

# STEP SKILLS MEASUREMENT

## Overview & Initial Results



**The World Bank**



**MULTI-DONOR TRUST FUND**  
LABOR MARKETS, JOB CREATION & ECONOMIC GROWTH

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# Why measure skills?

- **Skills are at the core of improving employment outcomes** and increasing productivity and growth.
- Yet, in many countries **education and training systems often lack quality** and labor market relevance, leaving workers ill-prepared for the labor market.
- **Many workers lack the right skills** to match the requirements in available job openings or have limited opportunities to access high quality pre-employment or skills upgrading training programs that promote higher productivity jobs.
- Despite the central role of skills in shaping employment outcomes, there is very **little information about the distribution of different types of skills** in the labor force and their distinctive contribution to labor market outcomes.
- Ultimately, the **lack of information affects the design of skills development policies** and programs.

# What is the STEP Skills Measurement Program?

- First-ever initiative to generate internationally comparable data on skills available in developing countries.
- The program supports the implementation of standardized surveys to gather information on the supply and distribution of skills and the demand for such skills in the labor market.
- The surveys include newly-designed modules that measure the cognitive skills, job-relevant skills, and socio-emotional skills of a representative sample of adults aged 15 to 64 living in urban areas, whether they work or not.
- Survey modules collect information on respondents' skills acquisition and maintenance, transitions in the labor market, self-employed, health status and family background

# Motivation | What we DO know about skills

- ❑ Employer surveys point to skills shortages
- ❑ Common proxies for skills are inadequate
  - Educational attainment
  - Test scores available for school-age populations only
- ❑ Skills are multi-faceted



**Cognitive**



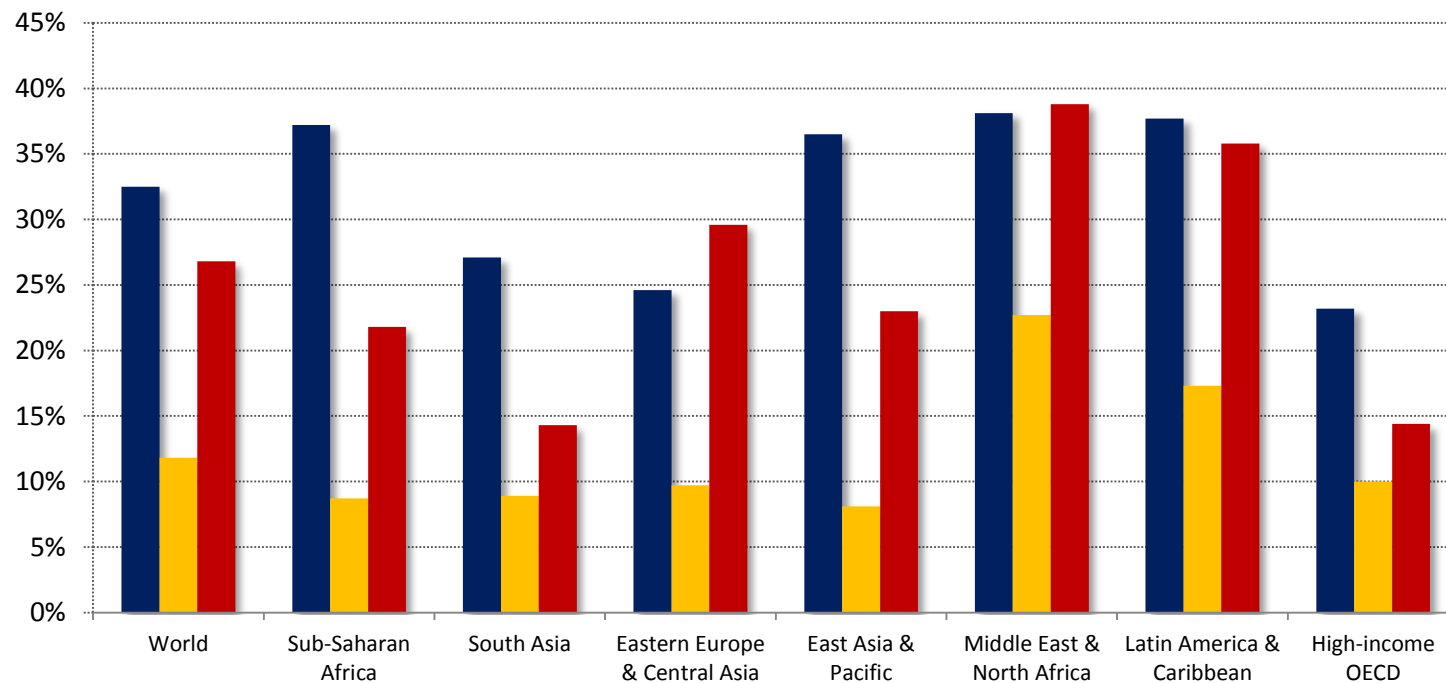
**Socio-emotional**



**Job-relevant**

**Skill Set**

# Skills are a constraint around the world



■ % unskilled workers, out of all production workers

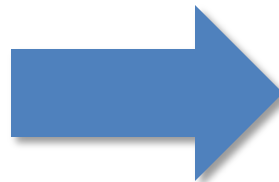
■ % firms identifying labor regulations as a major constraint

■ % firms identifying an inadequately educated workforce as a major constraint

# Key Questions

- ❑ What is the skills profile of the labor force?
- ❑ What skills matter for employment and productivity?
- ❑ What is the nature and size of skills gaps?
- ❑ What interventions may be considered to improve employability and productivity?

