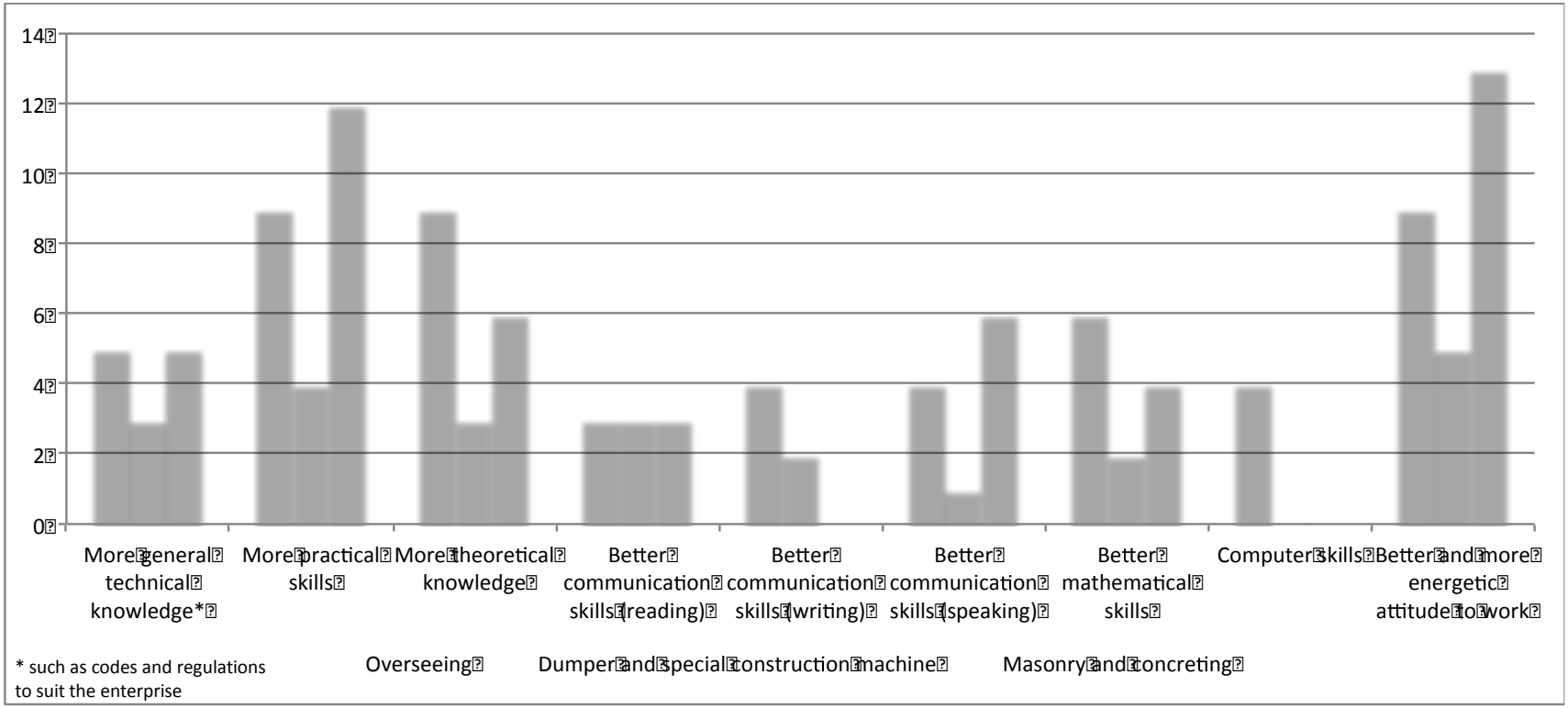


- The employer survey confirmed low educational attainments and little technical training, particularly in the construction sector

Highlights from ADB's project preparatory documents

Nepal – Skills development project

Skills missing in selected construction sector occupations, as reported by employers

