



**WORLD BANK GROUP**

Social Protection & Jobs

# *Jobs Diagnostic*

# *Methodological Approach & Enquiry*

Jobs and Migration

Core Course

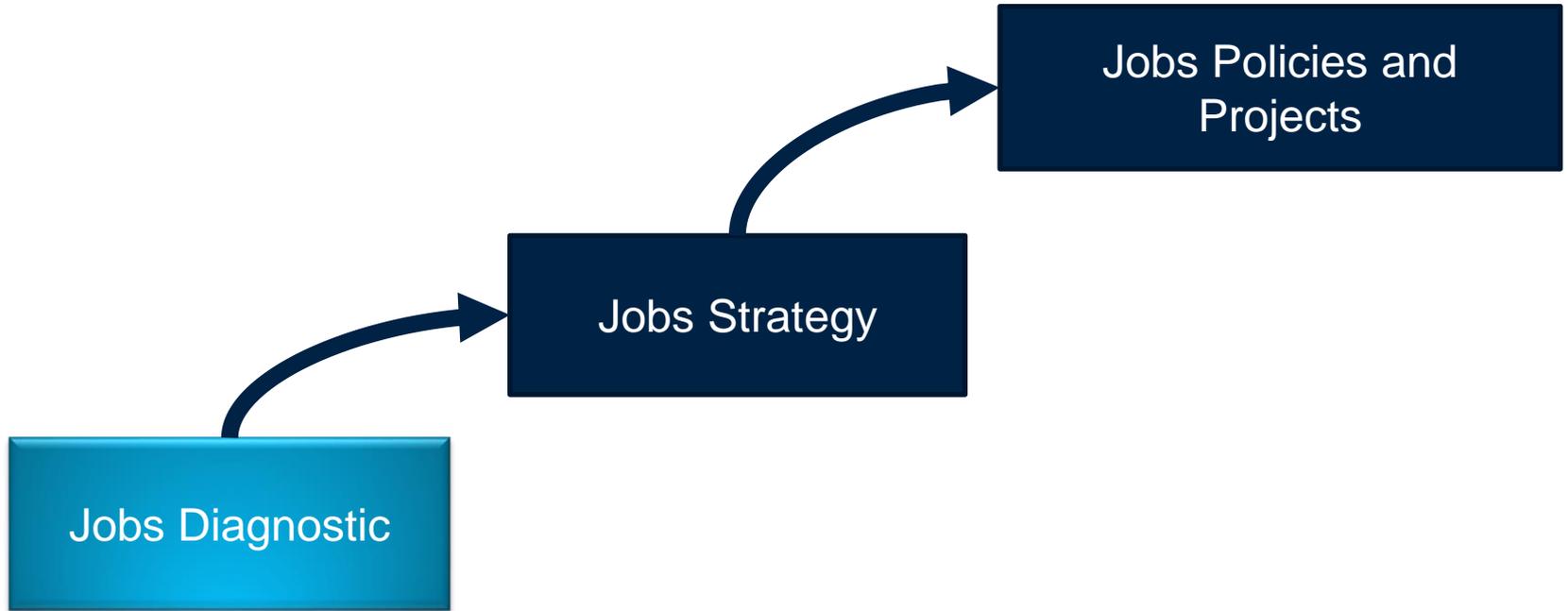
Tuesday, May 1

**Dino Merotto ,**

**Michael Weber, &**

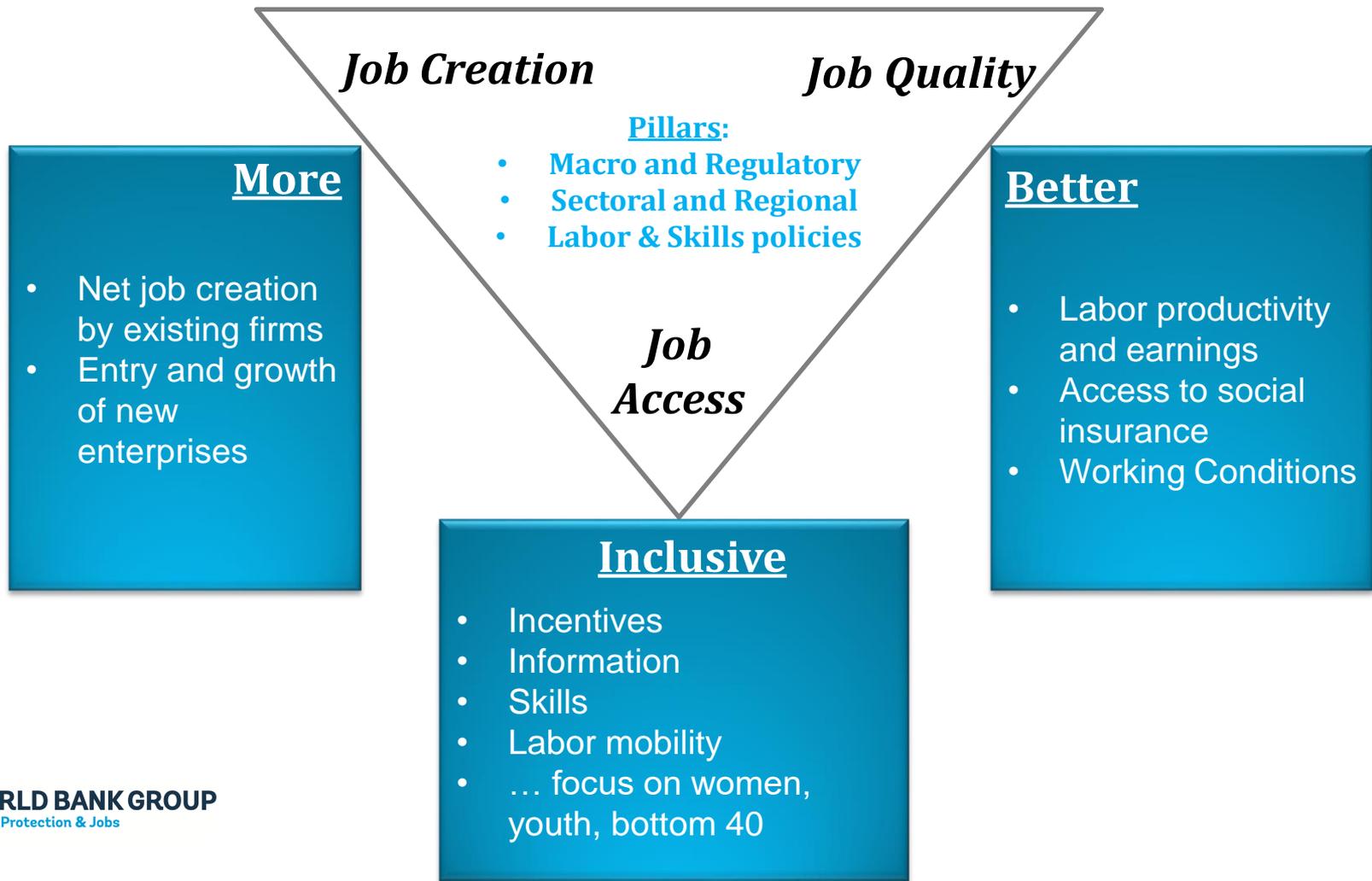
**Reyes Aterido**

# *Jobs Approach*

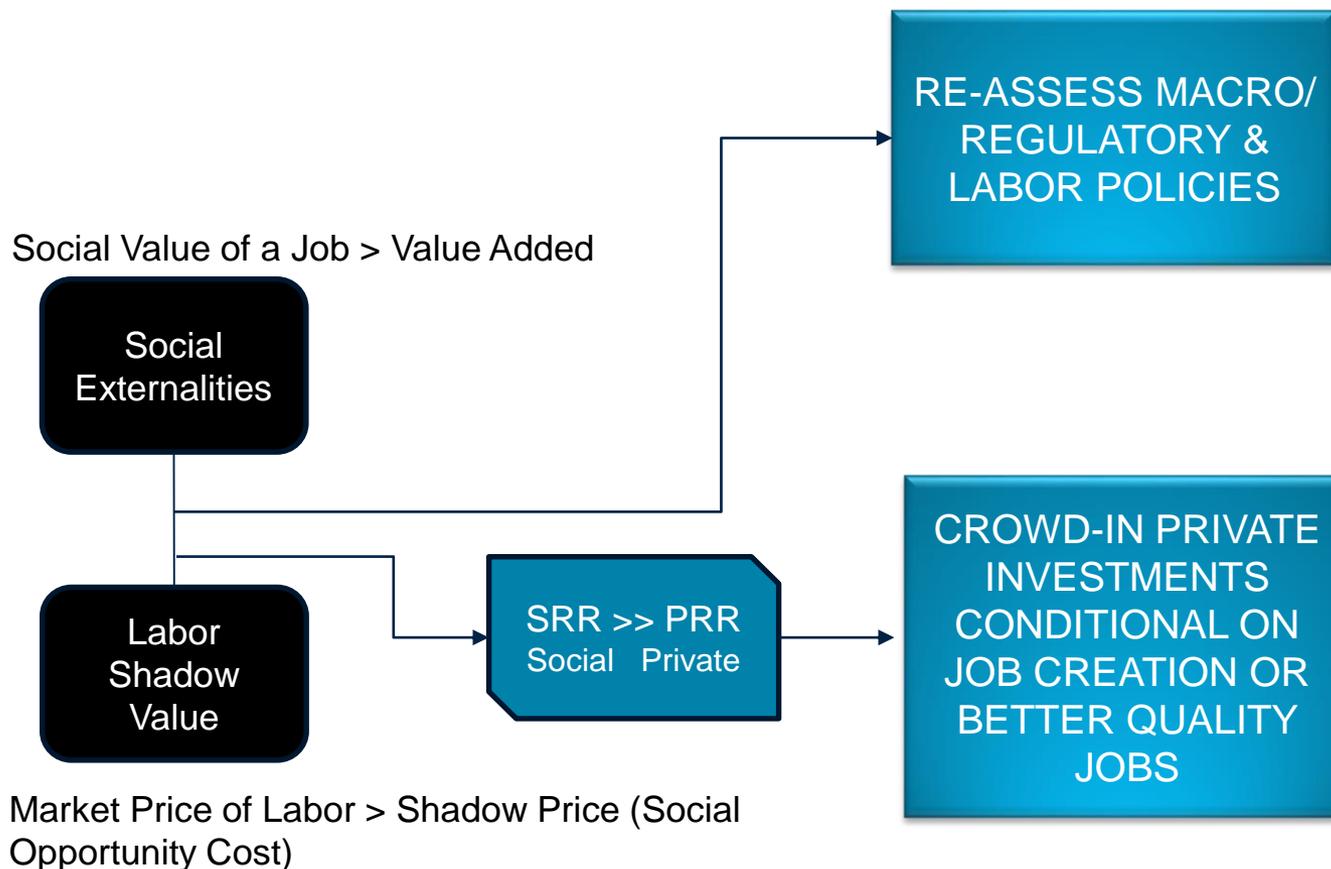


# Jobs Strategies target key constraints identified in Job Diagnostics

*Policies are organized around WDR MILES framework*



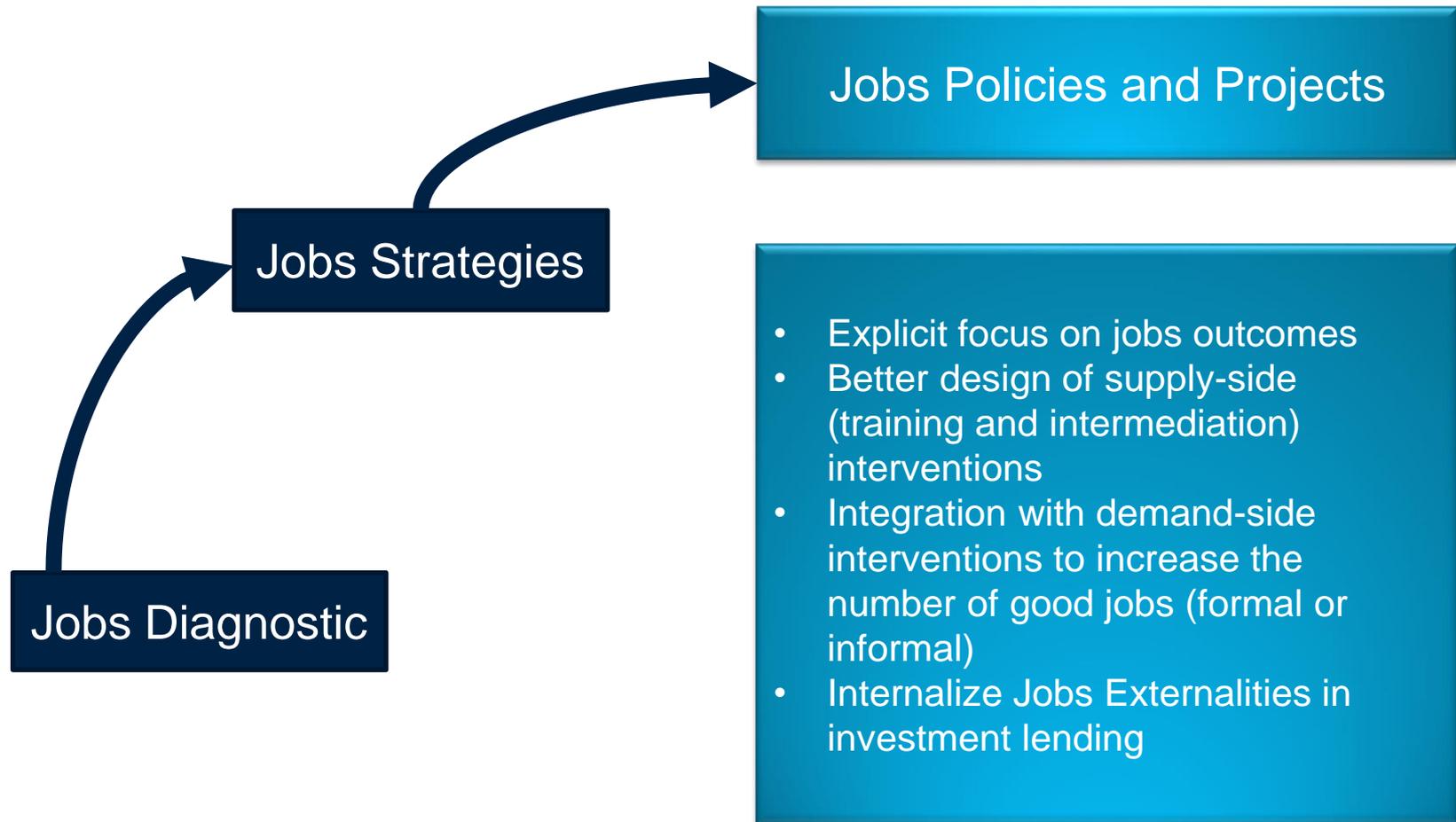
# Internalizing Jobs Externalities



- Fiscal/monetary policy
- Trade policy
- Labor regulations
- Labor taxation
- ALMPs

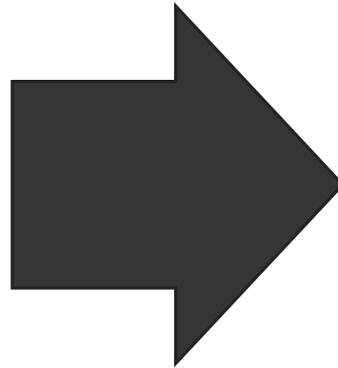
- Interventions to correct *Jobs Linked Externalities* (JLEs; subsidies/tax incentives)
- VC Development
- Aggregator programs
- SME Development
- Entrepreneurship
- Economic Inclusion