**To address these questions**



# STEP Program | Objective

**Collect internationally comparable data on different types of skills to inform policy and skill development strategies**

*The project includes two survey instruments*

## (1) Survey of Individuals (HH survey)

### Supply of skills

- Sample size: 2,000-3,500
- Length: 120-150 minutes
- Representative of **urban** areas
- Population aged 15-64



## (2) Survey of Employers (Firms)

### Demand for skills

- Sample size: 300-500 enterprises
- Length: 45-60 minutes
- Formal and informal sectors
- Geographic or economic sector based



# What skills are measured in STEP?

## Cognitive Skills

- Direct assessment of reading literacy based on the *Survey of Adult Skills* instruments
- Indirect assessment on individuals' use of reading, writing and numeracy skills at work and/or in daily life

## Job-relevant Skills

- Qualifications required for the job and job learning times
- Indirect assessment of skills used at work

Job tasks

Data—cognitive, mental power

People—interpersonal

Things—physical, muscle power

Technology use

## Socio-emotional Skills

- Personality traits (Big Five and Grit)
- Behavior (Hostile Attribution Bias and Decision Making)
- Risk and Time Preference

# Where is STEP being implemented?

- The STEP Skills Measurement Program has 14 participating countries, implemented in three waves:



Wave 1 – Completed 2013

Wave 2 – To be completed 2014