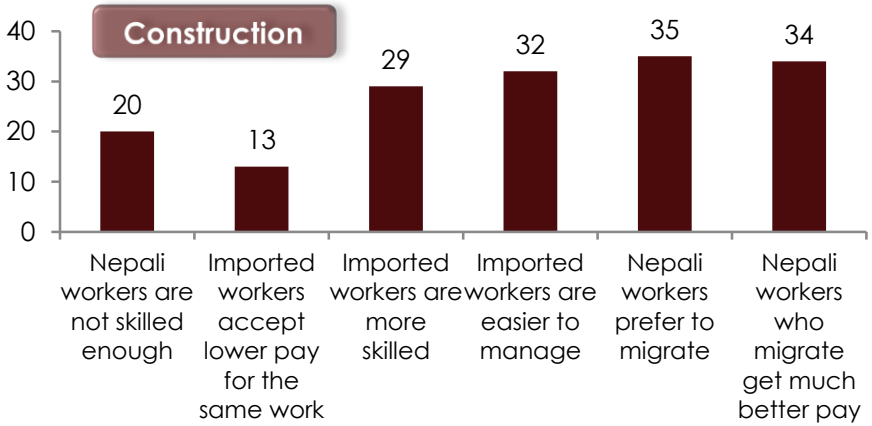


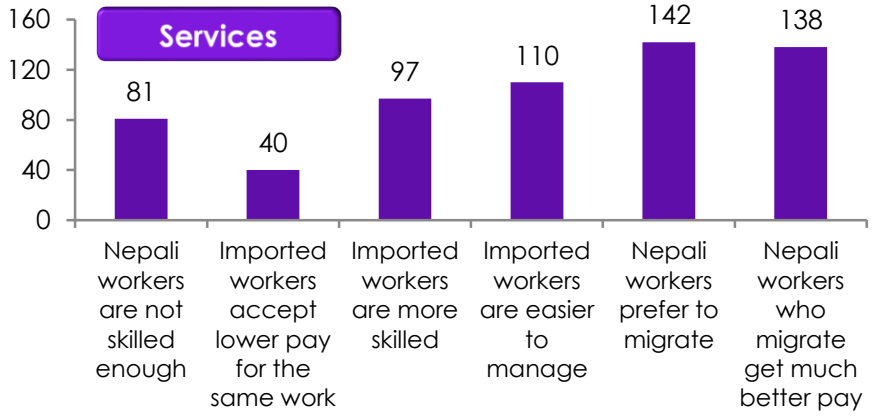
- Survey results highlighted missing skills in selected occupations,
- But sample size was small, making it difficult to generalize

Highlights from ADB's project preparatory documents

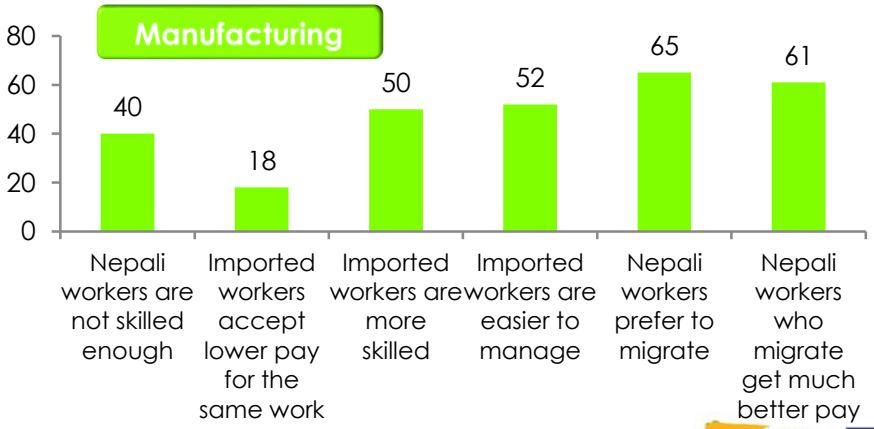
Nepal – Skills development project

Q: If employment opportunities in your line of business are good, why are they not filled by Nepali workers?





- Migration of Nepali workers
  - Employers reported that workers went overseas for higher wages
  - Nepalese employers reported a preference for recruiting foreign workers regarded as more flexible and easier to manage



Highlights from ADB's project preparatory documents

Mongolia – Skills for employment project

Sample size: 101 employers
Geographical coverage: 4 regions
Sectoral coverage: 10 sectors**

Research Tools Employed	Level of Analysis
To complement labor force survey data, ✓ Qualitative interviews with employers ✓ Meetings with key stakeholders ✓ Focus group discussions*	1. Occupations in demand (currently and in the future) 2. Types of skills valued by employers for specific occupations 3. Type of training provided by employers for new hires 4. Forms of cooperation between TVET schools and employers