# *From Jobs Diagnosis and Strategies to Policies and Projects*



# *Our Motivation*

**JOBS**

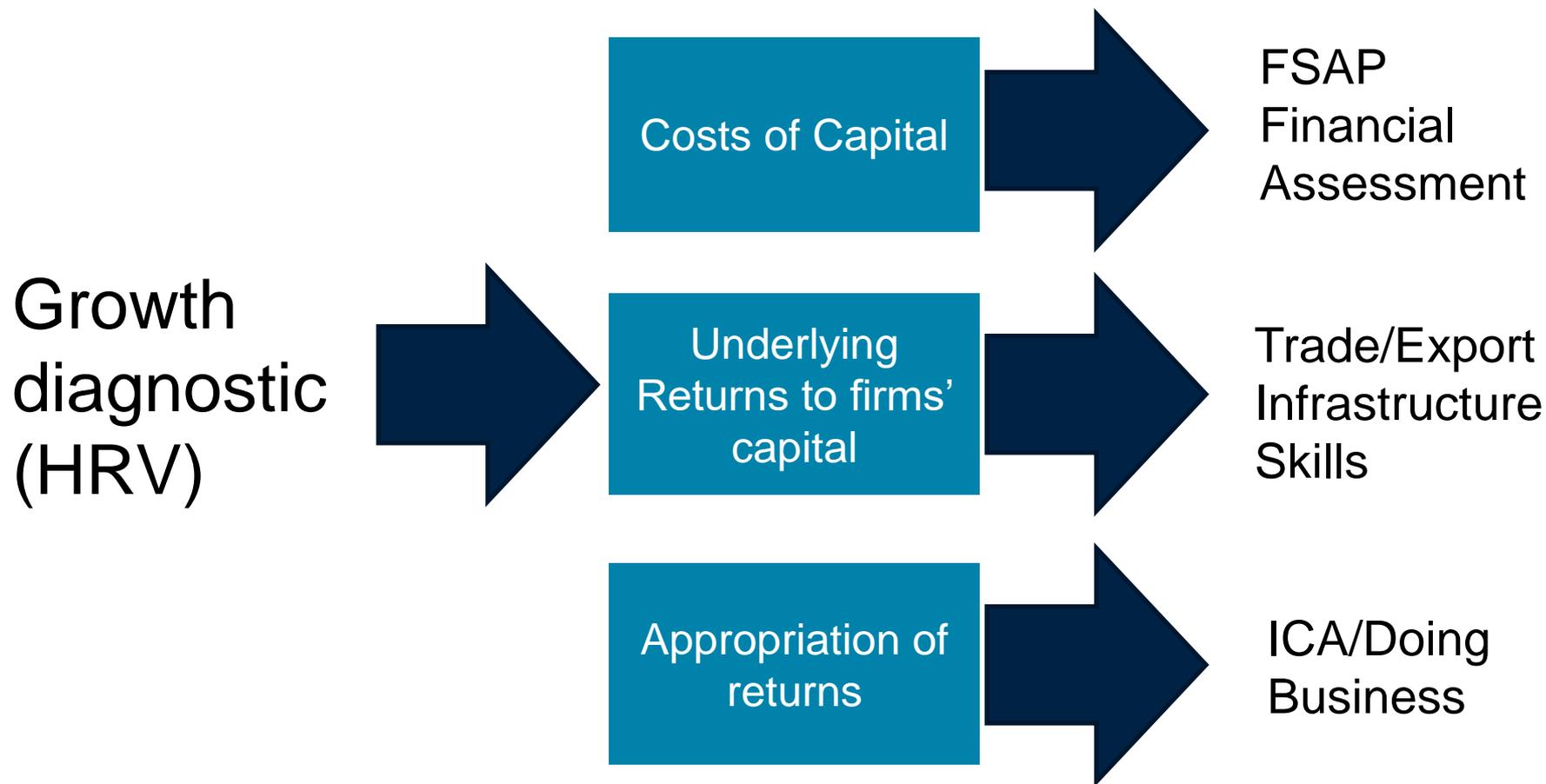


Economic Growth

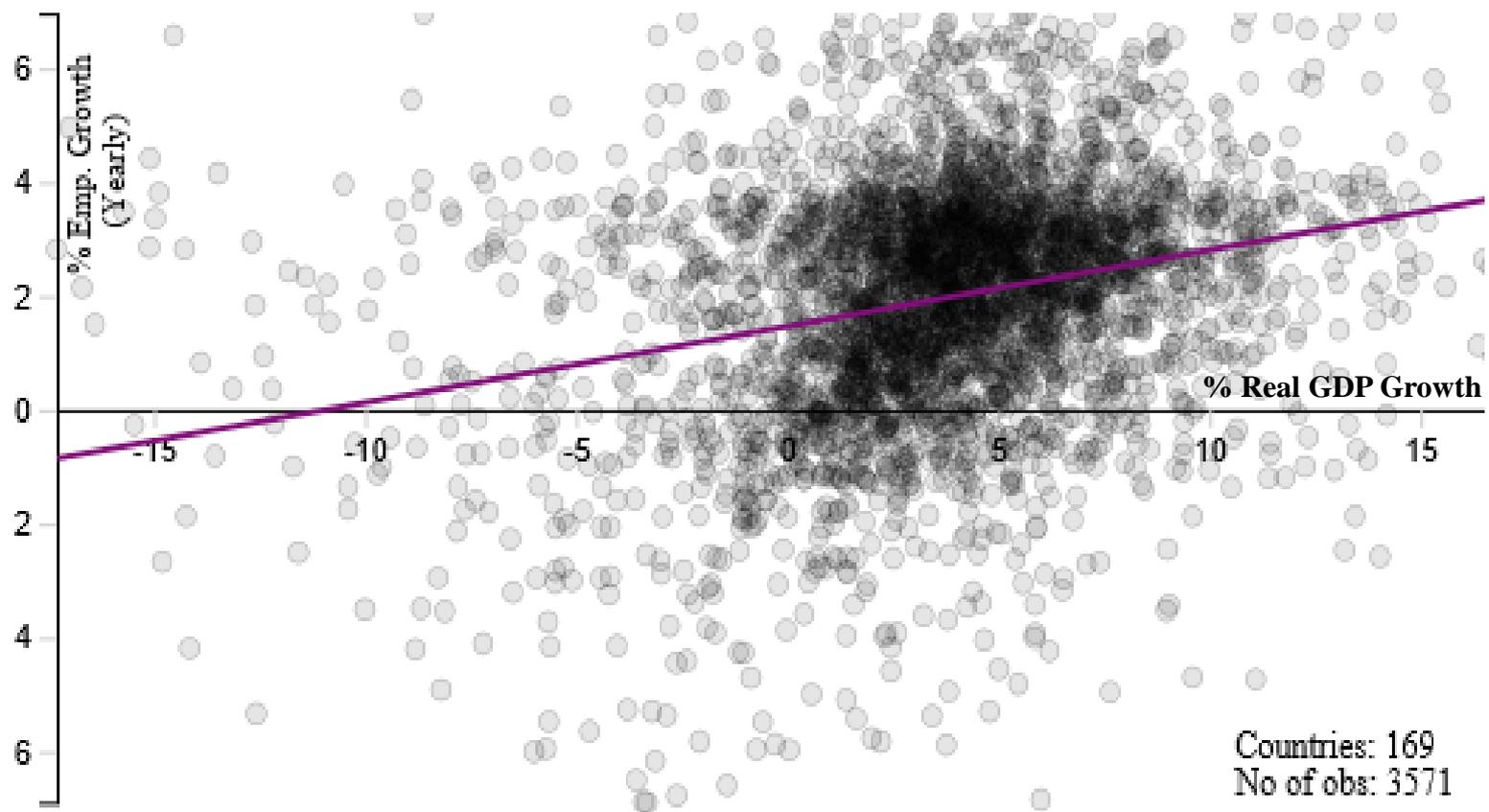
Poverty / Inequality

Social Stability

# *Traditional Diagnosis: Capital Focus*

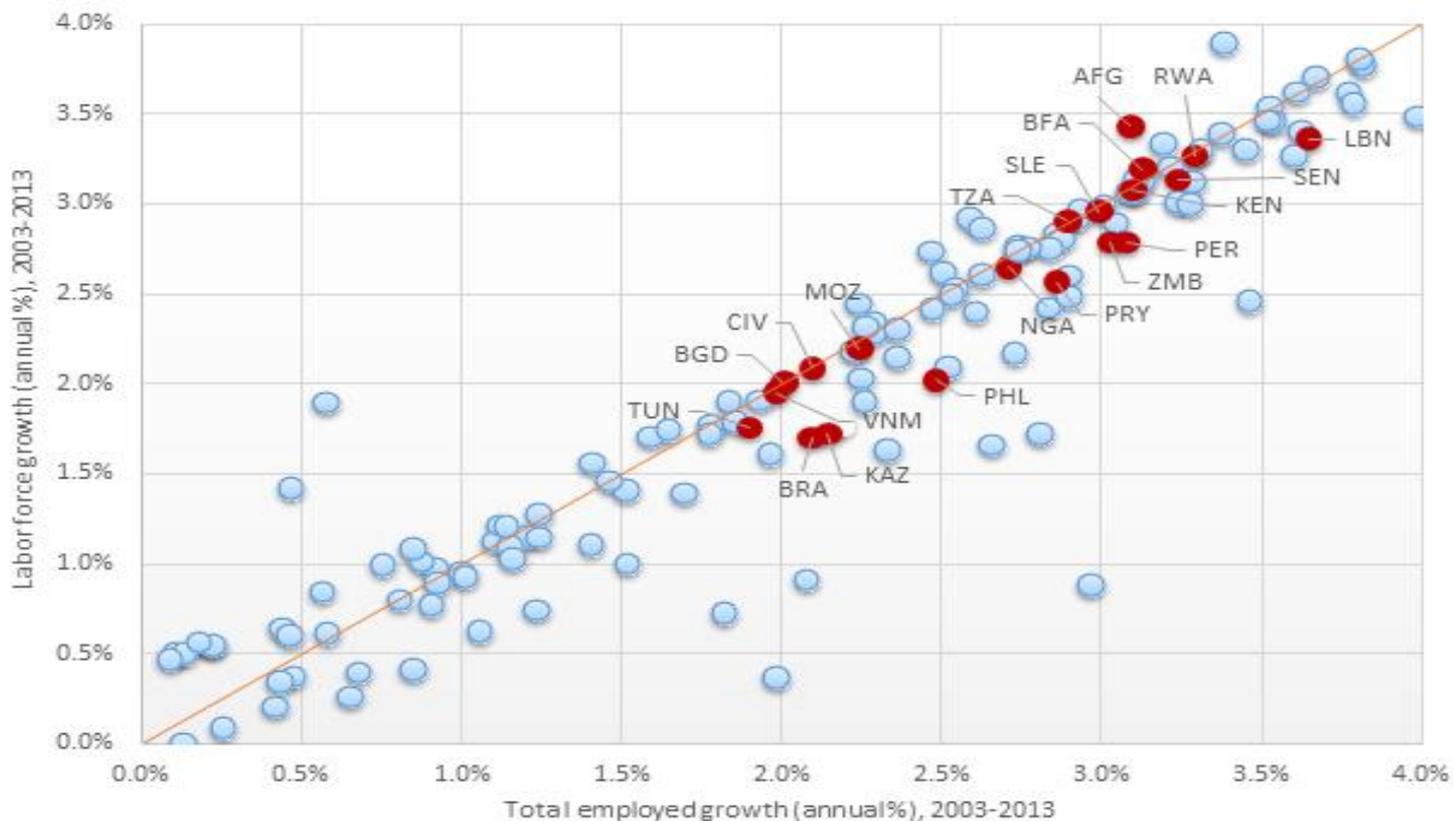


# *Evidence from Jobs Diagnostics suggests simply maximizing growth is not enough*

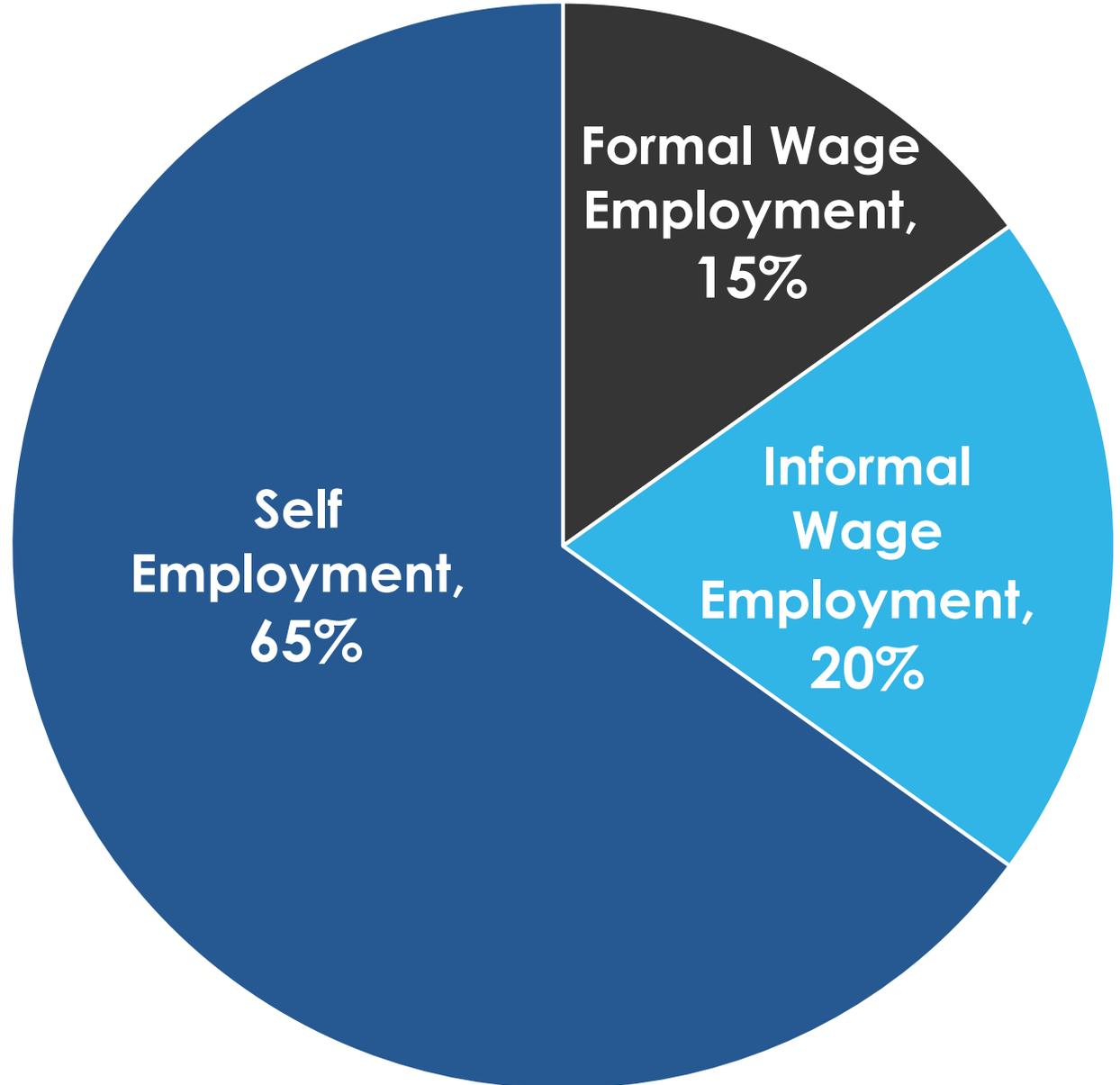


*Employment Growth (y-axis) and Real GDP Growth (x-axis)  
for 5 year growth episodes in 169 countries from 1991-2015*

# *The problem is usually not the QUANTITY of jobs...*

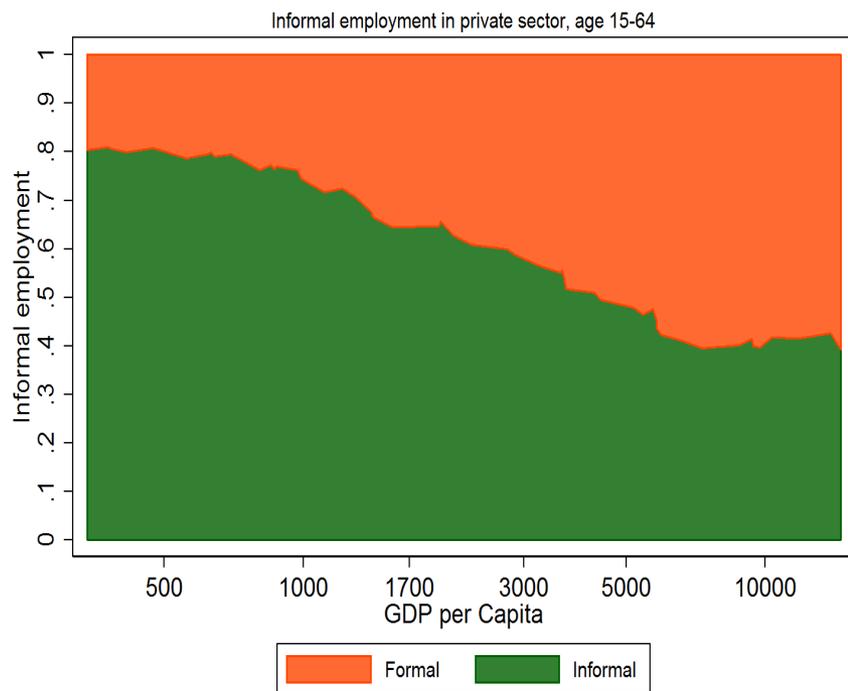


*...the problem is JOB QUALITY*

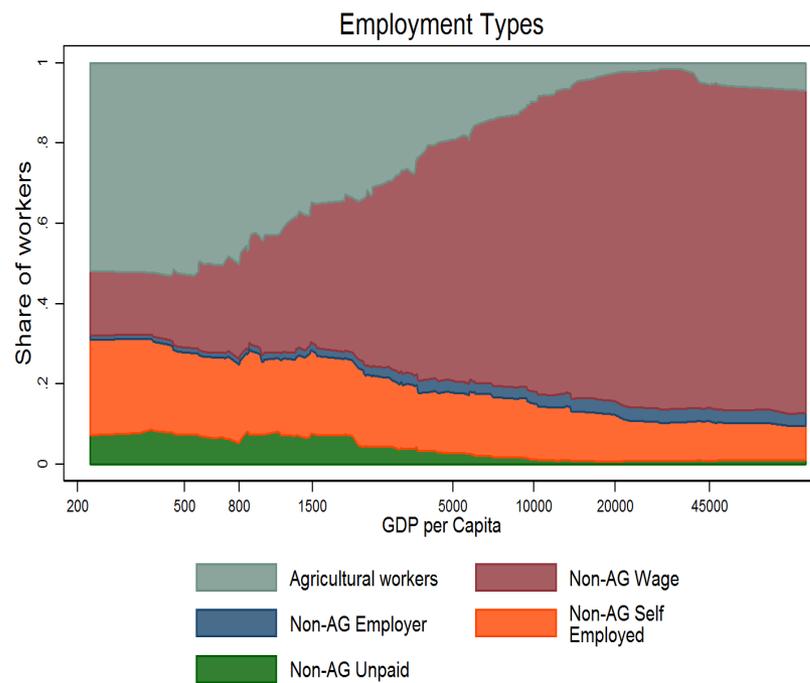


*especially in LICs and LMICs*

# *JOB QUALITY is a problem*



61 countries included covering the years 1999-2015



141 countries included covering the years 1999-2016

Source: Merotto, Weber & Aterido (2017), "Jobs Diagnostics Facts and Findings"

# *Why is so much labor in bad jobs?*

## Three labor market paradigms

- Neoclassical theory
  - Workers earn Marginal Product of Labor
  - Workers move between jobs until MPL is equated
- Classical theory (Ricardo, Marx)
  - Reserve army of labor
  - Workers get a subsistence wage and capitalists get the rest of the product (exploitation)
- Structural dualism (Lewis)
  - Separation of traditional and modern sectors in developing economies