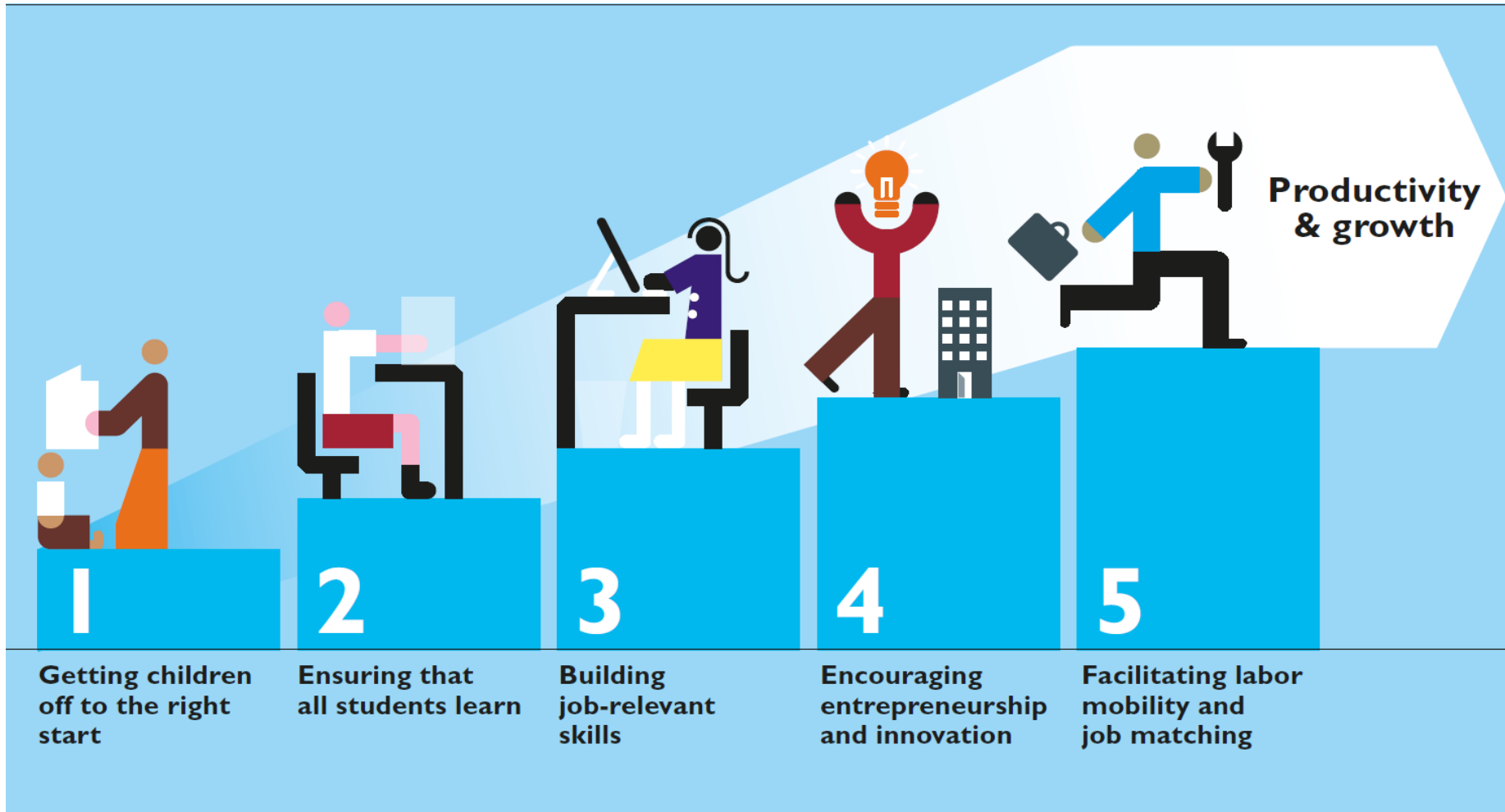
Wave 3 – Started 2014

# Snapshot of results

# General takeaways

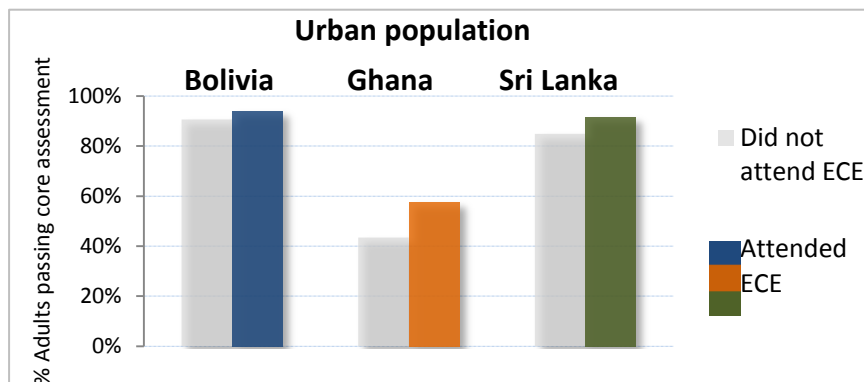
- Participation in early childhood education programs pays off
- Past household socioeconomic status affects the acquisition of socio-emotional skills, however, the educational system also plays an important role
- Strong foundational skills are a prerequisite for developing job-relevant skills
- A smooth transition from school to work has long lasting positive effects on socio-emotional skills
- The labor market rewards socio-emotional and job-relevant skills as much as educational attainment
- Training to strengthen such skills can improve adult's employability
- Businesses are not making full use of workers' skills. For example, employees are vastly underusing their employees' computer skills in their jobs

# STEP | Skills toward Employment and Productivity



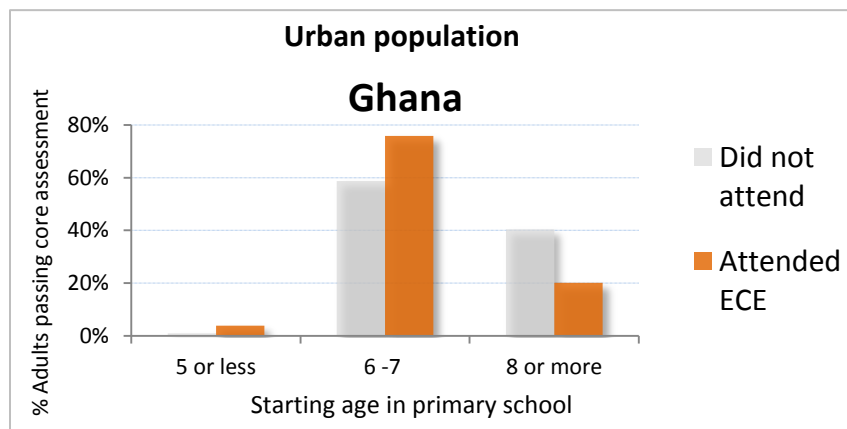
# Step 1 | Getting children off to a new start

Participation in ECE programs is associated with a higher probability of passing core reading literacy assessment



- The probability of passing the core literacy assessment—a measure of minimum literacy—increases significantly for adults who responded as having participated in an early childhood education program prior to entering the first grade in primary education.

A higher probability of starting primary education at the appropriate age (6-7 years old)