Qualitative interviews to assess employers' current and future occupations needs, specific skills needed in main occupations, as well as their views on the relevance of vocational training programs

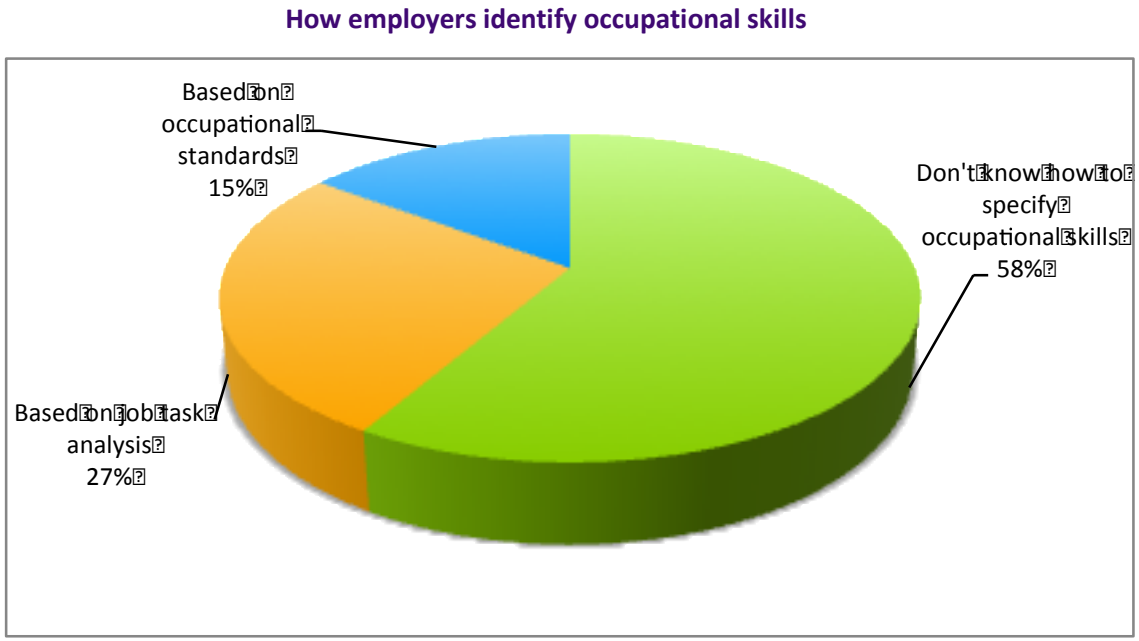
* with TVET students, recent graduates, unemployed, and persons with disabilities

** 1) construction; 2) road construction and maintenance; 3) agriculture; 4) transportation; 5) manufacturing; 6) light industry /wool, cashmere, and food processing/; 7) mining; 8) power energy and heat processing and supply; 9) water supply, sewage, waste management remediation activities; 10) wholesale, retail trade, repair of motor vehicles /mostly equipment supplier, dealers and maintenance