Which of these prevails is an empirical question

# *“Structural dualism” is back in fashion*

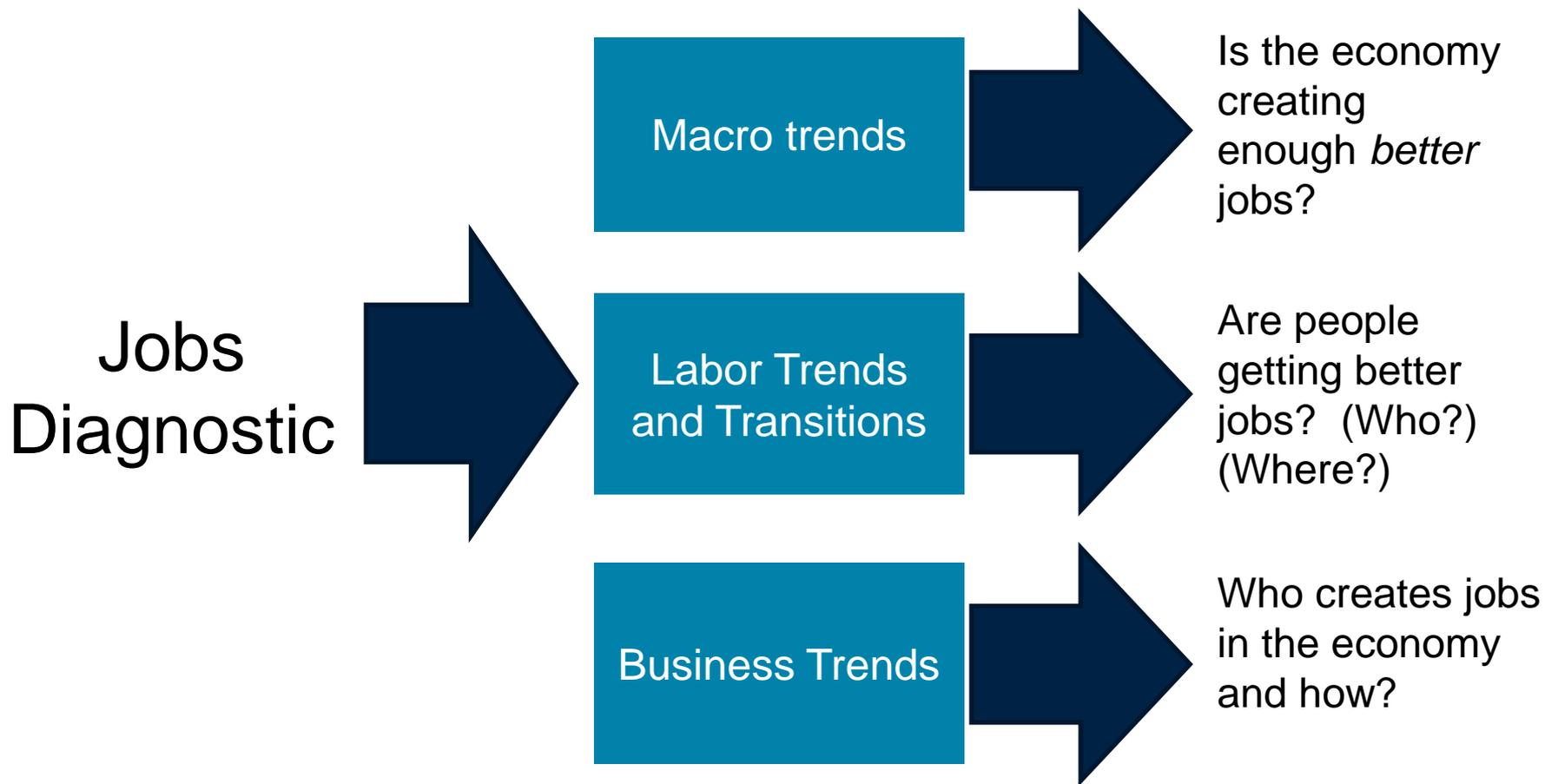
Arthur Lewis 1954

- Shifting labor from traditional to modern sector as key to development
- Multiple barriers negate relevance of the neoclassical paradigm in some cases; *coordination gaps, mkt failures, market rigidities.*
- Large gaps persist in the marginal productivity of labor between modern and traditional sectors
  - The prevailing modern sector wage rate does not reflect the opportunity cost of labor

Robalino and Walker (2018)

Growth Commission: “The Growth Report” (2008) page 45 para 4.

# Jobs Diagnosis Approach



# *How People Benefit from Job Opportunities in a Growing Economy*

More people join the labor force & find work

- Self-employment, start-ups, firm entry and growth
- Transitions: into employment, school to work from care-giving to labor force

People get better at doing their existing job:

- Returns to labor assets improve (incl thru' farming, self-employment)
- Labor productivity rises within occupations;

Labor moves from less to more productive jobs (economic transformation)

- Structural change:
- Migration / Urbanization
- Formalization: people move from capital-thin self-employment, to capital deep waged employment in firms
- Selection between businesses

Higher productivity:

- raises earnings and
- creates demand for more goods and services.

Externalities from good jobs support development

# *What is a Job Diagnostic?*

Structured enquiry into jobs outcomes in relation to economic growth in order to guide ***jobs strategies***

- It covers:
  1. Economy-wide macro analysis (Labor market demographics, GDP and employment)
  2. Firm-level analysis (the “demand” for labor)
  3. Household-level analysis (using Labor Force Surveys to analyze the supply of labor)
- Start with an overview of economic growth and jobs outcomes
- And a profile of where people work and who creates jobs
- Use structured enquiry based on:
  - a. “theory of change” that development happens through ***economic transformations***;
  - b. economic theory (industrial organization theories, search and match labor theories) of what we should expect to see of firms and workers in healthy product and labor markets.

# *When is it important to do a Job Diagnostic?*

## Good Growth / Bad Jobs Outcomes

Aggregate Demand and GDP are rising faster than the working age population, but:

- Employment is not rising (low elasticity of employment growth). And there may be outmigration
- Productivity in main occupations is not rising
- Wages are not rising in line with employment and productivity
- People are not moving to take advantage of better jobs (due to misallocation of factors: formal, spatial, sectoral)
- Dualism - There is labor market segmentation (the law of one price does not hold) even though firms hire
- Employment is not rising for specific groups; youth, women, the bottom 40%, minorities



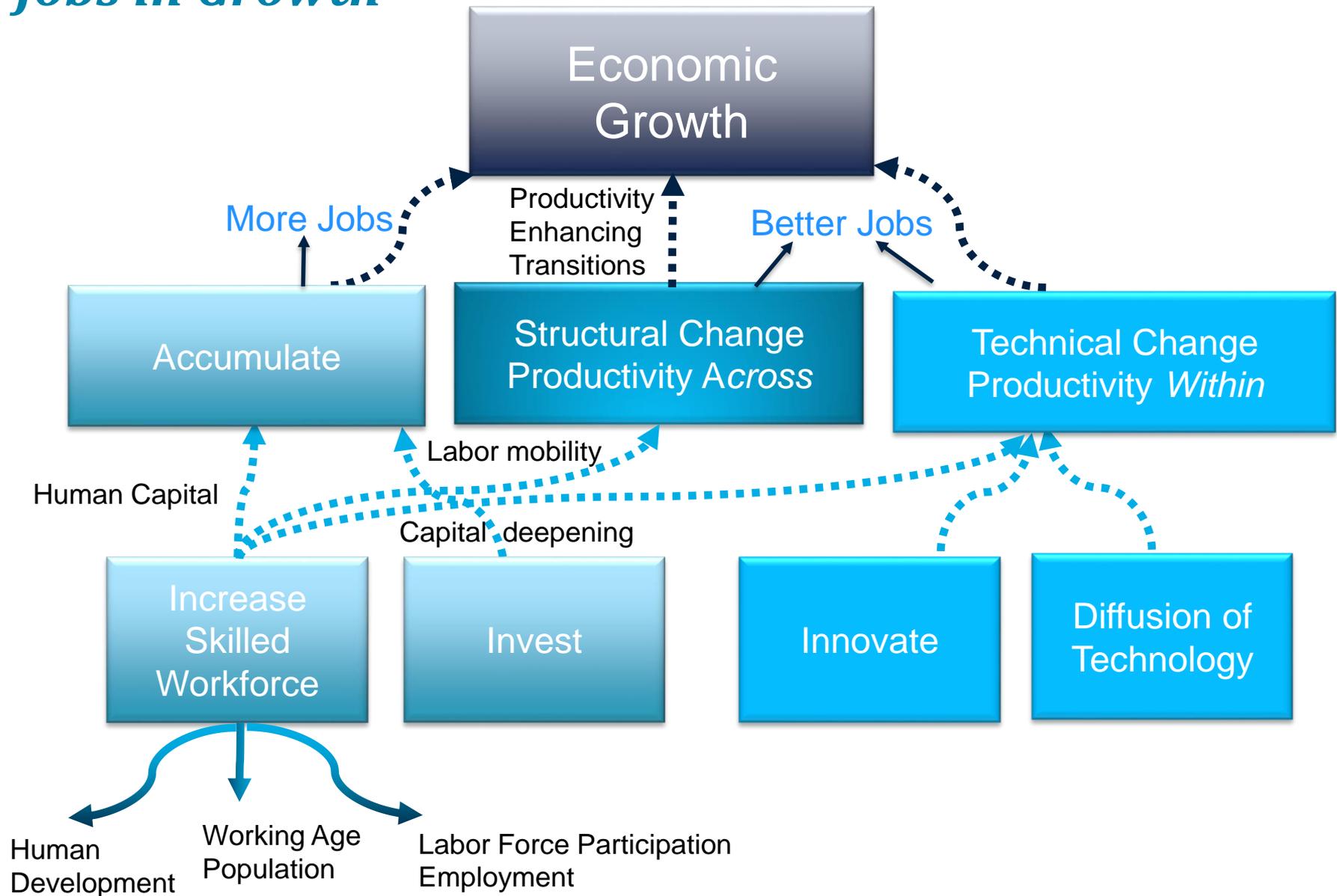
**WORLD BANK GROUP**

Social Protection & Jobs

***Jobs  
Diagnostic  
How To:  
Conceptual  
Framework***



# Jobs in Growth



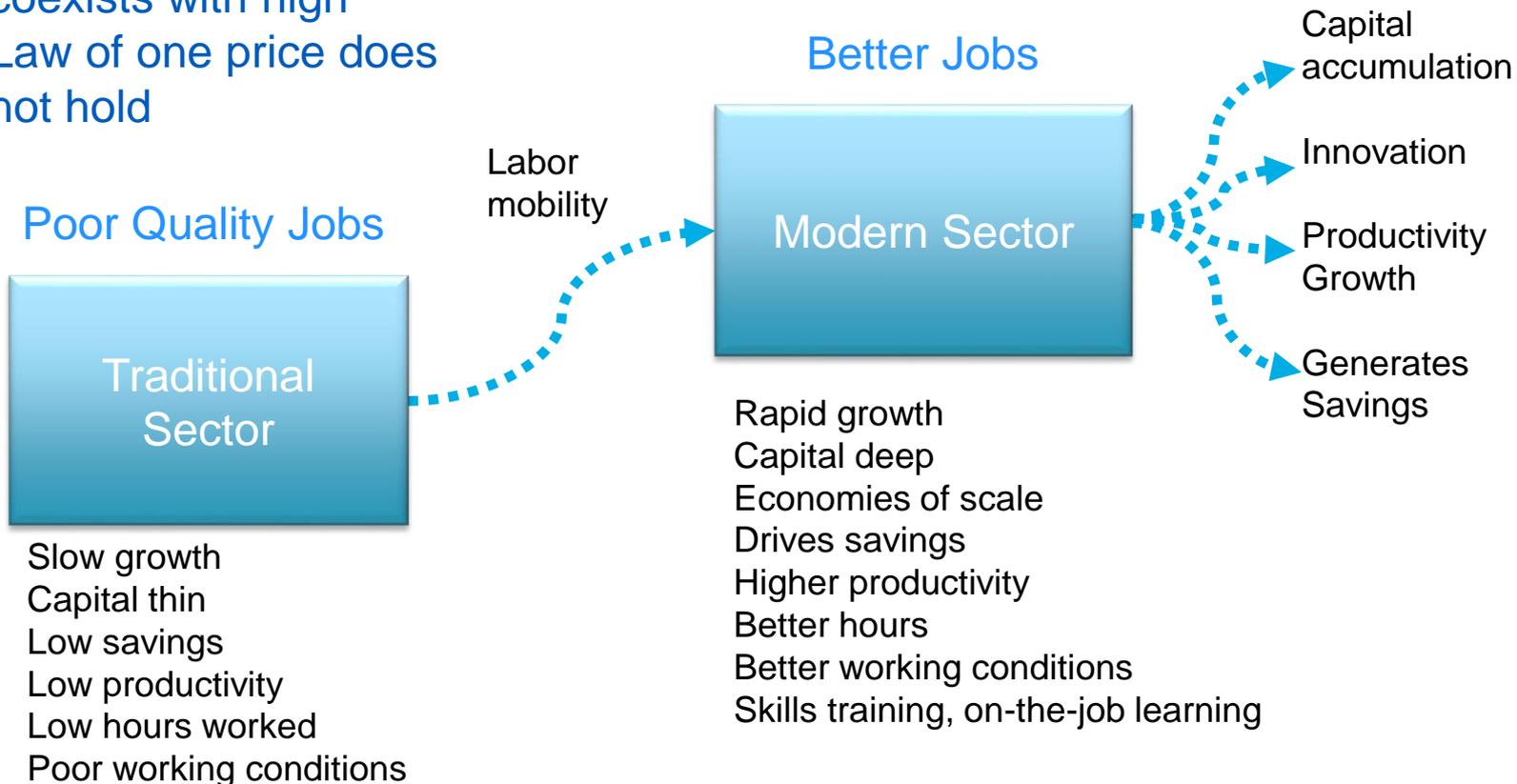
# Jobs and Structural Change

Structural dualism holds  
(*Lewis model*)

- Low productivity coexists with high
- Law of one price does not hold

Neoclassical Model holds

- Incentives to innovate
- Incentives to invest



# Key Questions to Ask - Macro

- Is growth fast enough to create enough jobs for young entrants?
- Are jobs outcomes, and poverty improving?
- What is driving real GDP per capita? How does this compare with other countries?
  - Is labor accumulation rising?
    - Working age,
    - Participation,
    - Employment rate
  - Is employment rising with output?
  - Is (labor) productivity rising?
    - Within sectors
    - From reallocation
    - Across locations
    - Across formal and informal sectors
  - Is labor moving to more productive sectors (locations, occupations, firms)?
    - Is employment urbanizing? (uses LFS)
    - Is employment formalizing? (uses LFS)
- Are gaps in productivity narrowing

## Key dimensions

- Aggregate Demand
- Productive Capacity
- Investment
- Demography
- Participation
- Employment
- Productivity
- Structural Change
- Urbanization
- Formality
- Country Characteristics

# *Growth from a Worker's perspective:*

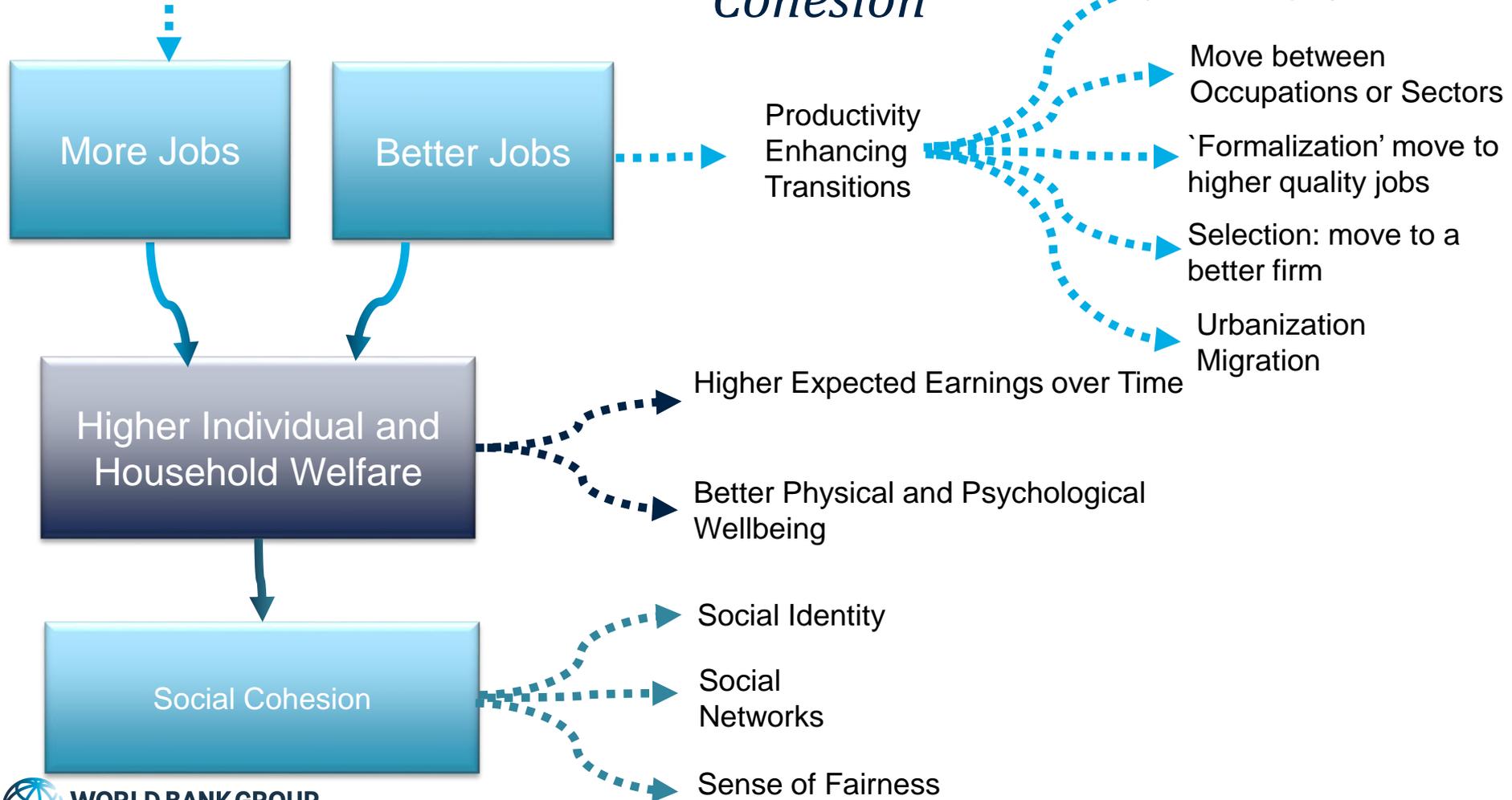
*Labor Mobility*

*Labor Income*

*Cohesion*

Transition into work:

- School to work
- Out of unemployment
- Into workforce



Productivity gains in self-employment

Move between Occupations or Sectors

'Formalization' move to higher quality jobs

Selection: move to a better firm

Urbanization Migration

Productivity Enhancing Transitions

Higher Expected Earnings over Time

Better Physical and Psychological Wellbeing

Social Identity

Social Networks

Sense of Fairness

More Jobs

Better Jobs

Higher Individual and Household Welfare

Social Cohesion



# *Key questions on LM Supply Side (Workers)*

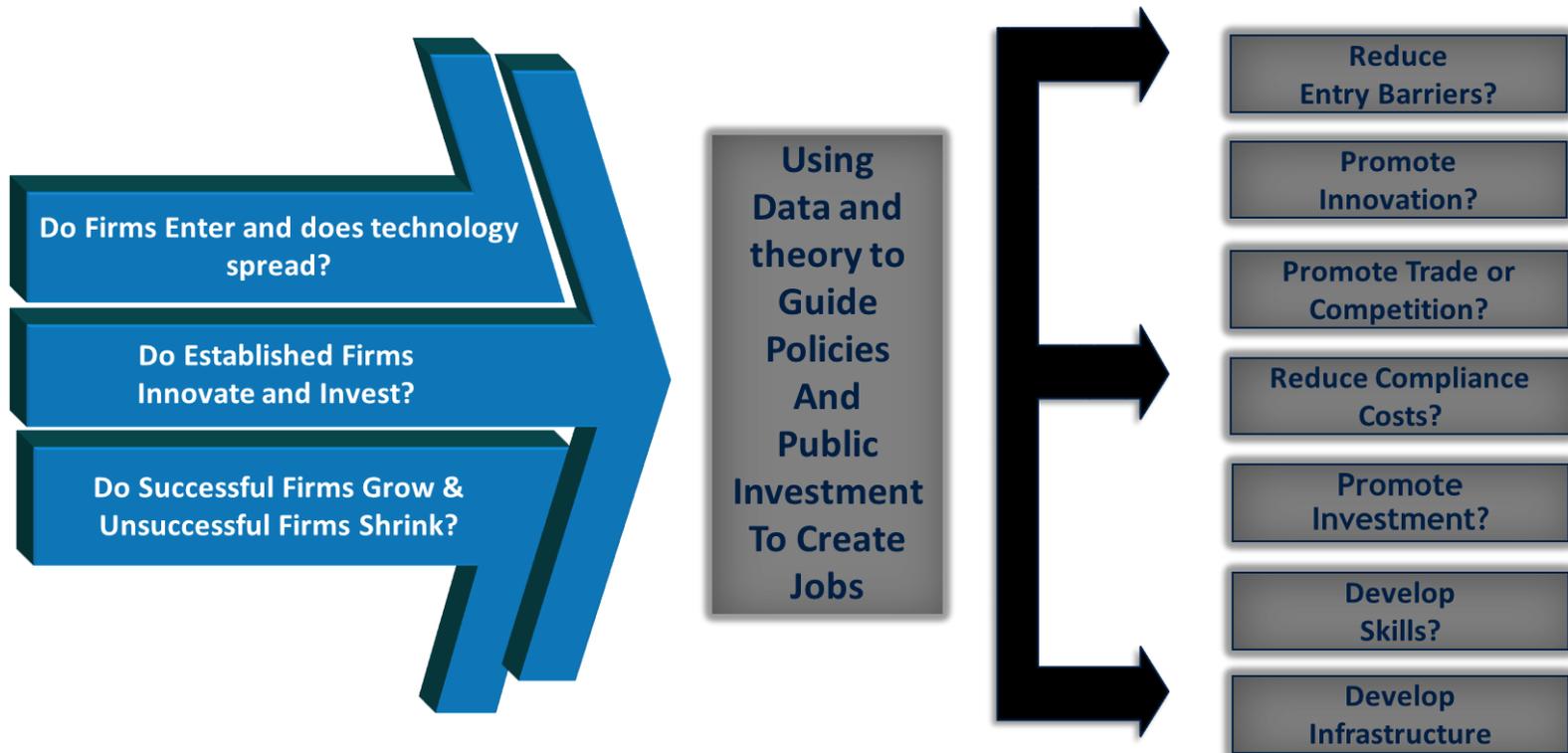
- Who finds jobs and who does not?
- Do people change jobs?
  - Across which dimensions and why?
- Are people fully employed?  
Underemployed? Do they have multiple jobs?
- Do jobs match the skills people have?
- Does education pay?
- Which factors affect employment & earnings?
- Are workers protected? Are their rights enforced?
- Do taxes and social insurance incentivize employment?

## Key Dimensions

- Gender
- Age
- Education
- Rural/urban
- Region
- Sector
- Occupation
- Contract Type
- Public/private employment
- Income/consumption levels
- Country relevant groups



# *Jobs and Productivity Evidence-Based Policies*



# *Key Questions to Ask – LM Demand side (Firms)*

- Are new firms entering?
- Do firms grow?
  - Which ones?
- Do micro firms survive and grow (or exit)?
- Are more productive sectors expanding?
- Are unproductive firms exiting?
- Is labor allocated to more productive firms?
- Are firms innovating?
- Are more competitive sectors more productive?
- Do productive firms pay more to their workers?

## Key Dimensions

(composition and changes over time):

- Size
- Age
- Sector
- Location
- Ownership



**WORLD BANK GROUP**

Social Protection & Jobs

# *Jobs Diagnostic Facts & Findings*

Jobs and Migration  
Core Course  
Tuesday, May 1

**Dino Merotto ,  
Michael Weber, &  
Reyes Aterido**



**WORLD BANK GROUP**

Social Protection & Jobs

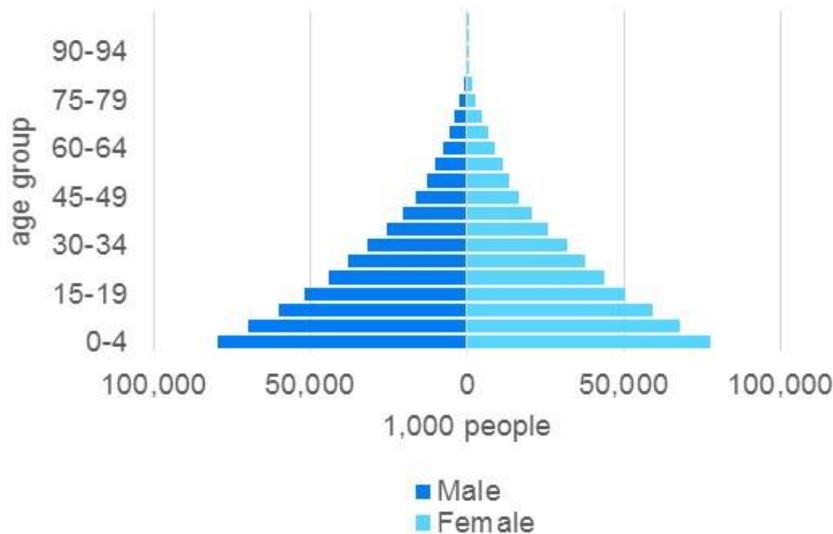
*Jobs Diagnostic  
Facts & Findings:  
Macro*



# *A country's demography fundamentally frames its jobs challenges*

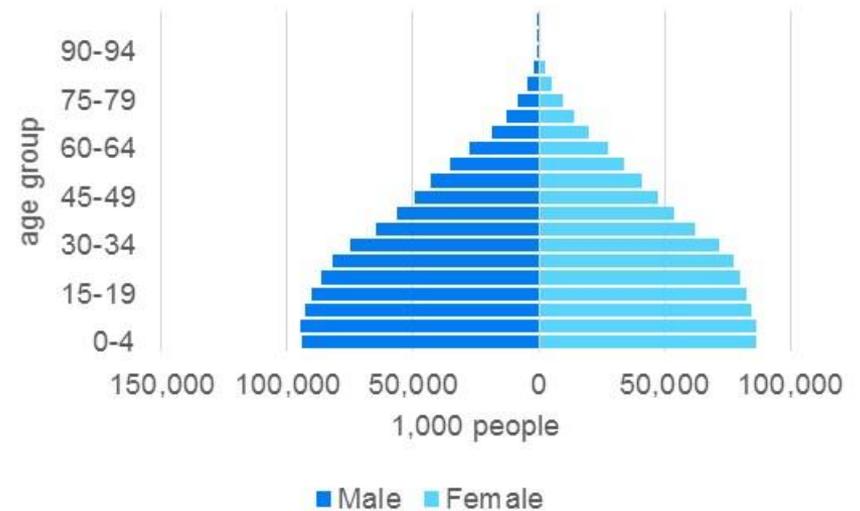
## *Youthful Africa*

Population by five-year age groups, Sub-Saharan Africa (excl high income), 2015

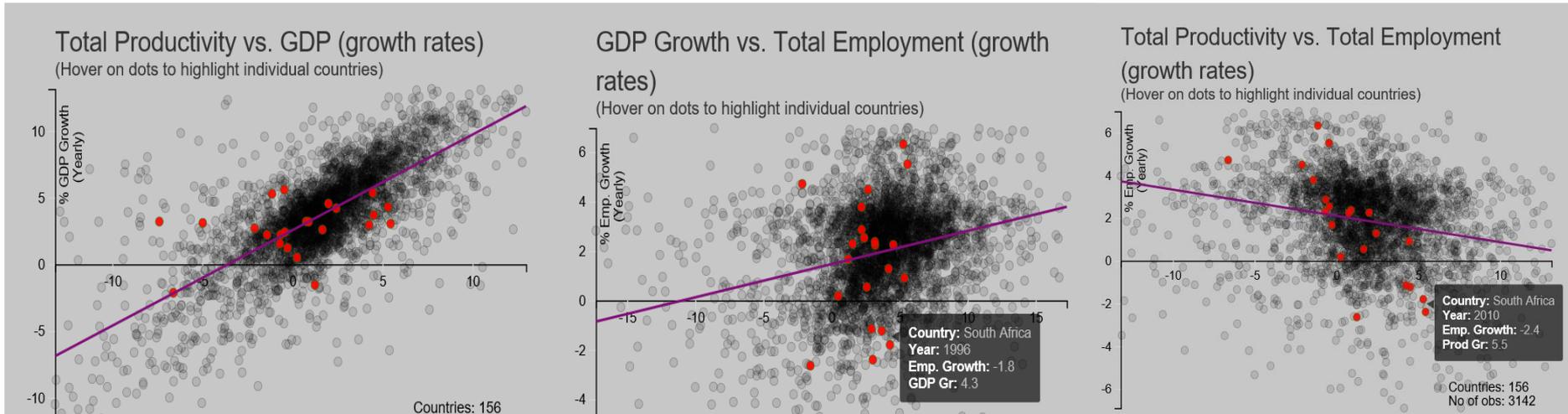


## *South Asia Entering Demographic Transition*

Population by five-year age groups, South Asia, 2015



# *Productivity Growth is associated with GDP Growth and GDP Growth creates jobs on average.*

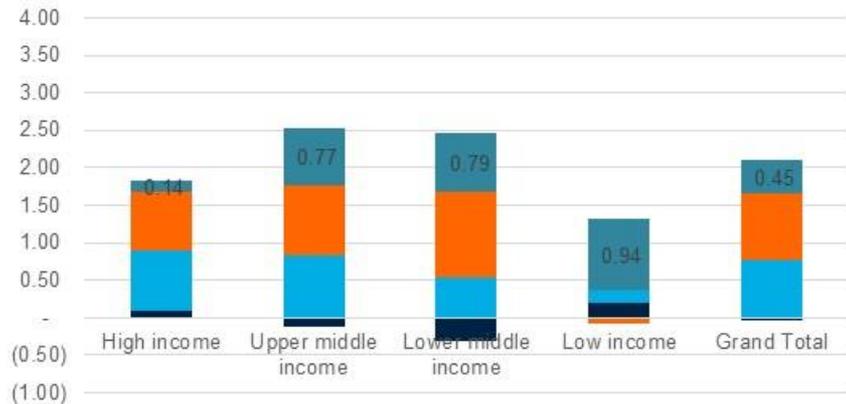


*But productivity growth is accompanied by less job creation*

Source: <http://www.worldbank.org/en/data/interactive/2017/02/02/jobs-macro-data-dashboard>

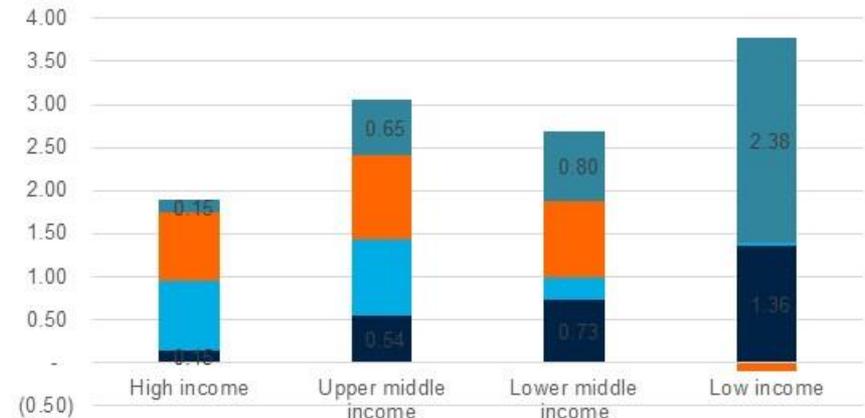
# *Economic transformation is fastest in low income countries, where reallocation of labor from low to higher productivity sectors explains most of the total productivity growth on average*

Productivity De-composition All Episodes



■ Av. Within Agr ■ Av. Within Ind ■ Av. Within Svs ■ Av reallocation

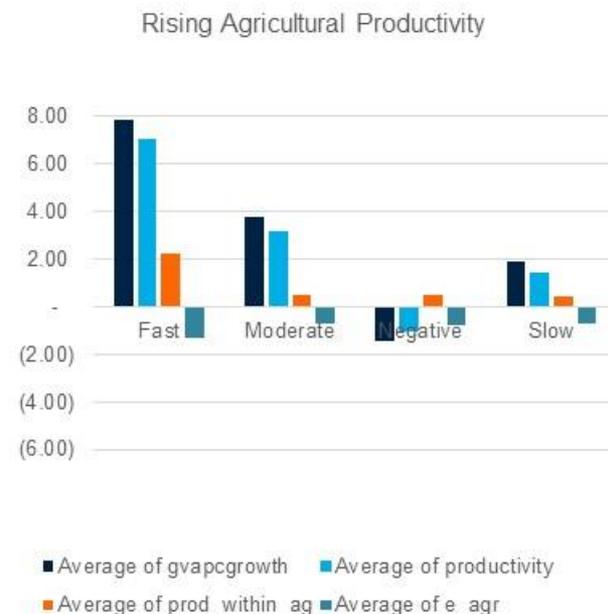
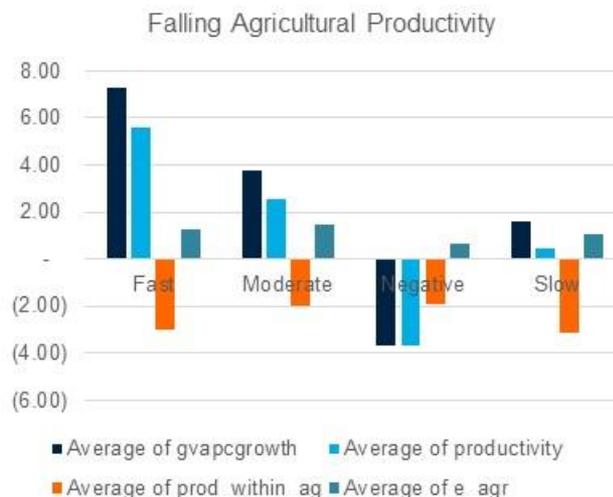
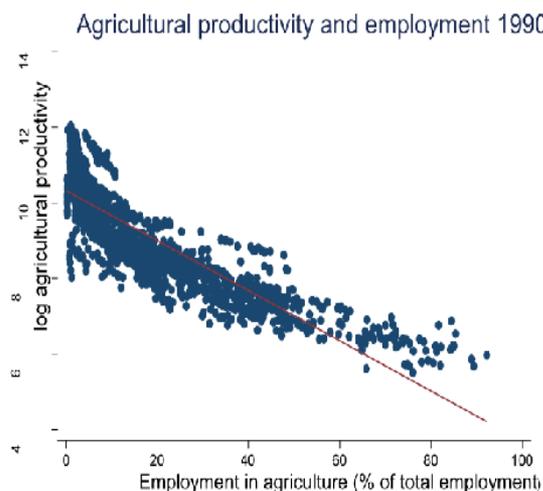
Productivity De-composition during Episodes of Agric Prod Growth



■ Av. Within Agr ■ Av. Within Ind ■ Av. Within Svs ■ Av reallocation

*It happens fastest in LICs, and growth is faster, when agricultural productivity is growing*

# Agriculture sheds jobs as productivity rises but not when productivity falls



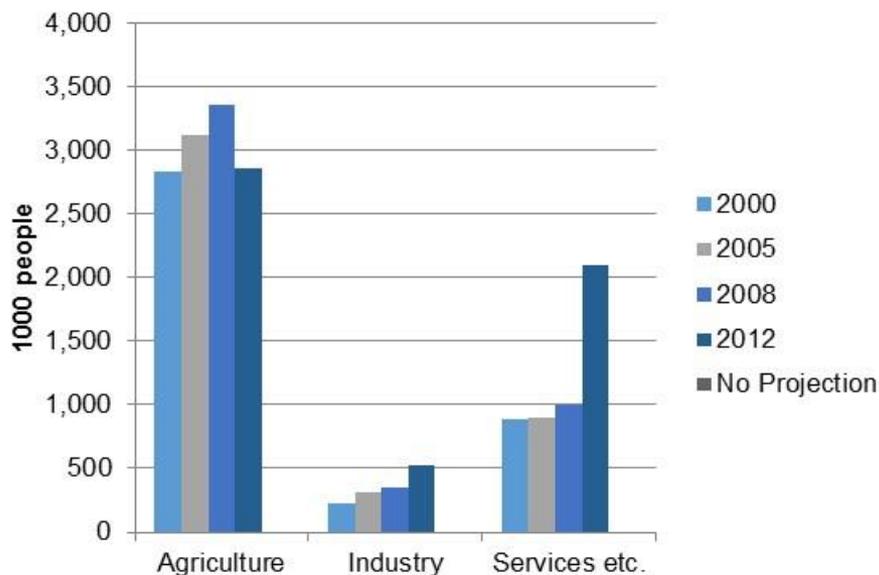
(Includes LICs, LMICs, UMICs)