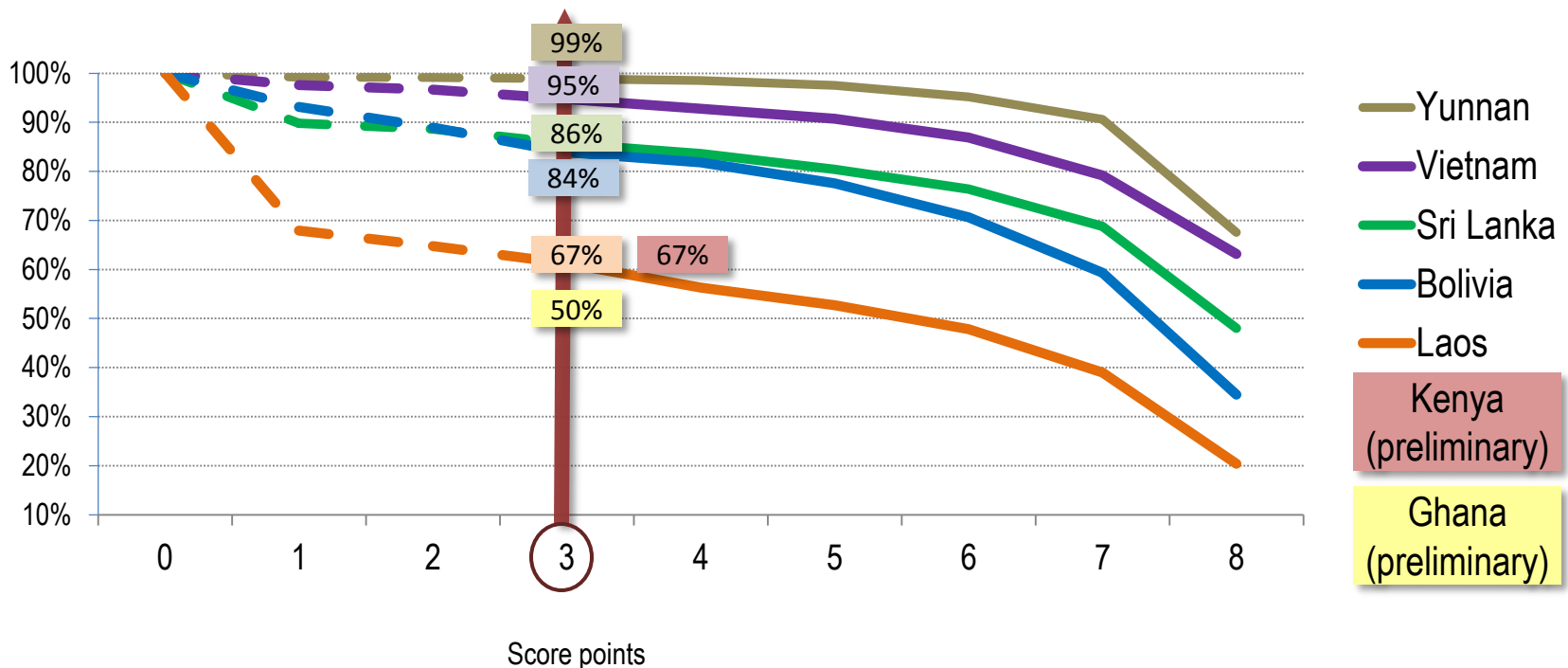


- In Ghana, adults who participated in ECE are significantly more likely to start primary school at the right age. About 40 percent of adults who did not attend ECE reported starting late, compared to 20 percent of adults who attended ECE.

## Step 2 | Ensuring that all students learn

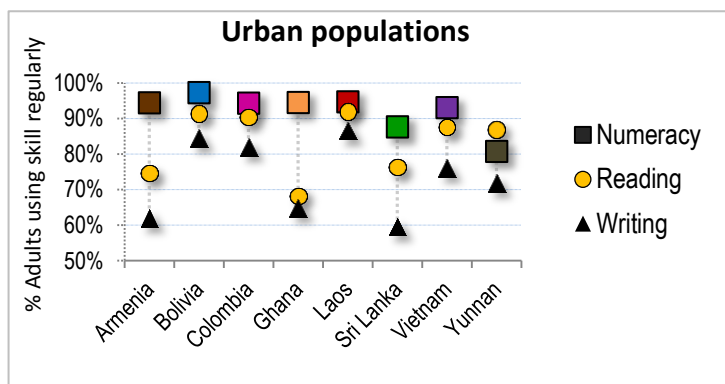
*The proportion of adults reaching the minimum literacy proficiency threshold varies widely across countries*

- Virtually all adults in Yunnan province and Vietnam pass the core literacy threshold (3 correct answers out of 8 questions)
- In contrast, only 50 percent of adults in Ghana pass the minimum threshold

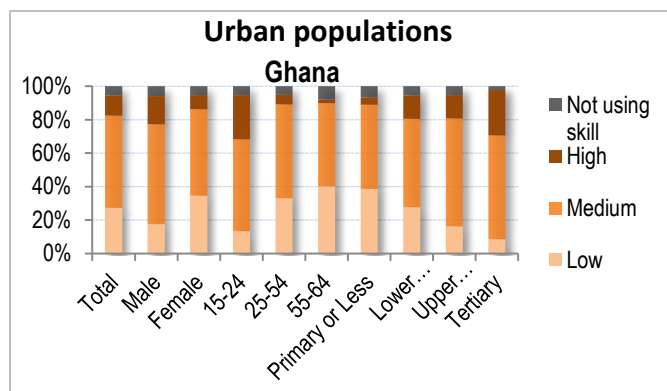


# Step 2 | Ensuring that all students learn

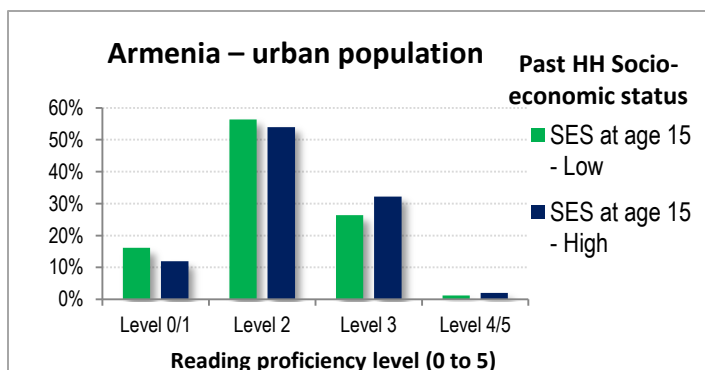
Most adults use their foundational skills regularly, especially numeracy skills...



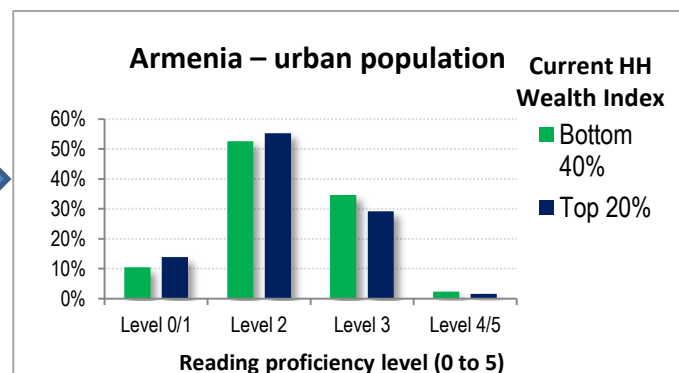
... but not all adults use their foundational skills to the same extent



Adults who once lived in high socio-economic-status households at the age of 15 perform better in reading proficiency...

