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Structural transformation
Global Patterns
& China

China findings from forthcoming paper

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“What was the Impact of Creating Better Jobs for More People in China’s Economic Transformation? What We Know and Questions for Further Investigation”
WBG Jobs Flagship: Selected Global findings

[Graphs and charts showing various economic indicators such as global employment, capital-labor ratio, urban employment share, share of waged employed in total employment, and share of service sector waged employed in working age population.]
WBG Jobs Flagship: Themes for Programming Indicators

1. Revisiting Growth Facts
   - Kaldor facts:
     - Constancy of Q/K, Q,L, K/L
     - Constant factor shares
     - Constant returns to capital
   - Kuznets facts (below)

2. Jobs Patterns of Development
   - How do country jobs indicators evolve with real GDP per capita?
     - LF Participation
     - Employment
     - Sectoral employment
     - Sectoral GDP
     - Waged employment
     - Urban share

3. Jobs and Growth
   - GDP growth, including by sector
     - Change in demographics,
     - Change in labor utilization,
     - Growth in labor productivity
   - X-Country Productivity convergence
   - Structural change decomposition

4. Drivers of Structural Change
   - Relative Factor Accumulation
     - Including through FDI
   - Demographic Change
   - Changing Patterns of consumption and net trade, including:
     - Net trade analysis
     - Engel's Law
   - Technical change

Standardized Data Analysis
- Global
  - Analysis of Jobs
  - Structural Transformation
  - And Growth
- Sub-national
  - Analysis of Jobs
  - Structural Transformation
  - And Growth

Hypothesis Testing
- Global
  - Macro drivers of better Jobs outcomes with Structural Transformation
- Sub-national
  - Policy-orientated Hypothesis-Testing using micro data

1. Jobs Patterns of Development
   - How do jobs indicators evolve by regional real per capita value added?
     - LF Participation
     - Employment
     - Sectoral employment
     - Sectoral GDP
     - Waged employment
     - Urban share

2. Jobs and Growth
   - GDP growth, including by sector
     - Change in demographics,
     - Change in labor utilization,
     - Growth in labor productivity
   - Human capital accumulation
   - Productivity convergence
     - Inter-state and intrastate
   - Structural change decomposition

3. Jobs & Household Transformation
   - Representative households
     - Labor Force participation with good waged jobs:
       - Sex, age, marital stat.
       - Rural vs urban
       - Education level
   - Age in school
   - School to work transitions

4. Labor Market Efficiency
   - Regression analysis of:
     - Wage gaps
     - Work seeking
     - Probabilities of employment
     - Returns to education
Approach for China: Combining macro and micro data

• Relate longer term trends in economic growth to `proximate drivers’ of structural transformation


  i. Demographic change

  ii. Relative factor accumulation

  iii. Changing patterns of demand and net trade

  iv. Relative productivity (rough proxy for technical change)

• Decompose growth in per capita GDP

  • Shapley method (Shorrocks 1999) and

  • Labor Productivity (de Vries, Timmer and de Vries 2015)

• Derive World Bank Jobs Group’s standardized labor indicators for 3 CHIP survey modules each survey year:

  • Rural

  • Urban

  • Migrant


• Derive wage gaps and estimate a wage equation based on Hukou status and location

• As part of (iii) above, use the consumption module of CHIP to investigate changing patterns of domestic demand in China.
Motivation and Data Sources

Data Sources:

• Penn World Tables 10.0 (*June update in these slides*)
• GGDC & UNU WIDER Economic Transformation Database
• World Bank World Development Indicators
• China Household Income Project surveys: 5 waves
• Underway – China Family Panel Studies:
Findings: Exceptional growth since late 1980s brought convergence with other regions. Productivity gains in *manufacturing* and *agriculture*, labor shift into services drove average productivity with convergence between sectors.

Sources: GNI in current $US PPP from WDI, Output per capita expenditure-side real GDP at chained PPPs (in mil. 2017US$) from PWT10.0
Findings: employment transitions from rural to urban, self-to waged-employed; youth (15-24) especially moved, and they moved into services, education of the employed workforce improved too, but secondary education and above was just 35% in 2013

Source: CHIP surveys
Findings: Wage growth was strong, including for the lower part of the distribution. Wage earnings gaps between rural and urban, migrant and urban narrowed after 2007. Wage share of income initially fell; consumption grew slower than both labor compensation and output.

Source: CHIP surveys
Findings: Significant capital deepening with human capital improvements per worker, and slower growth in labor force (through aging).

Source: Penn World Tables 10.0 (June amendment)