*This is true for high, low and negative overall GDP growth*

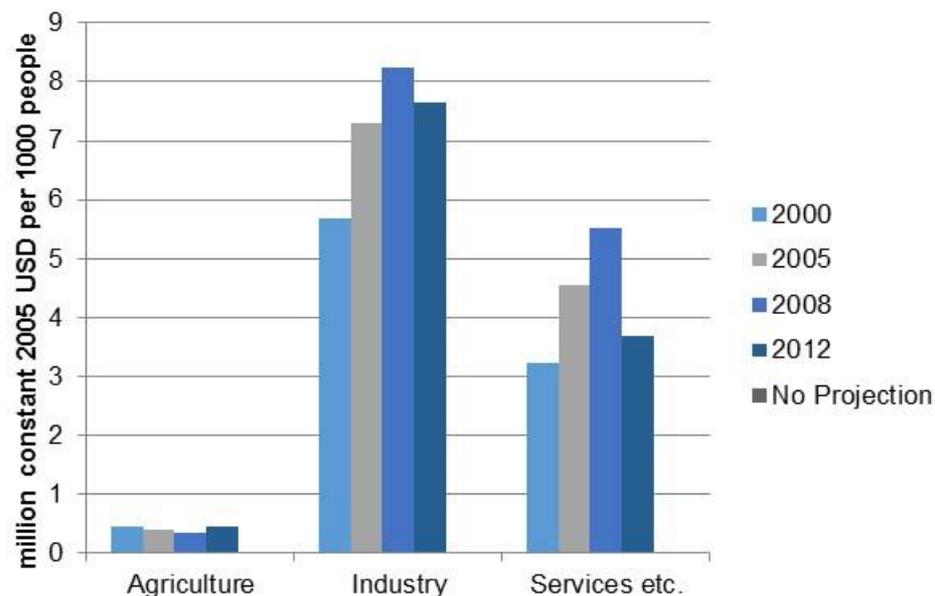
# *Economic transformation in LICs typically involves more labor movement into services than into industry*

## *Example Zambia*

**Total Employment by Sectors of Economic Activity 2000-2012**



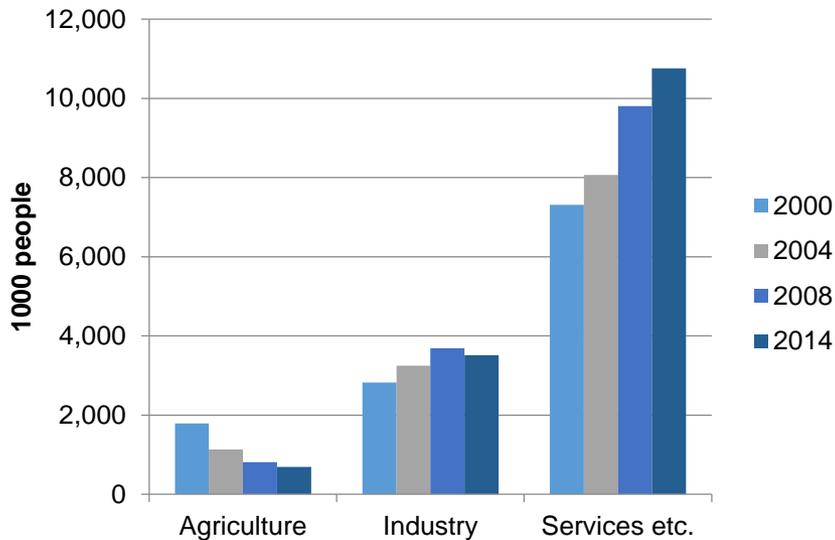
**Value Added per Worker by Sector, Zambia 2000-2012 and 2012- (p)**



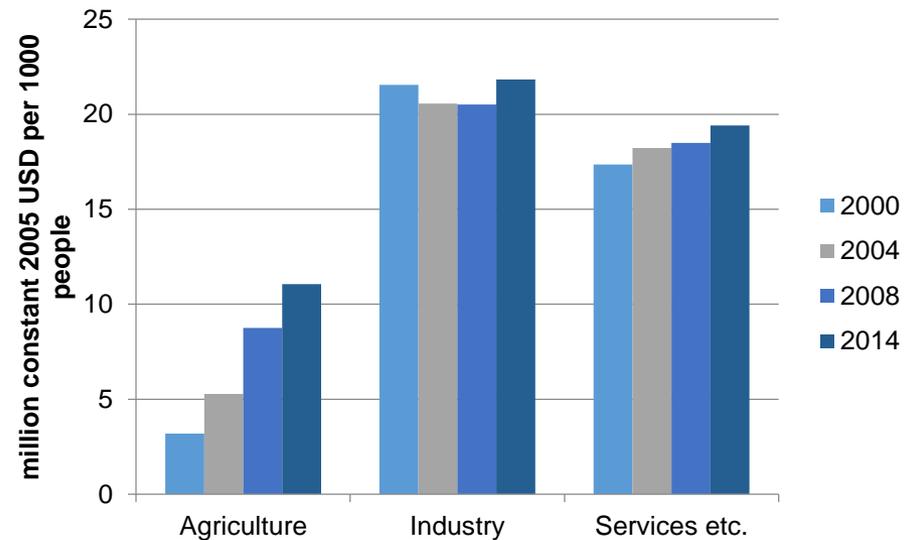
*And in many growth episodes economic transformation out of agriculture is associated with declining/stagnant average labor productivity in receiving sectors*

## *Example South Africa*

**Total Employment by Sector  
South Africa 2000-2014)**

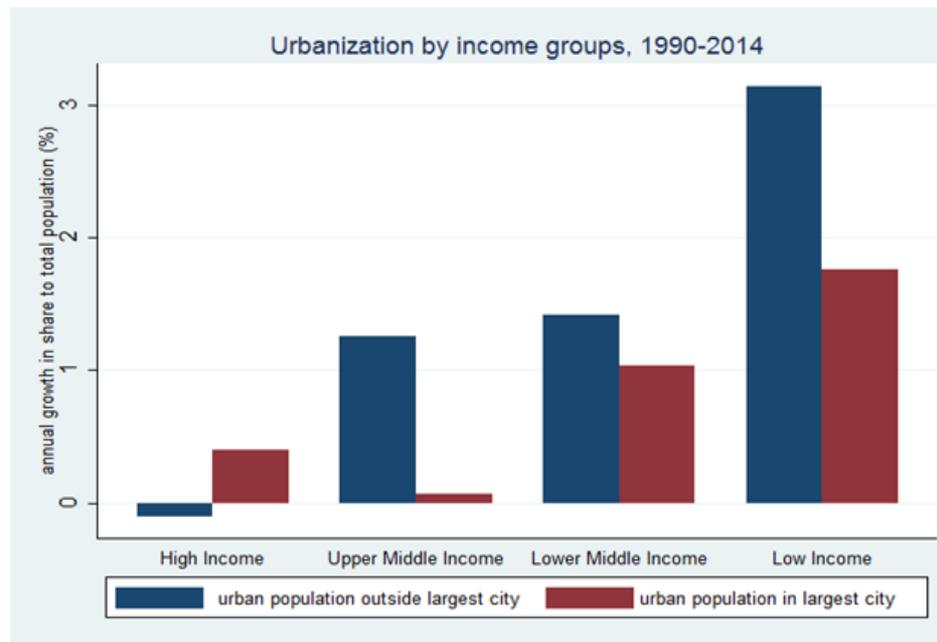
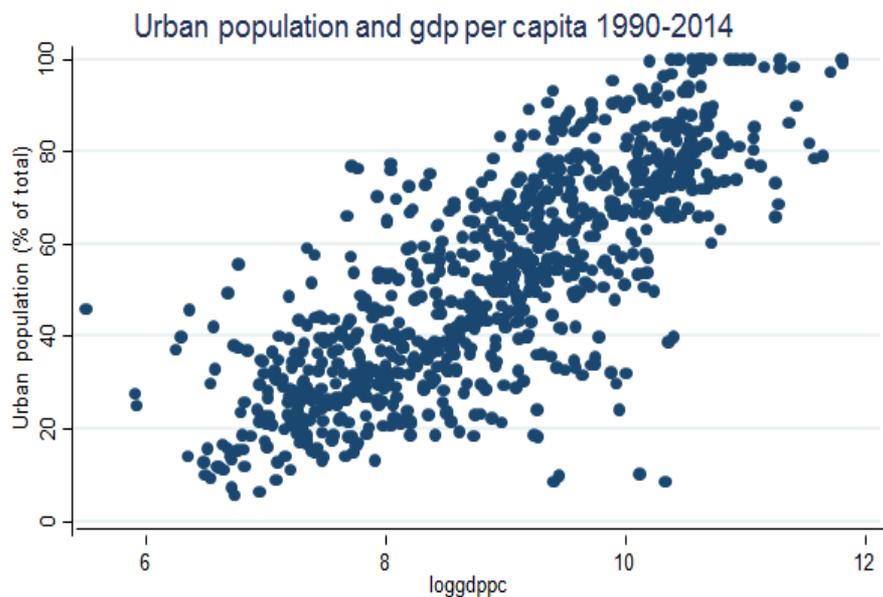


**Value Added per Worker by Sector  
South Africa 2000-2014**



# *Urbanization is correlated with per capita GDP*

## *Growth in the share of the urban population is fastest in low income countries, where it is fastest outside of the largest city*





**WORLD BANK GROUP**

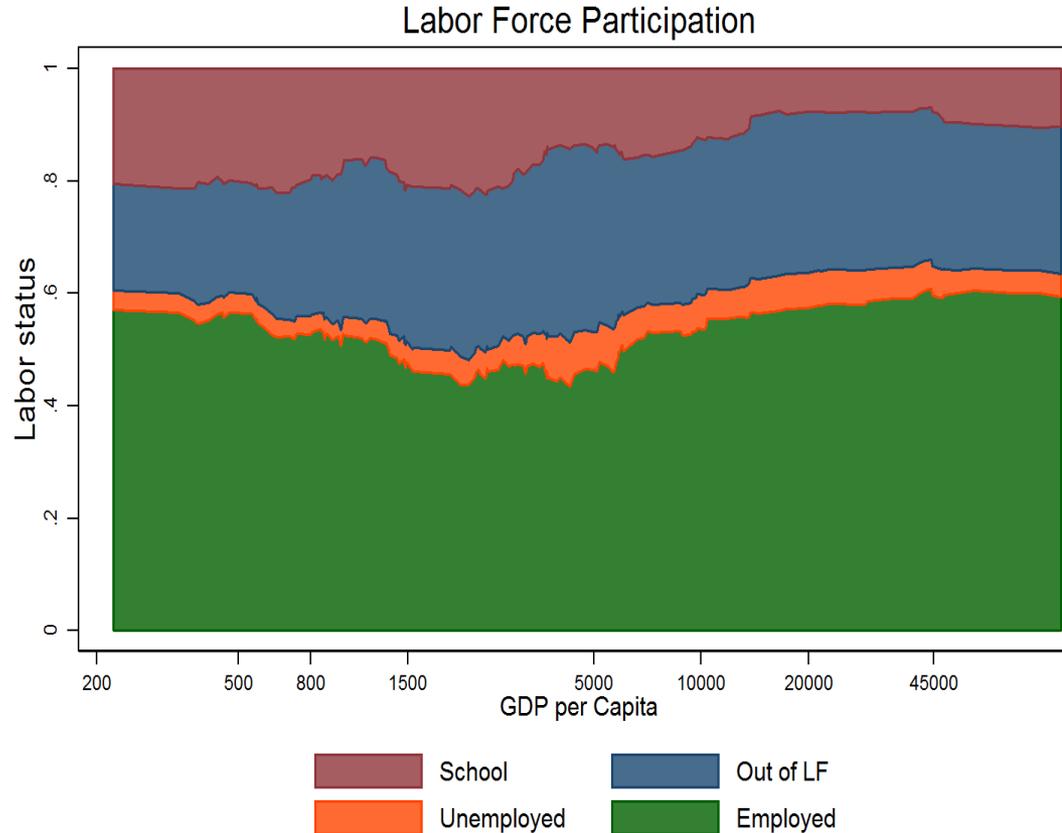
Social Protection & Jobs

***Jobs  
Diagnostic  
Facts &  
Findings: LM  
Supply  
(Workers)***

*Uses most recent Labor  
data for 141 countries  
(fewer countries where data  
exclude the use of the  
survey, but typically over  
130)*



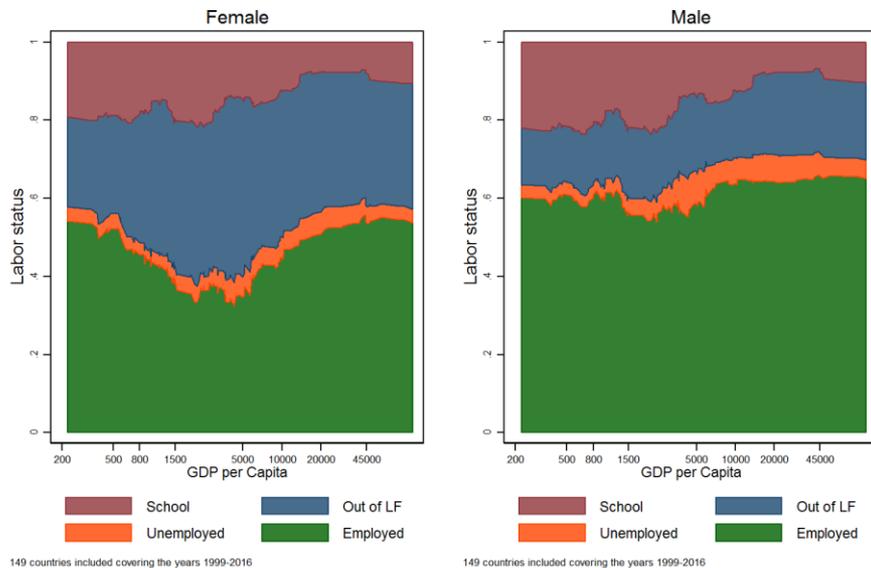
*Labor Force Participation rates are highest in low income countries (LICs), lower for middle income countries (MICs) and then higher again for Higher Income Countries (HICs)*



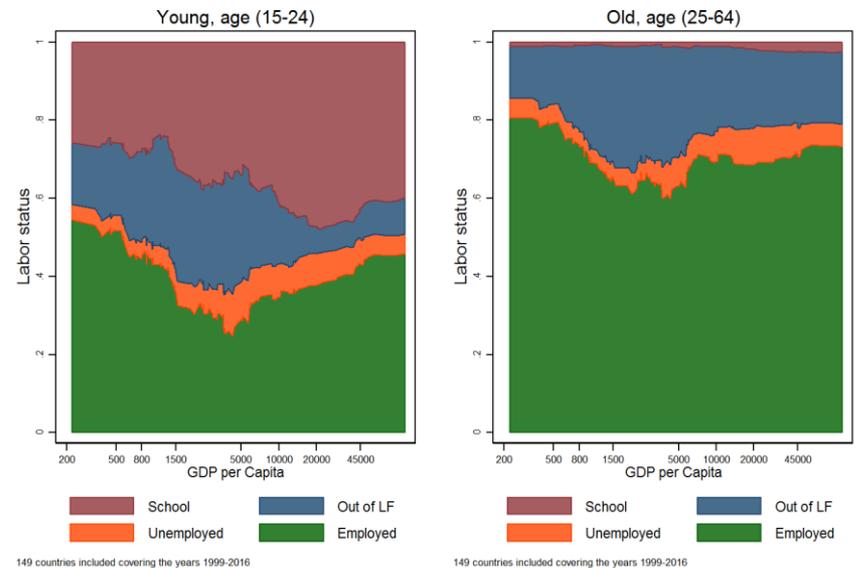
149 countries included covering the years 1999-2016

# Labor Force Participation rates are highest in low income countries (LICs), lower for middle income countries (MICs) and then higher again for Higher Income Countries (HICs)