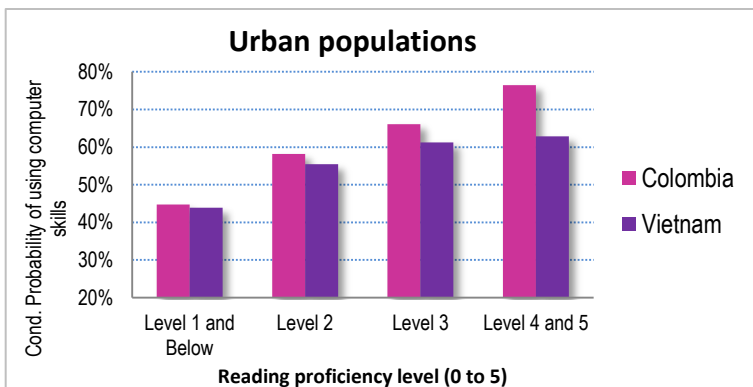


... however, adults currently living in wealthier households do not necessarily perform better in reading proficiency



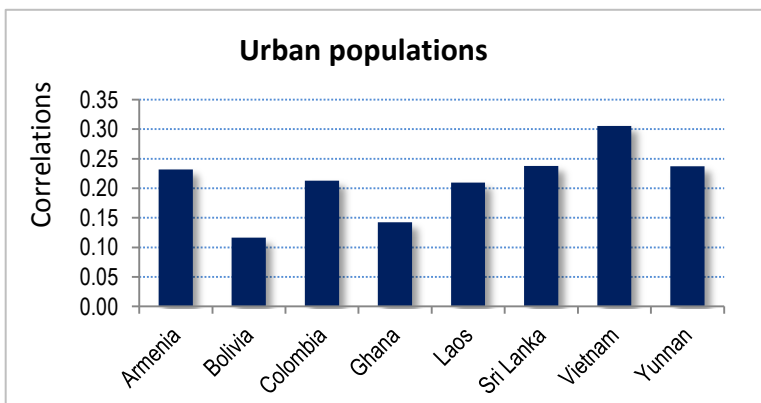
## Step 3 | The Right Skills for the Job

Learning outcomes are related to the use of job-relevant skills. For instance, the higher a person's reading proficiency level, the more he or she uses computers at work.



- Solid foundational and socio-emotional skills play an important role in workforce development. In Colombia and Vietnam, adults with higher than average reading proficiency levels have a higher probability of using computer skills at work.

Similarly, a worker's socio-emotional skills are associated with the use of job-relevant skills. For example, greater **extraversion is associated with more contact with clients**.

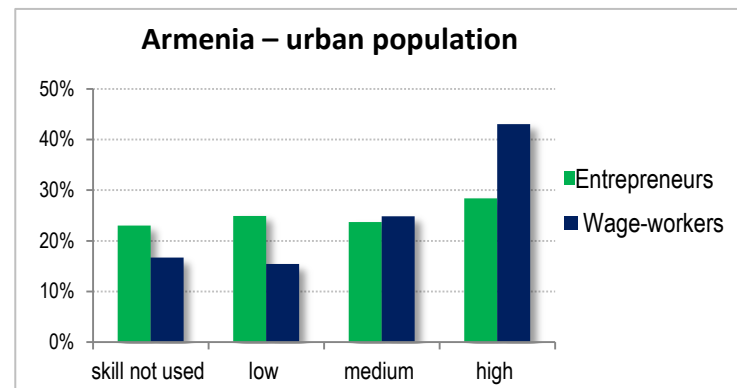
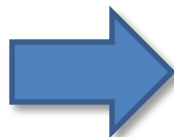
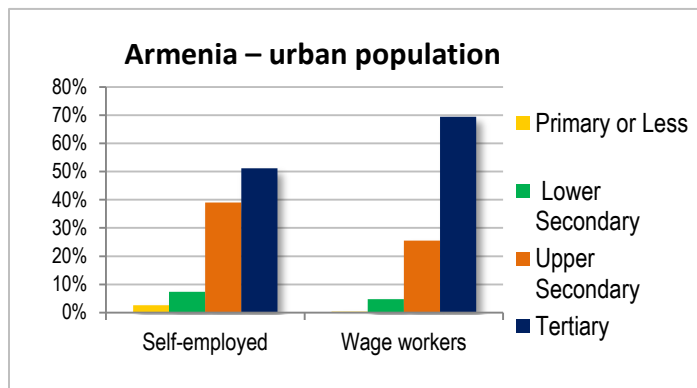


- Workers who are intellectually curious and open to experience are more likely than others to solve complex problems and learn new things at work.

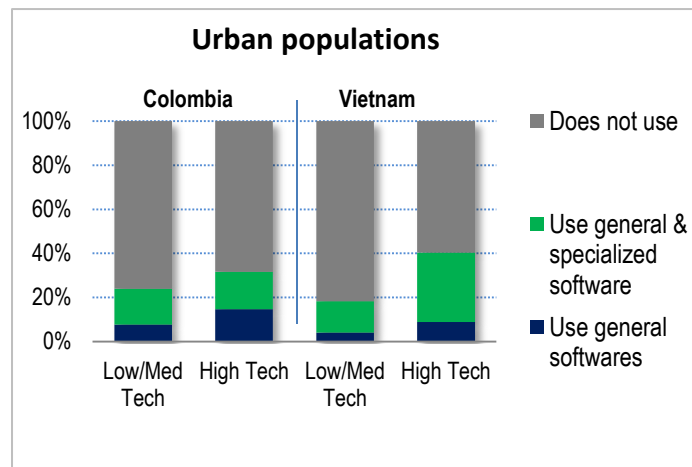
# Step 4 | Encouraging Entrepreneurship & Innovation