Highlights from ADB's project preparatory documents

Mongolia – Skills for employment project

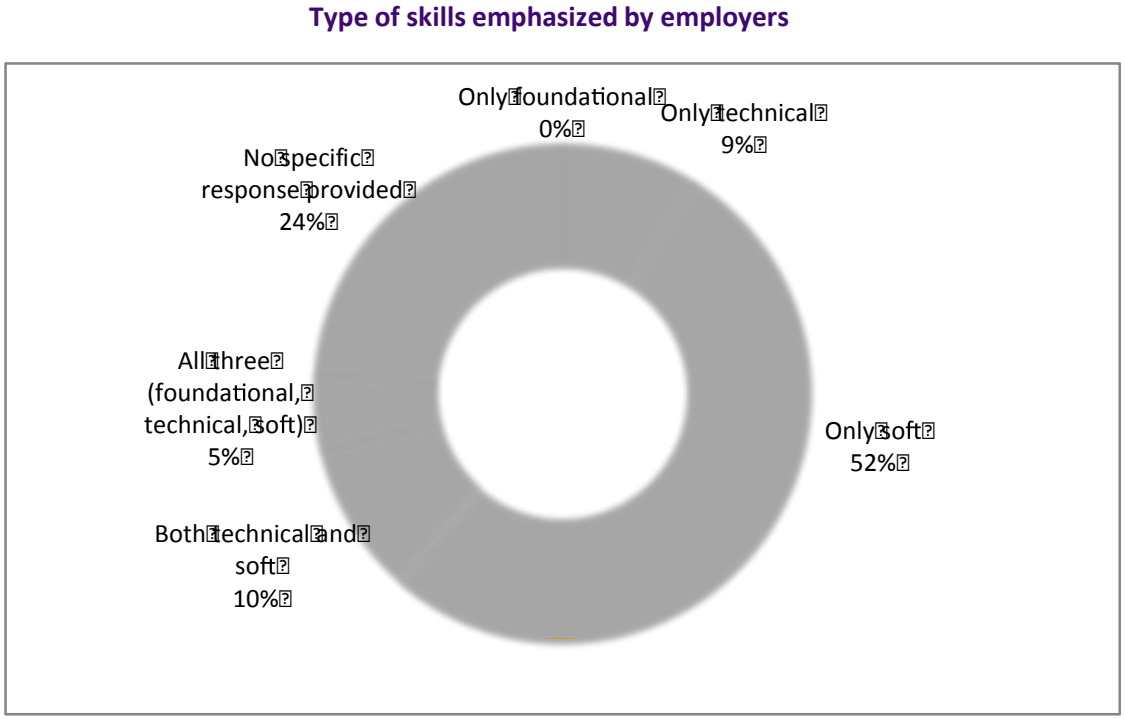
- More than half of employers interviewed (58.4%) did not know how to determine job-specific technical skills



Highlights from ADB's project preparatory documents

Mongolia – Skills for employment project

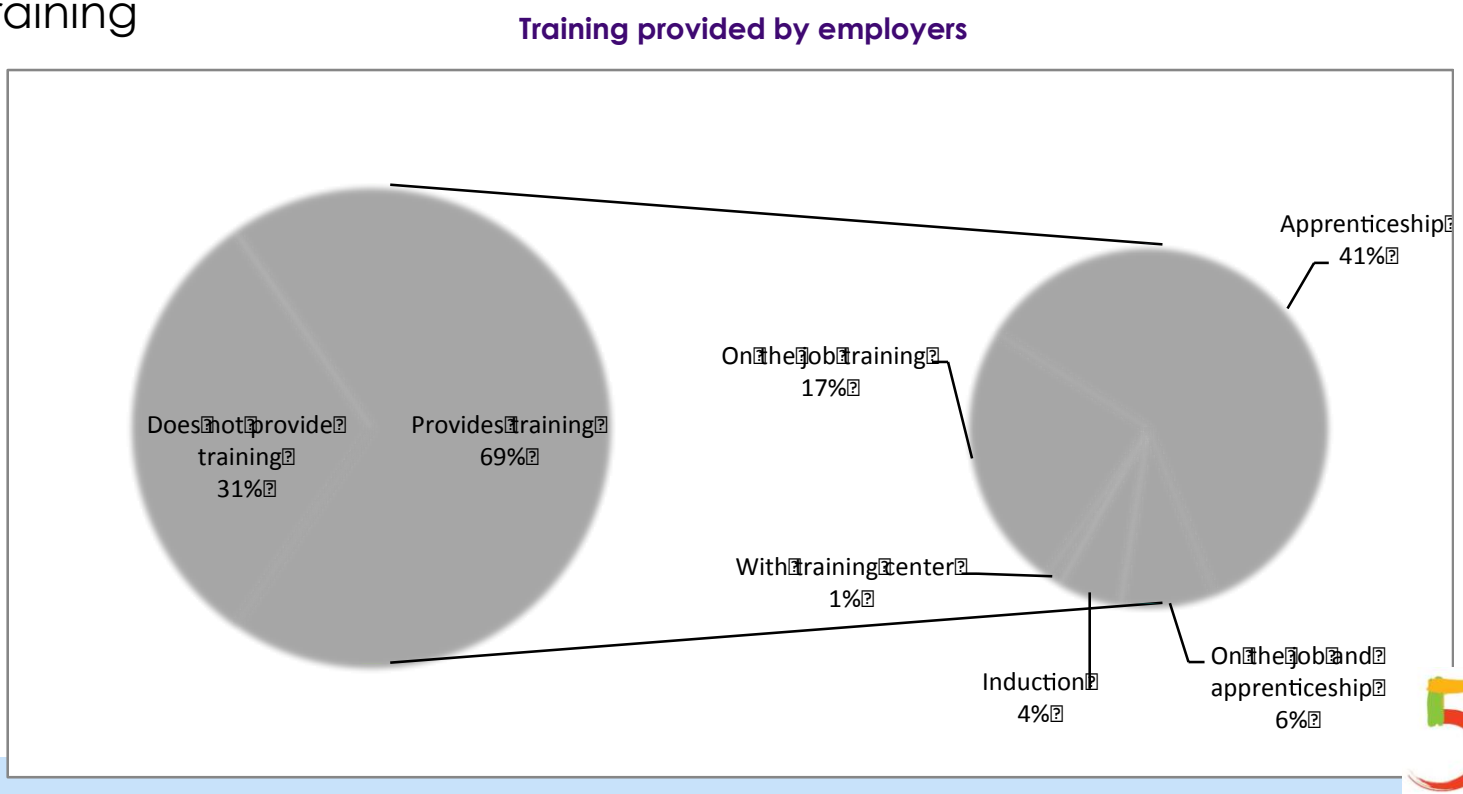
- More than half of employers interviewed (58.4%) did not know how to determine job-specific technical skills for trade occupations