Labor Status by GDP per capita and gender

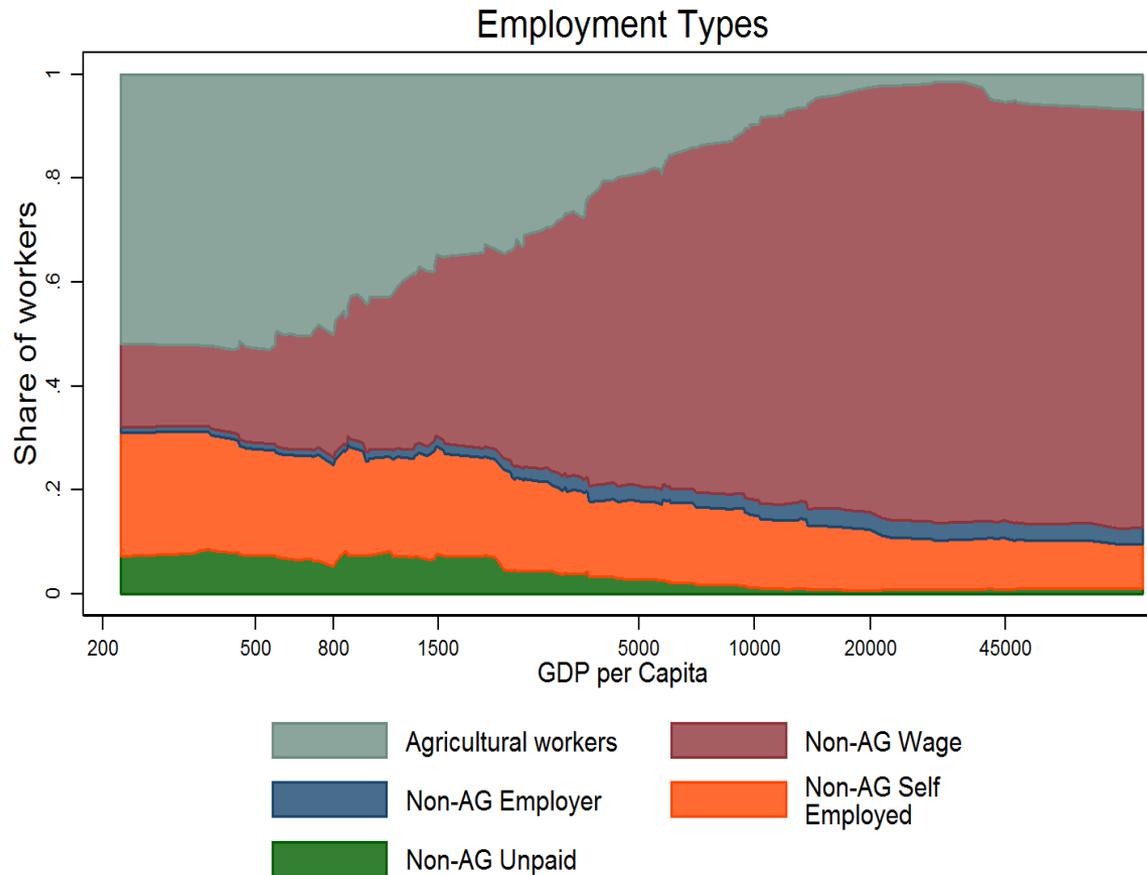


Labor Status by GDP per capita and age



*This result is driven by females and youth*

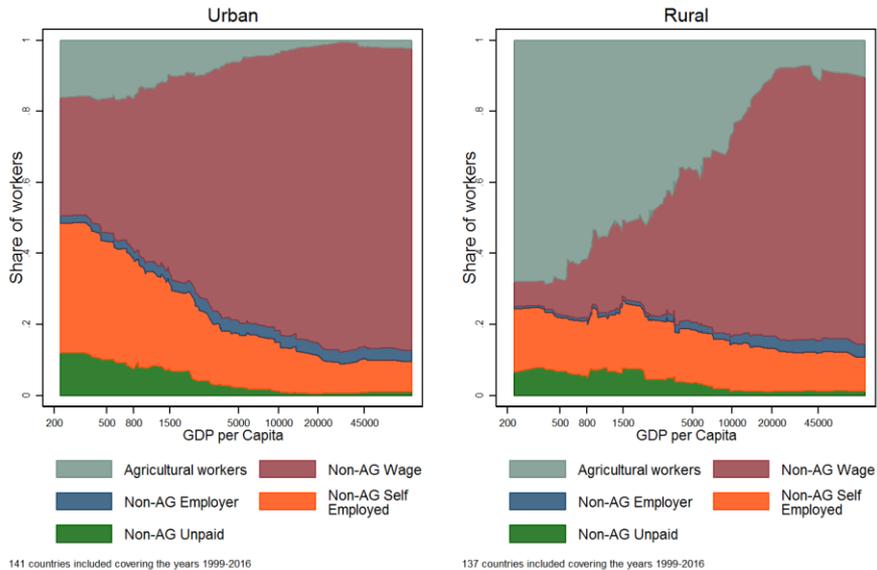
# Employment patterns vary greatly over GDP per capita – more developed countries have higher shares of wage work



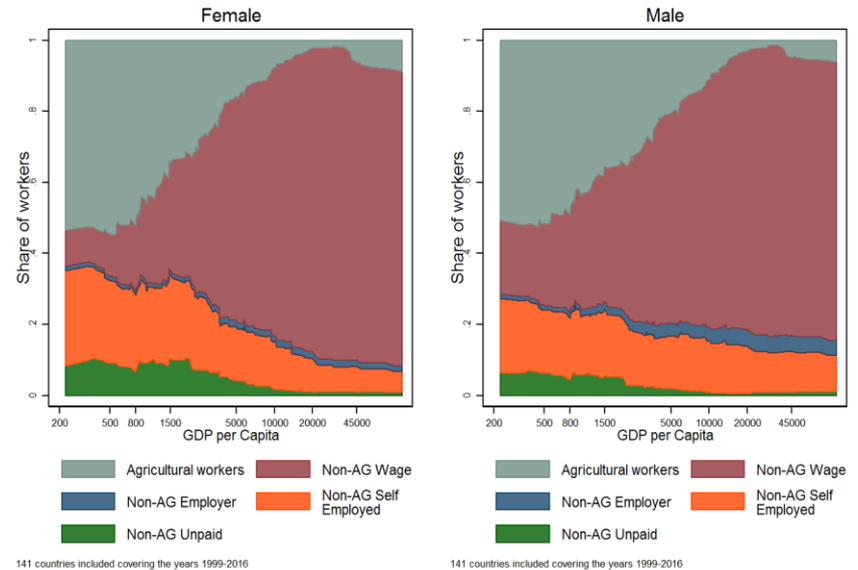
141 countries included covering the years 1999-2016

# Employment patterns vary greatly over GDP per capita – more developed countries have higher shares of wage work

Employment types by GDP per capita and area

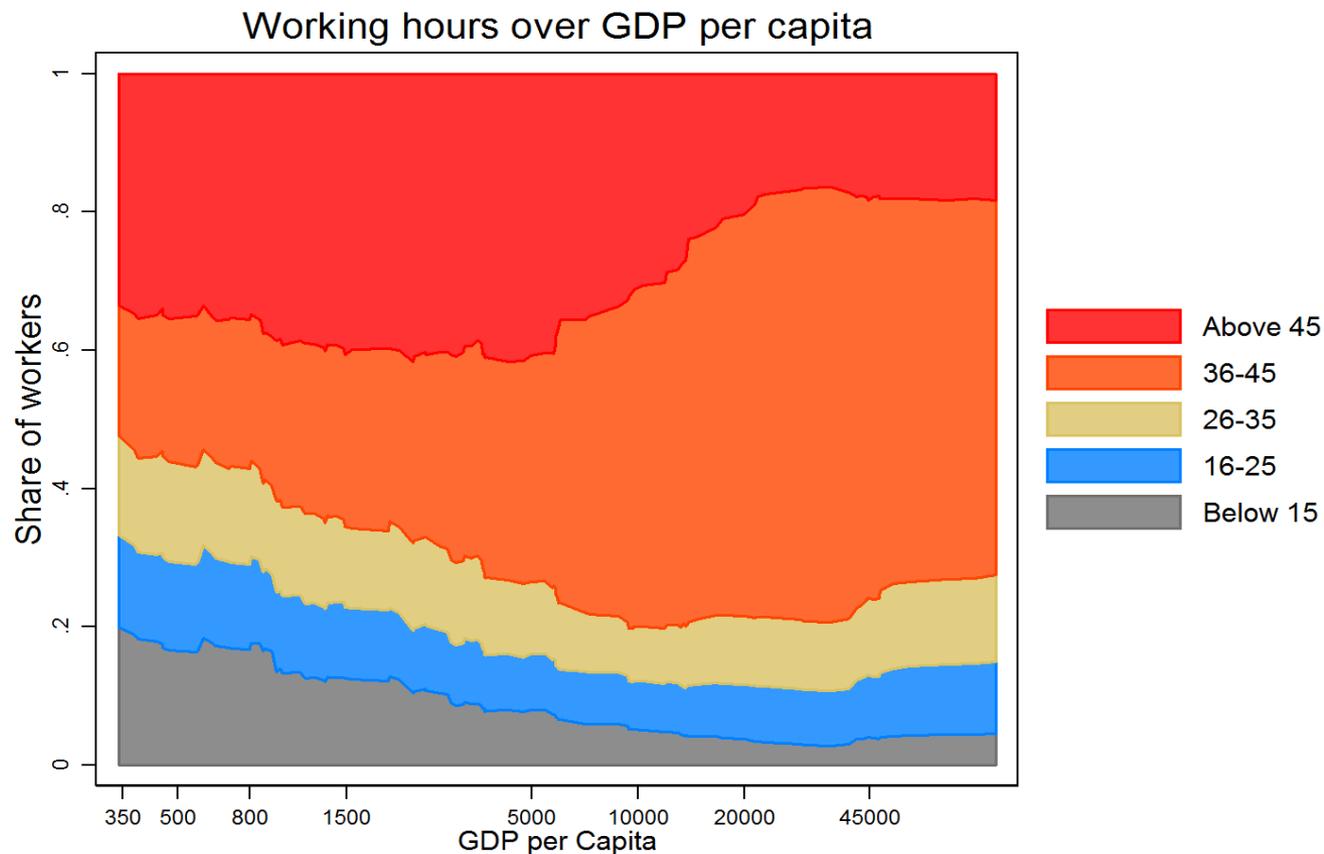


Employment types by GDP per capita and gender



*Richer countries have more rural waged employment  
And more waged employment for women*

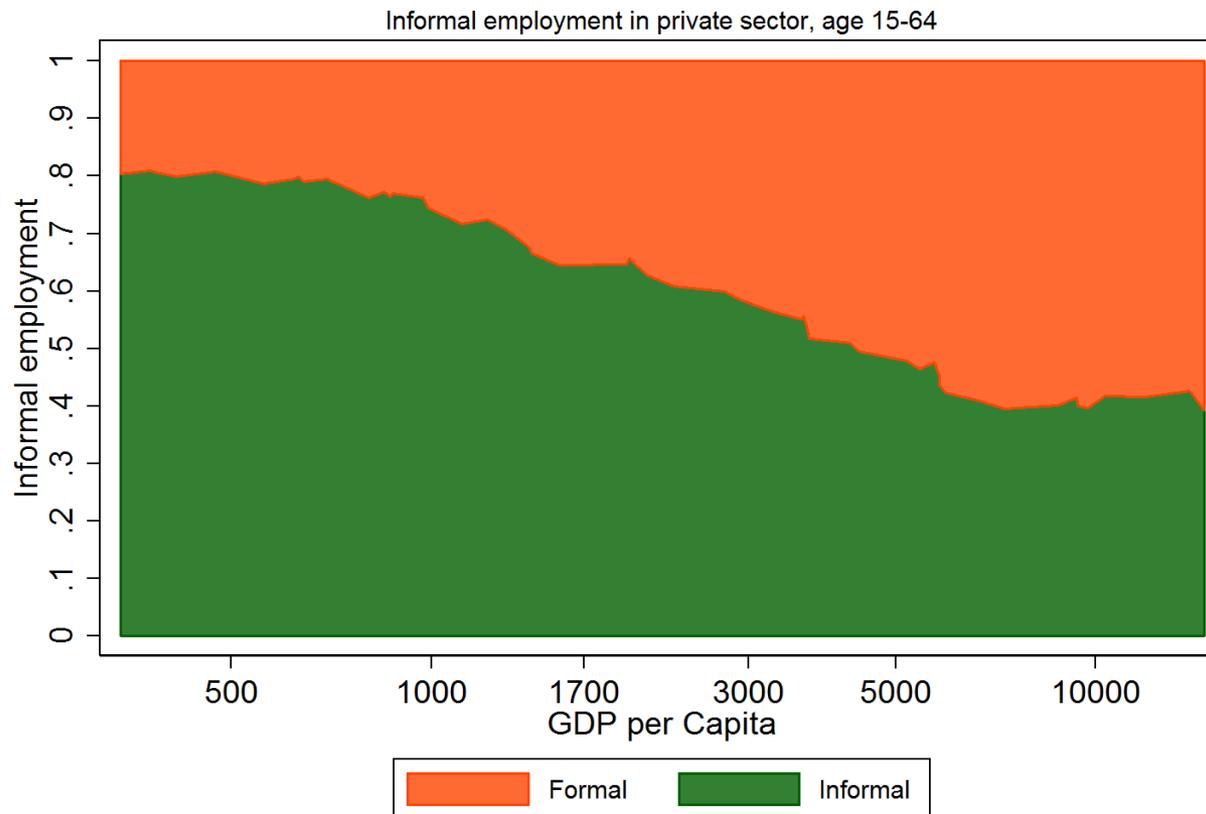
# Poorer countries feature high underemployment not unemployment



112 countries included covering the years 1999-2016

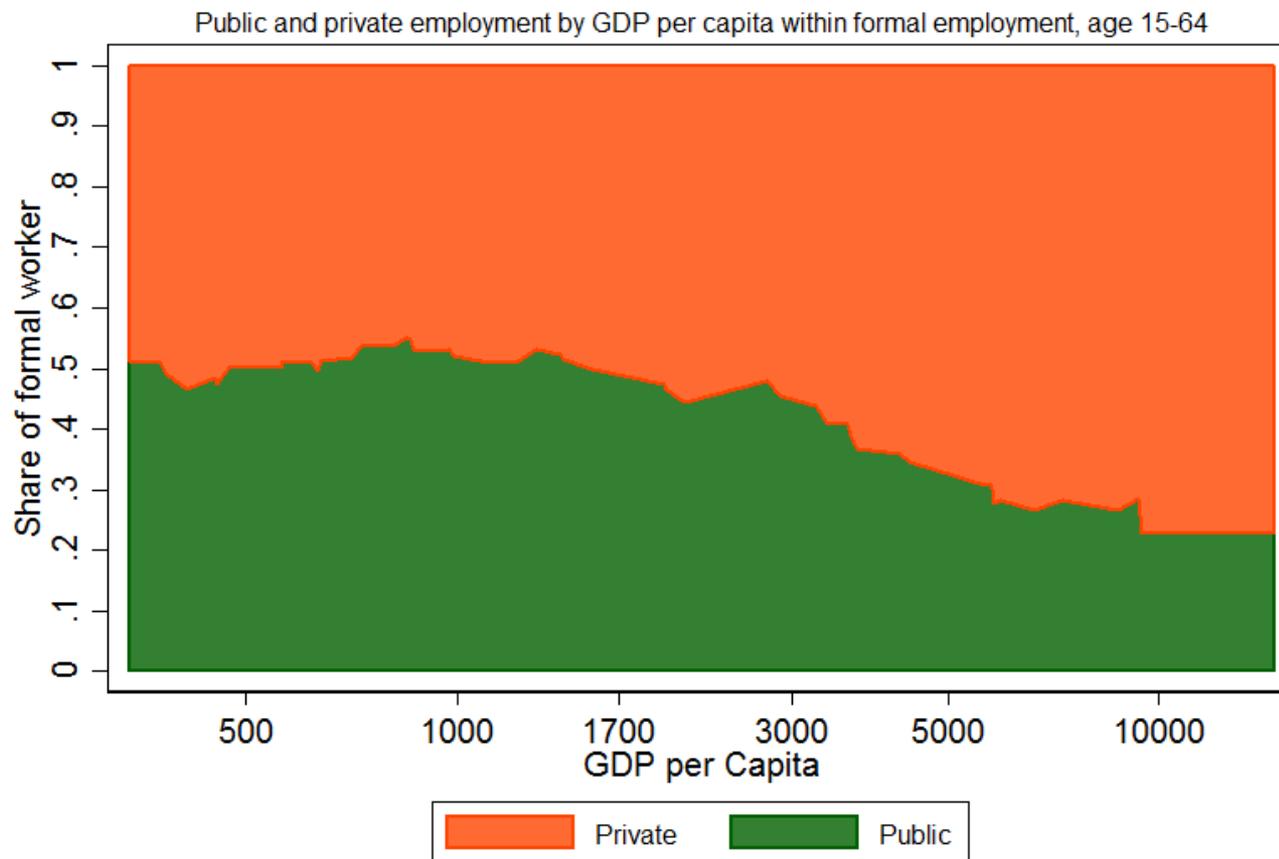
*...but also more excessive work hours*

# *Informal employment is lower in MICs than LICs but is persistently high across countries covered.*



61 countries included covering the years 1999-2015

# *Public sector employment accounts for a relatively large share of formal employment in Low Income Countries.*

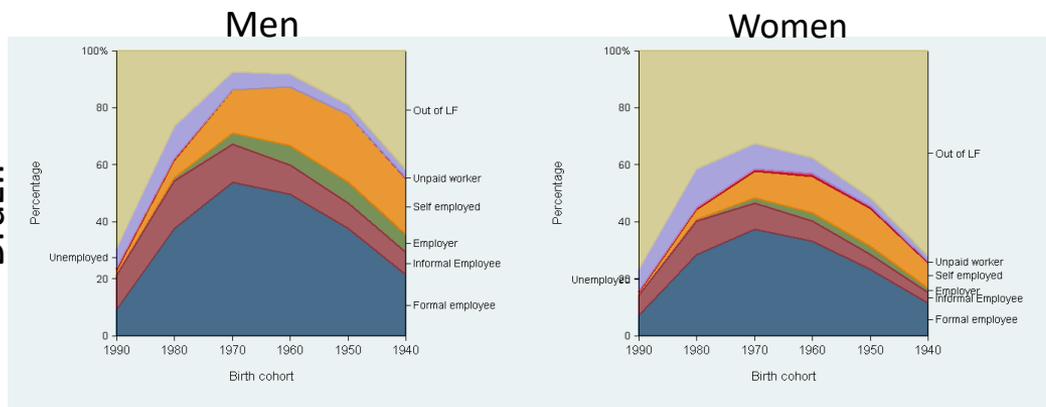


54 countries included covering the years 1999-2015

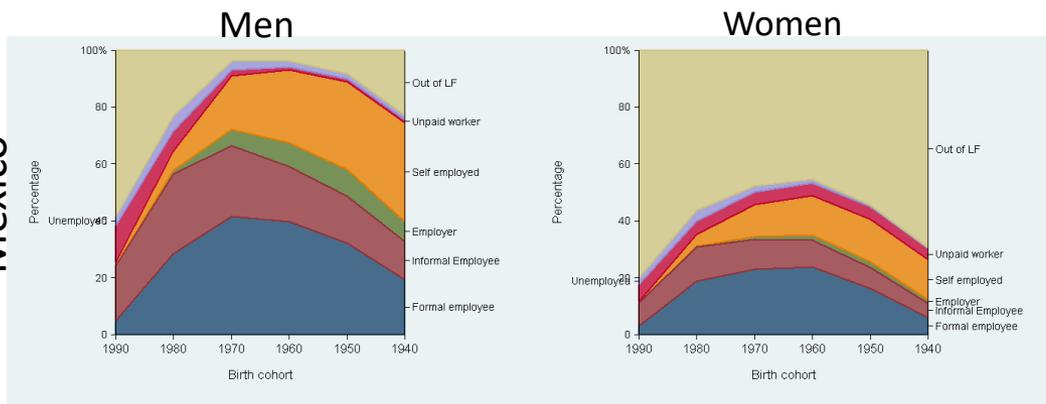
# So Who finds a Good Job? Labor Market Status evolves differently over the Life Cycle for Men and Women