Entrepreneurs have a different educational profile compared to wage workers

And they use reading skills less regularly and with less intensity



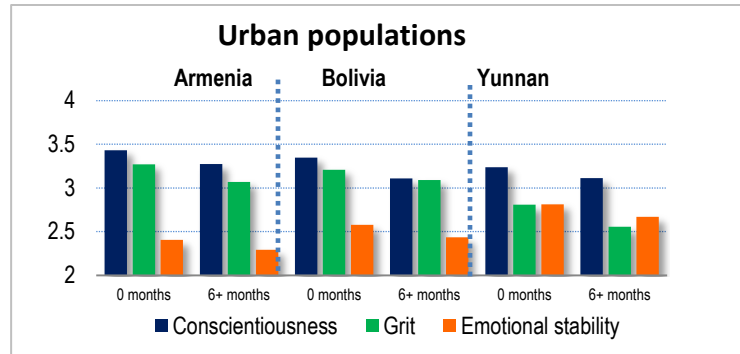
High-tech jobs in manufacturing are more likely to require workers to be able to use computers, in particular advanced software, than low/medium tech jobs



- Most innovative sectors such as high tech manufacturing require the use of more complex computer skills.
- The proportion of workers in high tech using more specialized software differs across countries

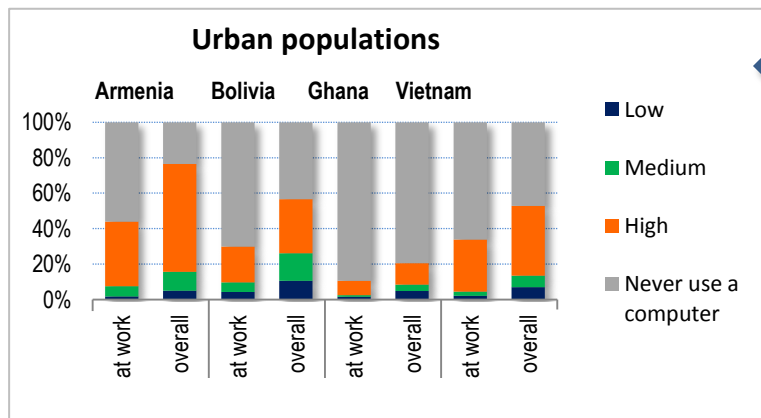
# Step 5 | Facilitating Labor Mobility & Job Matching

Individuals with a tertiary education who take the least time to find their first job have the highest scores in terms of conscientiousness, emotional stability, and grit.

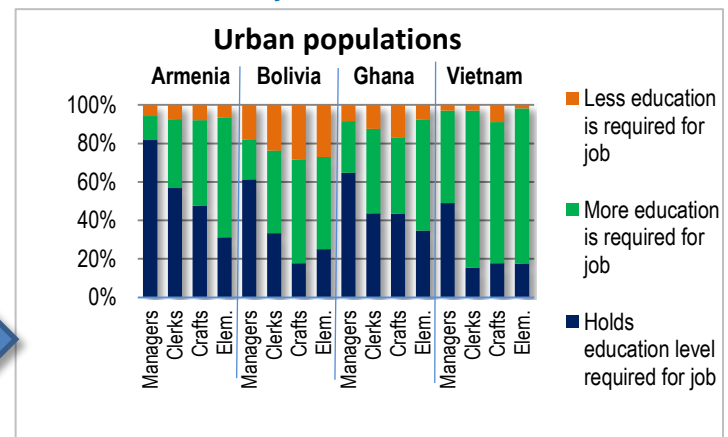


- Among 35 to 45-year-old adults with a tertiary education, those who spent more than six months looking for their first job tend to display less conscientiousness, emotional stability, and grit than those who found a job right after graduating.

Workers underuse computer skills in their jobs when compared to their overall use... suggesting untapped skills potential