Highlights from ADB's project preparatory documents

Mongolia – Skills for employment project

- Over two-thirds of interviewed employers provide some training to new hires
  - Most apprenticeship and on-the-job training focus on technical skills, suggesting that training programs lack relevance
  - Most firms do not develop specific training programs, providing ad-hoc training



Highlights from ADB's project preparatory documents

Bangladesh – Skills for Employment Investment Program

Research Tools Employed	Level of Analysis
1. Primary data: Employer surveys, focus group discussions, key informant interviews 2. Secondary data: Quantitative data analysis using census, labor force surveys, and other administrative sources	1. Current and future demand for different types of occupation in each sector 2. Mapping and analysis of occupations and qualifications 3. Adequacy of current training programs and training needs assessment

Macro-level analysis – labor force projections
Micro-level analyses - detailed sector assessments in 9 industries*
Geographical coverage: nationwide

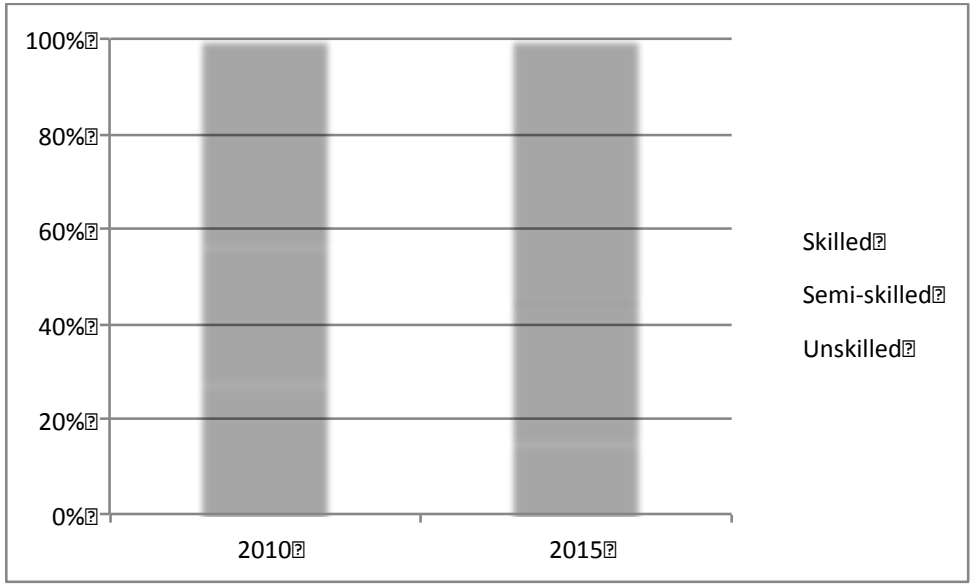
* Light engineering, construction, IT, shipbuilding, leather goods, agro-processing, healthcare, hospitality & tourism

Highlights from ADB's project preparatory documents

Bangladesh – Skills for Employment Investment Program

- In the Ready Made Garment industry, employers report skills shortages as the major constraint to growth
- Skills content of jobs is also evolving towards more skilled occupations, requiring more autonomy