Brazil



Mexico



Work status:

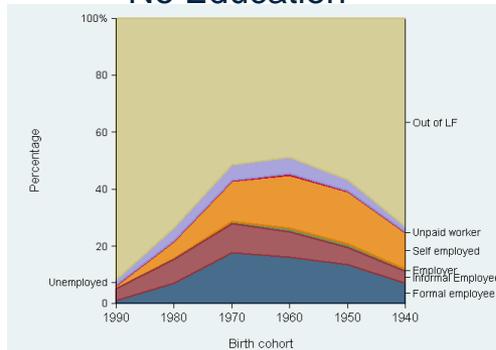
- Out of Labor Force
- Unemployed
- Unpaid (family) workers
- Self-employed
- Employer
- Informal Wage Employee
- Formal Wage Employee

# Education also affects the Evolution of Labor Market Status with Age

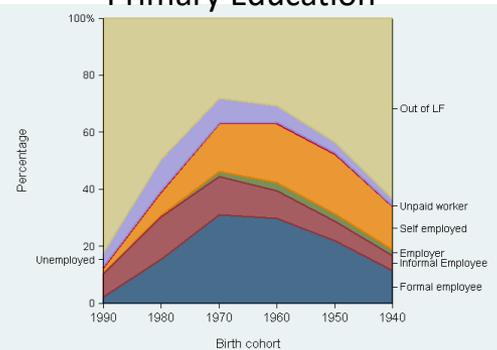


Brazil

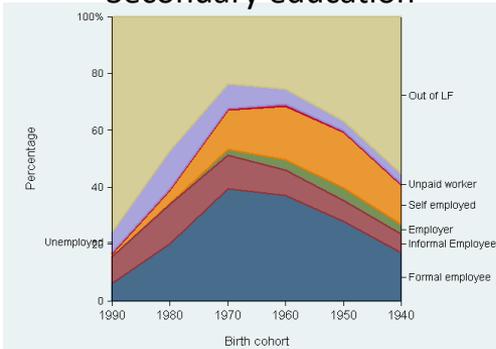
No Education



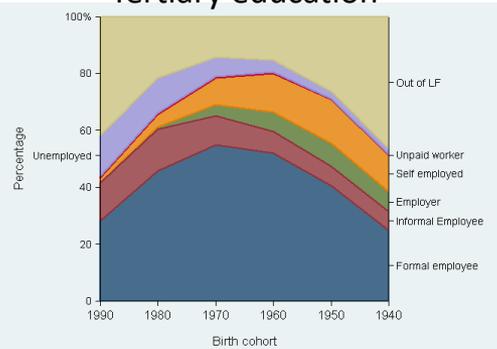
Primary Education



Secondary education



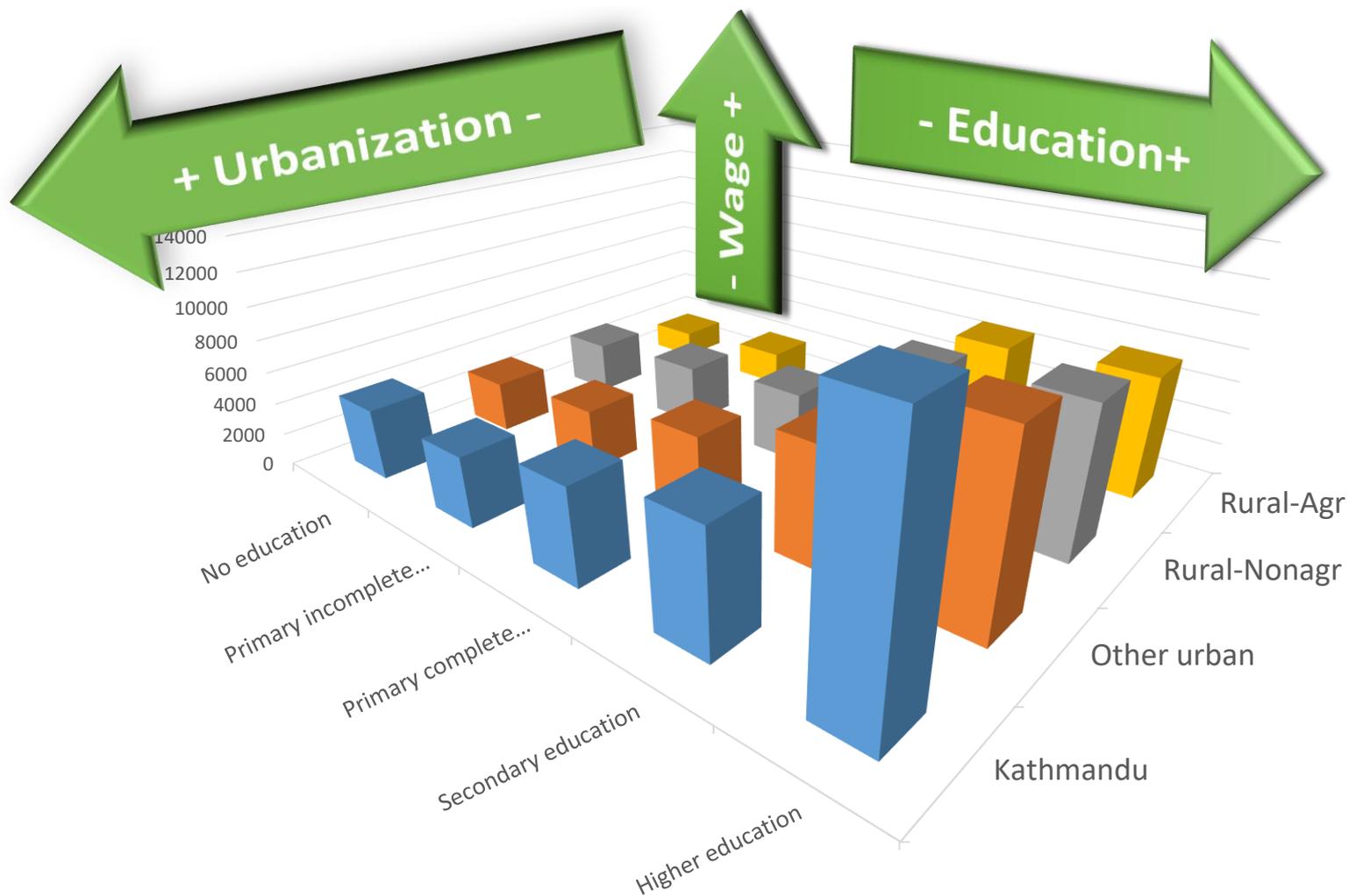
Tertiary education



## Work status:

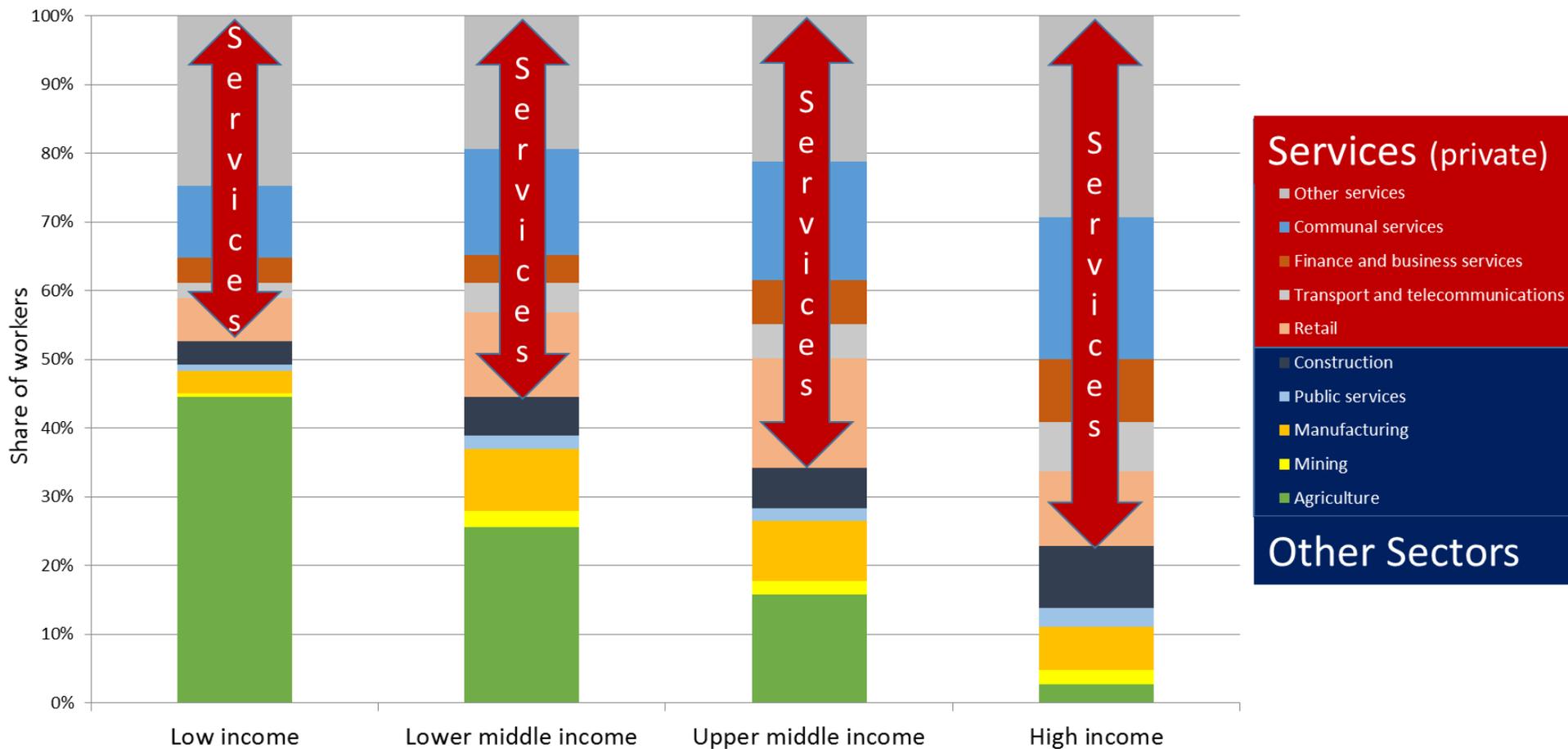
- Out of Labor Force
- Unemployed
- Unpaid (family) workers
- Self-employed
- Employer
- Informal Wage Employee
- Formal Wage Employee

# Jobs Outcomes improve with Education and Urbanization



Nepal LFS 2008 - Working age population (15-64) with a non-missing and nonzero wage. Mean wages are reported as weighted.

# Employment in Services increases as Countries develop





**WORLD BANK GROUP**

Social Protection & Jobs

***Jobs Diagnostic  
Facts &  
Findings:  
LM Demand  
(Firms)***

*This section uses  
representative  
business census and  
survey data for a  
selection of LICs and  
MICs undertaking  
Jobs Diagnostics.*



# *Firm Level analysis in JD refers only to the formal non-agricultural*

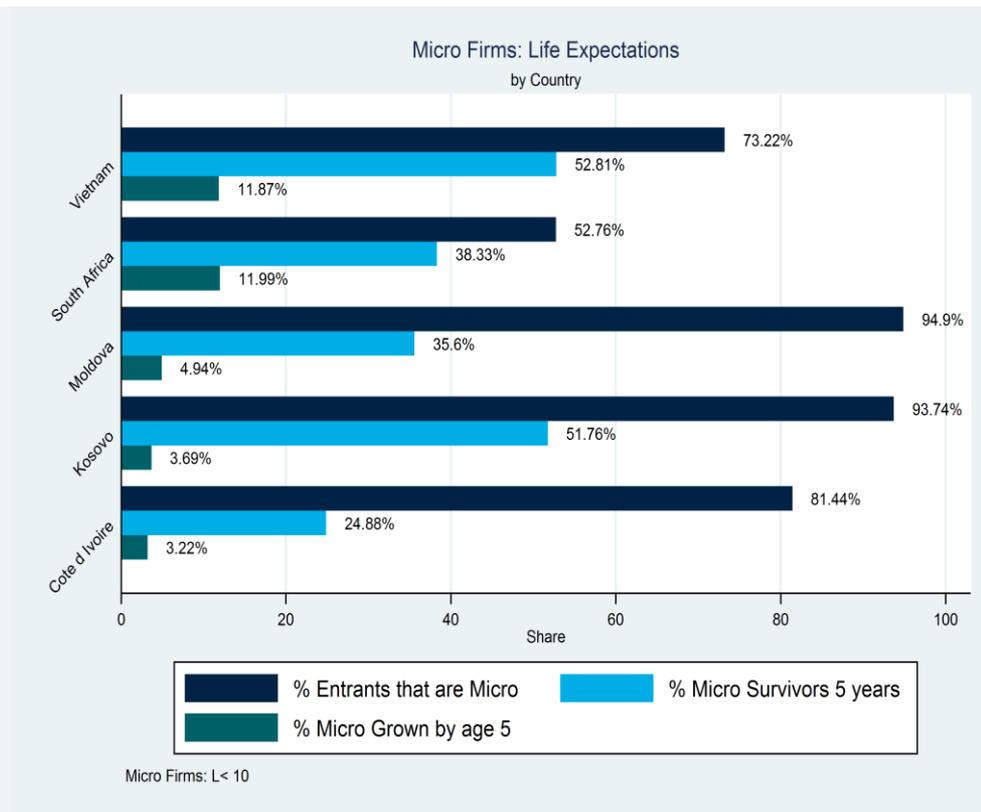
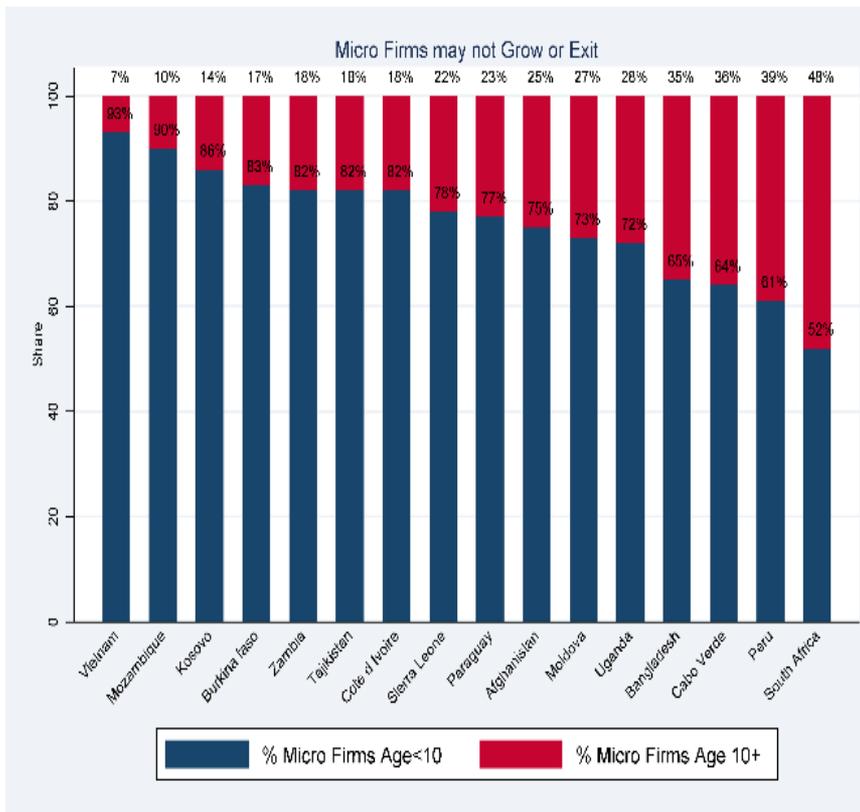
- Formal private sector (PS) employs only a small portion of the working age population
- BUT PS drives both productivity and employment growth
- It is responsible for most value added and growth
- Jobs in the PS provide better wages, more stability and opportunities for skill development and human capital formation

# Most firms are micro. Large firms employ more people

Micro firms comprise between 50 and 95 percent of all firms, but over 40 percent of employment in the formal private sector is in large firms. There is also large concentration of workers in few very large firms (the top 1% of largest firms hold more than one third of the jobs in the formal private sector)



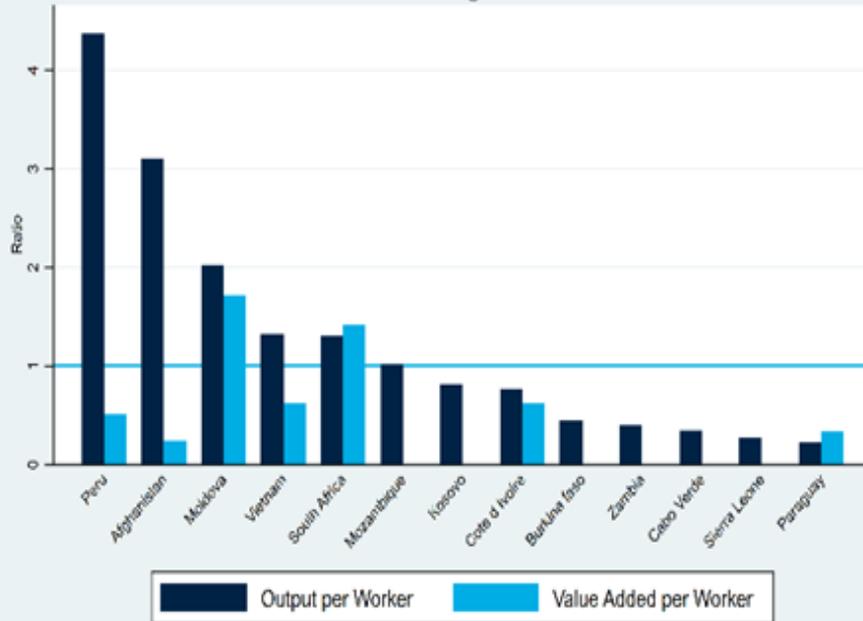
# Micro firms can persist over time and are unlikely to expand employment.