Most workers feel they do not have the right level of education for their jobs



Looking at  
Job  
Matching  
in 2 Ways



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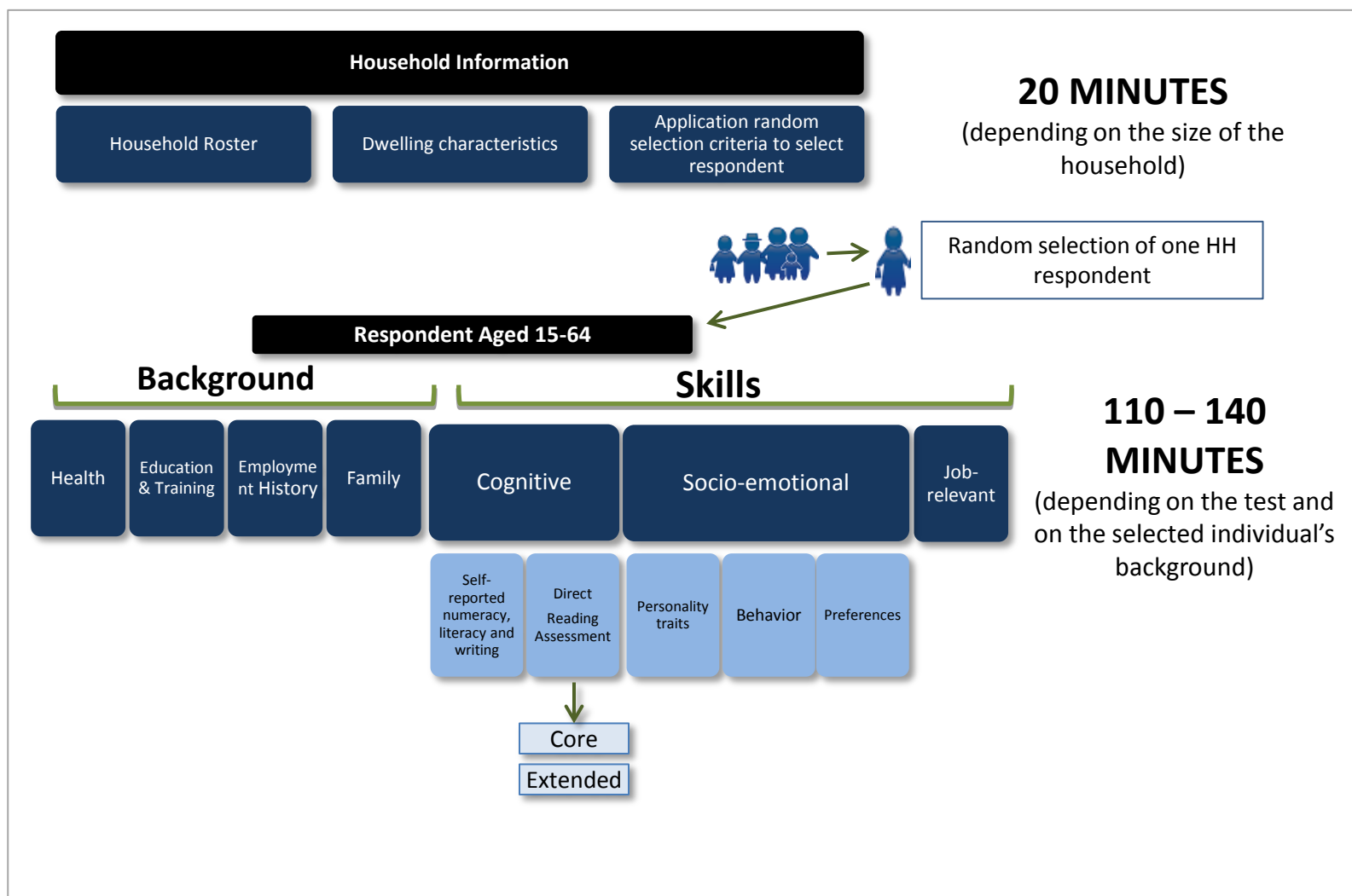
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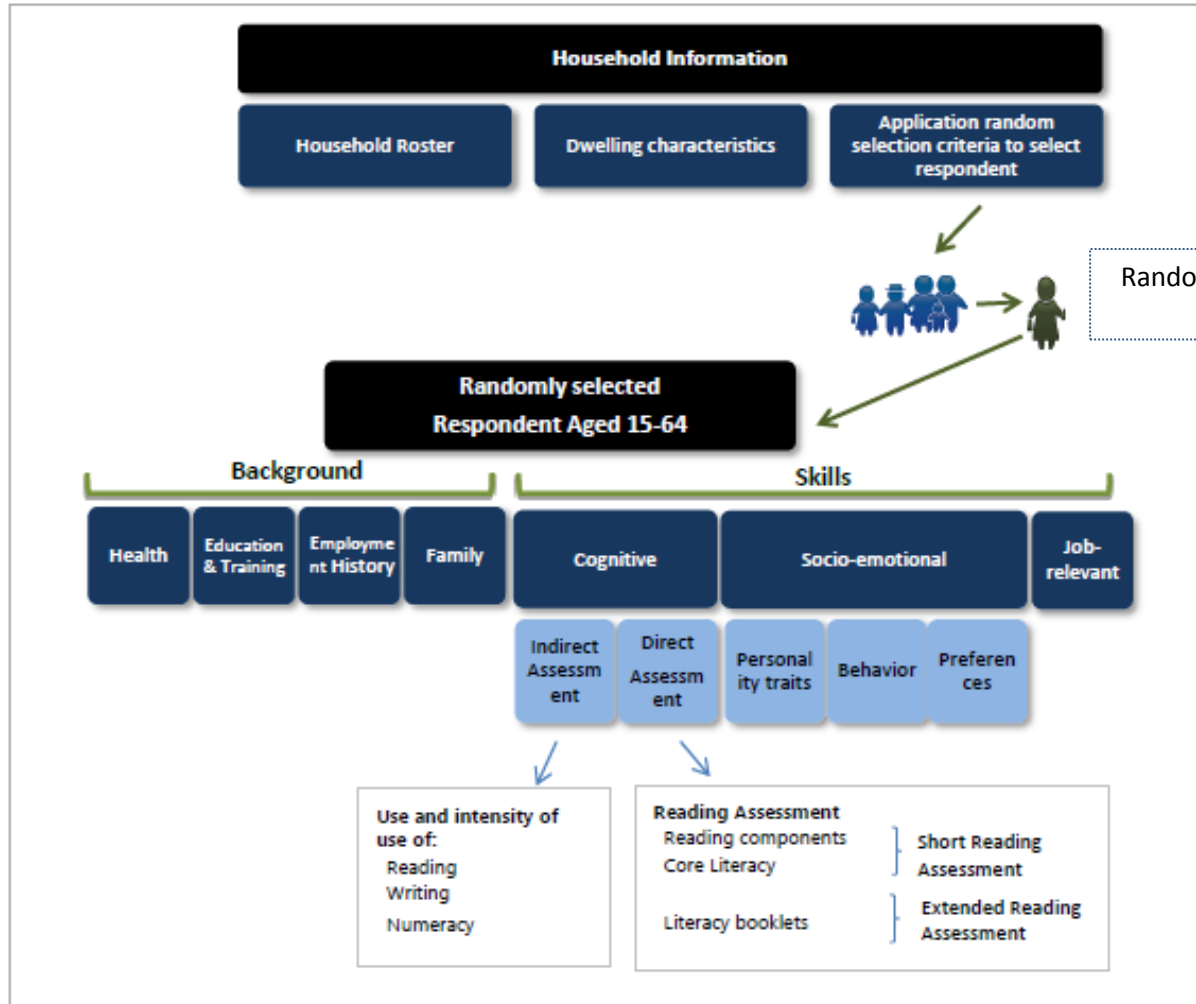
# Annex