Skills content of jobs in the Ready-made garment industry

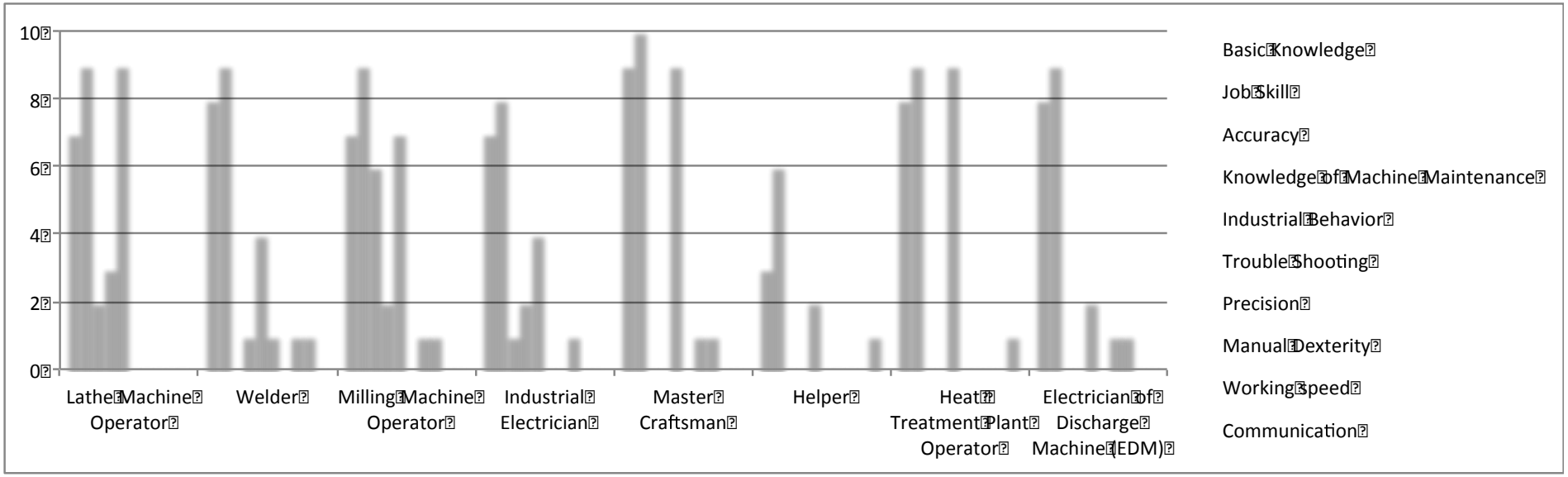


Unskilled	Needs close supervision to perform any function and does not have an experience of any skilled/semi-skilled job in the RMG sector
Semi-skilled	Can perform only one function without supervision
Skilled	Can perform more than one function without supervision

Highlights from ADB's project preparatory documents

Bangladesh – Skills for Employment Investment Program

Employers' assessment of workers' abilities in selected occupations, light engineering industry
0 = No ability to 10 = Full mastery



- In the light engineering industry, surveyed employers appear relatively satisfied with workers' basic knowledge and technical skills
- However, they rated skills needed to achieve higher degrees of mastery extremely poorly (e.g. accuracy, precision) and emphasized the absence of transversal skills, such as trouble shooting or communicating

Assessing skills mismatches
Looking ahead

Need for a clear framework

- Defining skills and skills mismatches
  - Concepts and understanding vary across regions, countries, sectors
  - Need for a common framework
- Proxies to assess skills mismatches
  - Currently:
    - Qualifications (level and field)
    - Ad-hoc questions on skills
    - Tools developed by PIAAC and STEP (more sparingly)
  - Looking ahead:
    - Refine and mainstream these new assessment instruments
    - Explore other options as well (datamining)

Assessing skills mismatches
Looking ahead

Beyond traditional surveys

- Current sources…
  - Labor force surveys
  - Individual and employer surveys
  - Tracer studies
  - Qualitative tools (e.g. focus group discussions, key informant interviews)
- … present many limitations
  - Timeliness
  - Cost
  - Quality of survey instruments
  - Sampling
- Alternatives?
  - Data mining of professional networking platforms could provide valuable data in real time

https://www.adb.org/sectors/education/main

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