# Large firms do not necessarily have higher labor productivity than small firms

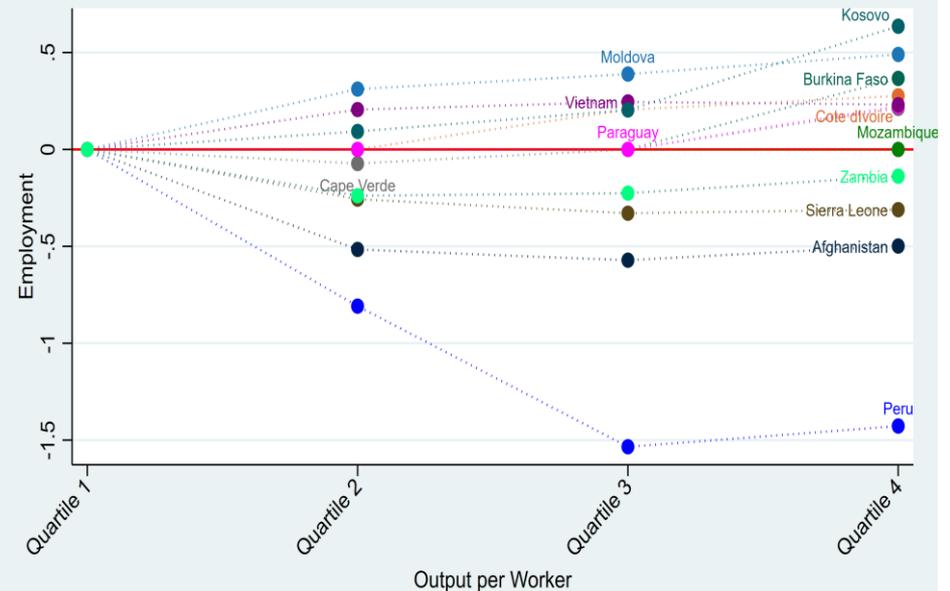
Lack of robust correlation between firm's size and firm's productivity undermines the existence of economies of scale or a selection process where more productive firms grow

Productivity  
Micro/Large Ratio



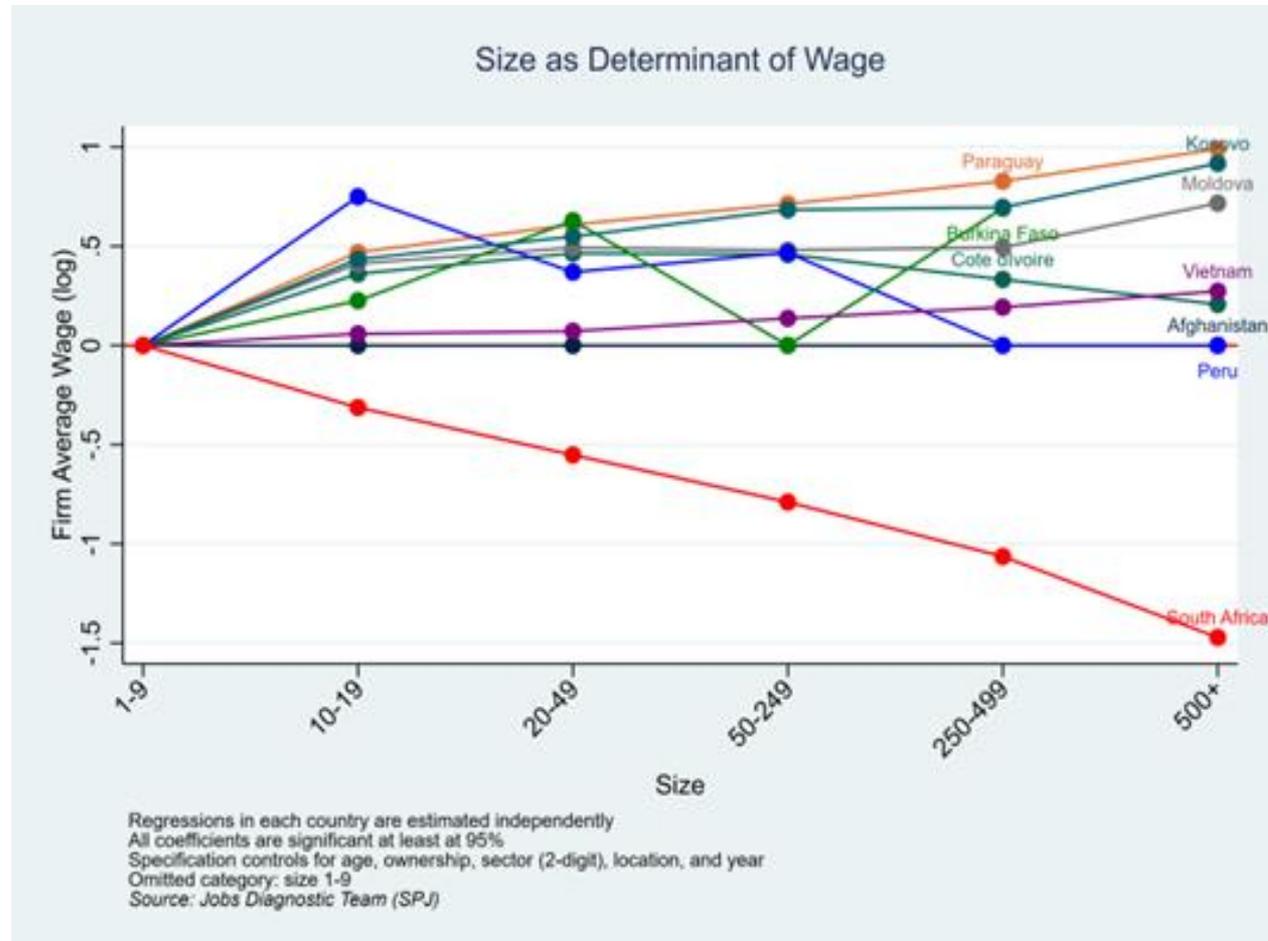
Micro firms: size 1 to 9; large firms: size 100+  
Source: Job Diagnostics (SPJ)

Productivity as Determinant of Employment



Regressions in each country are estimated independently  
All coefficients are significant at least at 95%  
Specification controls for age, ownership, sector (2-digit), location, and year  
Omitted category: quartile 1 (lowest productivity)  
Source: Jobs Diagnostic Team (SPJ)

# Large firms are likely to pay higher wages

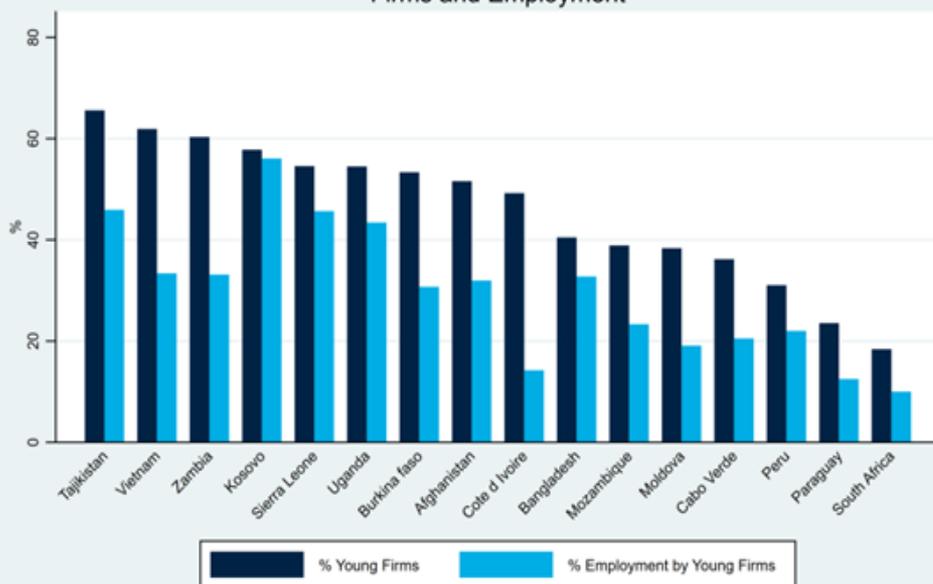


# New and young firms are a primary source of net job creation.

Young firms typically hold 10 to 50 percent of jobs

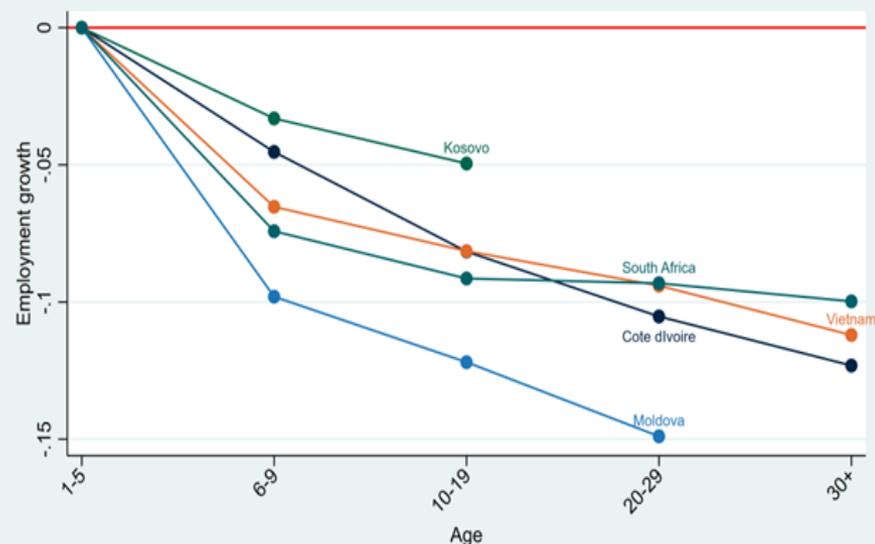
Employment growth of young firms is faster and slows as firms age

Share Young Firms and Employment



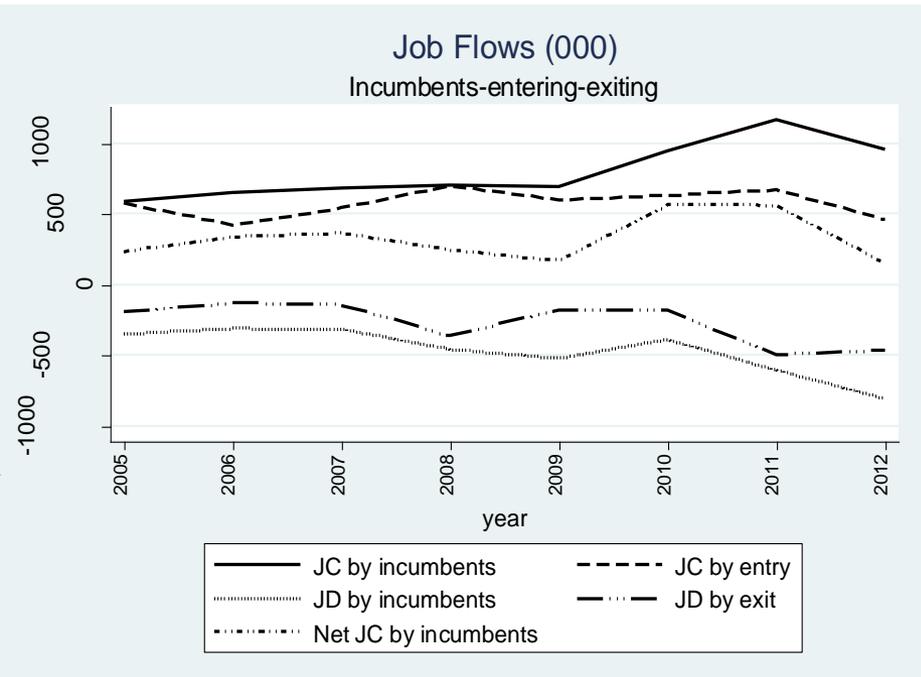
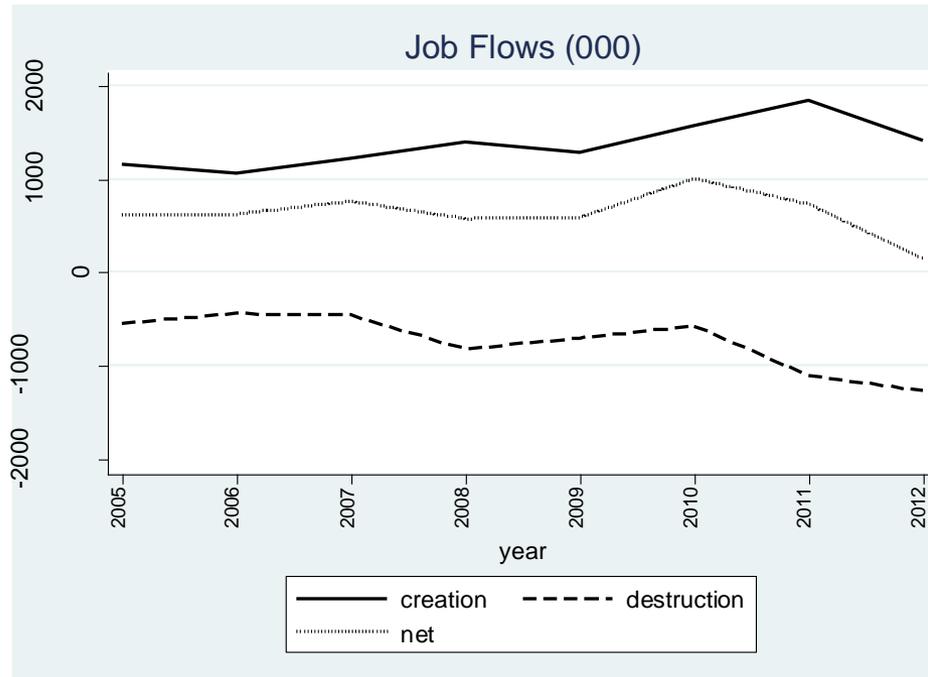
Young firms: age 1-5  
Source: Job Diagnostics (SPJ)

Age Effect on Employment Growth



Regressions in each country are estimated independently  
All coefficients are significant at least at 99%  
Specification controls for size, ownership, sector (2-digit), location, and year  
Omitted category: age 1-5; Moldova's result excluded 4 firms older than 29, which are outliers  
Source: Jobs Diagnostic Team (SPJ)

# Churning is high; entrants are very important for job creation

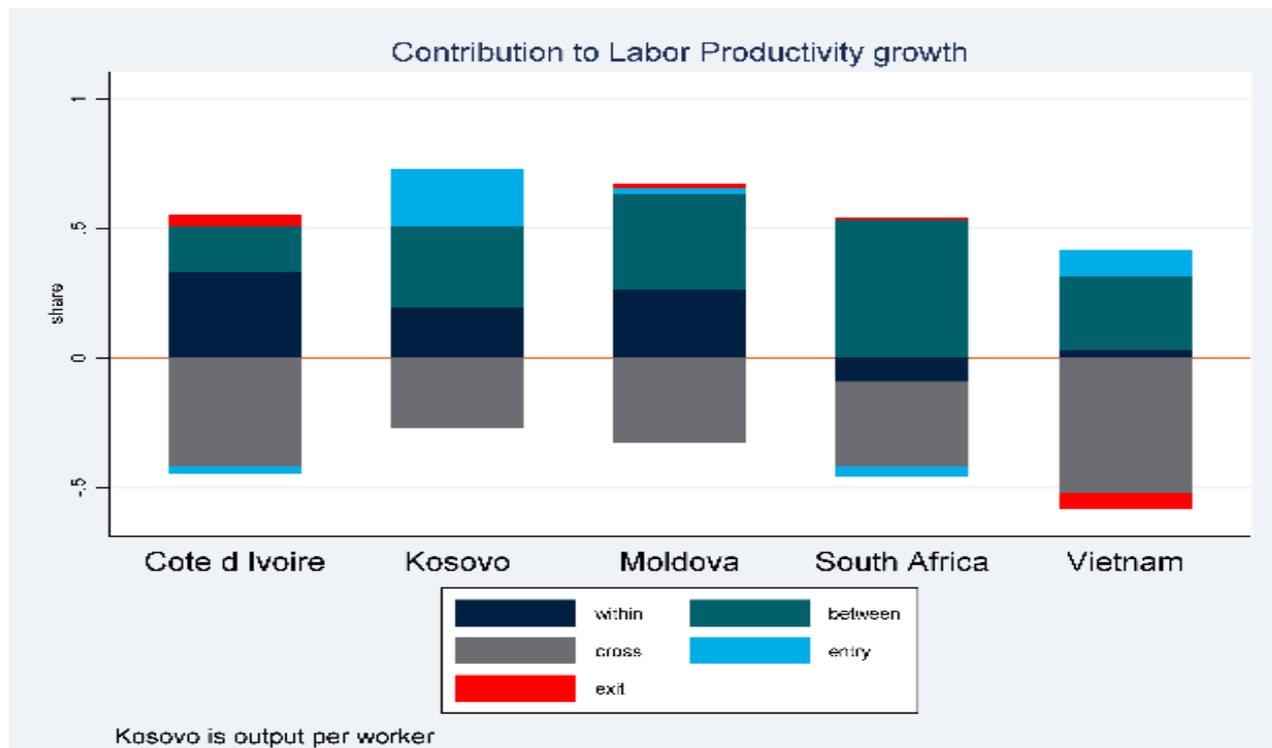


# The more productive the firm, higher the wages



# *Specific evidence shows that labor is allocated to more productive firms but productivity gains is accompanied by job losses*

The *between* term (green), positive in all countries, shows that firms with above average productivity are expanding their employment share in the economy. The *cross* term (grey), negative for all countries, shows that increasing productivity decreased labor share.





**WORLD BANK GROUP**

Social Protection & Jobs

**Thank you!**

**<http://www.worldbank.org/en/topic/jobsanddevelopment>**

World Bank Group  
Social Protection & Jobs Global Practice  
1818 H Street NW  
Washington DC 20433  
USA