## Survey Instruments

# STEP Skills Measurement | HH Survey Instrument



# STEP Skills Measurement | HH Survey Instrument



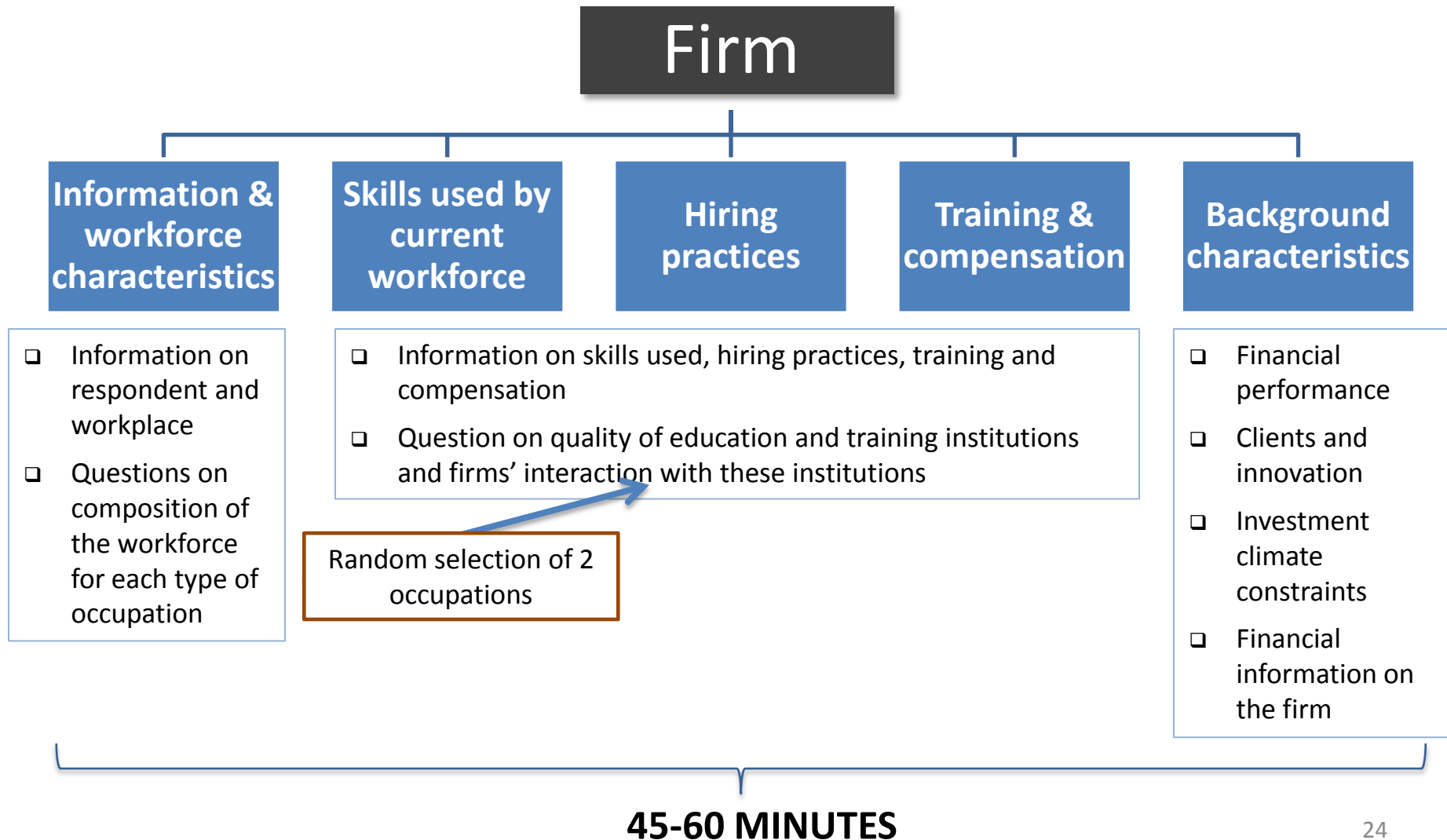
**20 MINUTES**  
(depending on the size of the household)

**110 – 140 MINUTES**  
(depending on the test and on the selected individual's background)

# STEP Skills Measurement | HH Survey Key Features

- ❑ Provides **comprehensive skills modules** for selected individuals aged 15-64 (employed, unemployed and inactive)
- ❑ Tracks **skills acquisition and maintenance** through detailed education and training history, including non-formal and formal apprenticeships
- ❑ Includes **transitions in the labor market**, including first job, current and previous spells, information on previous wage jobs for self-employed (voluntary/involuntary self-employment)
- ❑ Provides information on **labor market success of the self-employed** (start-up capital, earnings, sales, business expansion)
- ❑ Incorporates information on **health status** (BMI, chronic disease)
- ❑ **Instrumental variables** (family background, distance to school)

# STEP Skills Measurement | Employer Survey



# STEP Skills Measurement | Employer Survey Key Features

- ❑ Can be implemented to **firms of any size (formal or informal)**, since it refers to occupations currently employed in firm
- ❑ Provides **comprehensive skills modules** for selected types of occupation
- ❑ Measures skills that are **directly comparable** to those of the household survey
- ❑ Provides information on **training provision and needs**, as well as relationship with and opinion about **education and training institutions**