Structural Change & Labor Trends Globally and in East Asia

Labor Market Policy Core Course
Seoul, December 2011
Outline

- Trends in developing country labor in the last 10 years
  - Population, Structural Shifts, Employment, Productivity
- Trends in East Asian labor, compared with other regions
- Impact of the Global Financial Crisis
- Recovery since
Labor market indicators: Crash Course

Economic activity; employment; unemployment; earnings and satisfaction.
Indicators

- **Activity**
  - Employment ratio, Unemployment rate, Labor force participation

- **Type of job**
  - Sector: Agriculture, industry, service, etc.
  - Status: Government worker, Private wage worker, self employed, family and unpaid workers
    - Self-employed alone, self-employed with temporary, and self-employed with permanent.

- **Hours and compensation**
  - Earnings, hours of work, benefits, hourly wage

- **Can analyze by subgroups**
  - age, education level, gender, location, ethnicity, region, poverty status
## Activity Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Definition</th>
<th>Strength</th>
<th>Weakness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment ratio</td>
<td>#employed/# working age pop.</td>
<td>Overall level of economic activity, simple &amp; clear</td>
<td>Declining employment could be good or bad</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>#unemployed/# of labor force</td>
<td>A measure of lost potential</td>
<td>Fuzzy definition, influenced by participation</td>
</tr>
<tr>
<td>Labor force participation rate</td>
<td># labor force/# working age pop.</td>
<td>Size of work force, willingness to work</td>
<td>Fuzzy definition, participation could be good or bad</td>
</tr>
</tbody>
</table>
Importance of “job quality” indicators

Hypothetical example

![Graph showing employment pre and post crisis]

![Graph showing employment with wage, self, and family categories pre and post crisis]
## “Job Quality” Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Definition</th>
<th>Strength</th>
<th>Weakness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment Status and sector</td>
<td>Share of employment in different status or sector</td>
<td>Easy to measure and related to earnings and productivity</td>
<td>Coarse measure</td>
</tr>
<tr>
<td>Earnings</td>
<td>Reported profits or salary per month</td>
<td>What workers care about most. Good proxy for productivity. Continuous measure.</td>
<td>Very difficult to measure accurately, especially for self-employed.</td>
</tr>
<tr>
<td>Self-reported job Satisfaction</td>
<td>Reported Worker satisfaction with job</td>
<td>Easy to measure, including for unpaid family</td>
<td>Definition varies greatly across people</td>
</tr>
</tbody>
</table>
Measurement Error in Earnings

- Self reported earnings tend to be inaccurate
  - In the US and Sweden countries, even comparisons of self-reported data to earnings shows large measurement error.
  - Higher earners under-report, and low-earners tend to over-report

- Self-reported earnings from self-employed workers are difficult to collect
  - And usually understated, because of difficulty remembering profits, fear that it will be provided to tax authorities, or modesty.

- Administrative data only covers formal wage employees

- Benefits and perks are difficult to value.
1. Is sector and status a good proxy for earnings and job satisfaction?
2. Is job satisfaction an accurate indicator of job quality? Why or why not?
Case study: Investigate using Indonesia data from 2007
   – Large and diverse lower middle income country with data on earnings and job satisfaction.
Is sector a good proxy for earnings?

- Yes, because Ag workers make less, but...
  - Sector alone only explains 5% of earnings variation
  - Part of the difference may be due to measurement error in farmers’ profits.

<table>
<thead>
<tr>
<th>Log Earnings Per Month</th>
<th>Coefficient</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industry</td>
<td>0.56</td>
<td>**</td>
</tr>
<tr>
<td>Services</td>
<td>0.62</td>
<td>**</td>
</tr>
<tr>
<td>Observations</td>
<td>12,766</td>
<td></td>
</tr>
<tr>
<td>$r^2$</td>
<td>0.05</td>
<td></td>
</tr>
</tbody>
</table>
## Sector weakly related to job satisfaction

Agricultural workers are slightly more satisfied, even though they earn less

### Reported Job Satisfaction by Sector

<table>
<thead>
<tr>
<th></th>
<th>Very Unsatisfied</th>
<th>Unsatisfied</th>
<th>Satisfied</th>
<th>Very Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>0.5</td>
<td>17.2</td>
<td>79.8</td>
<td>2.5</td>
</tr>
<tr>
<td>Industry</td>
<td>0.4</td>
<td>20.2</td>
<td>76.3</td>
<td>3.1</td>
</tr>
<tr>
<td>Services</td>
<td>0.6</td>
<td>18.6</td>
<td>77.3</td>
<td>3.6</td>
</tr>
<tr>
<td>Total</td>
<td>0.5</td>
<td>17.5</td>
<td>78.7</td>
<td>3.2</td>
</tr>
</tbody>
</table>
Status is a better proxy for earnings than sector

- Especially when public and private workers are distinguished, at least in this case…

<table>
<thead>
<tr>
<th>Status</th>
<th>Coefficient</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-employed alone</td>
<td>Omitted</td>
<td></td>
</tr>
<tr>
<td>Self-employed with others</td>
<td>0.13</td>
<td>**</td>
</tr>
<tr>
<td>Government worker</td>
<td>1.48</td>
<td>**</td>
</tr>
<tr>
<td>Private wage worker</td>
<td>0.51</td>
<td>**</td>
</tr>
<tr>
<td>Observations</td>
<td>12,766</td>
<td></td>
</tr>
<tr>
<td>r²</td>
<td>0.11</td>
<td></td>
</tr>
</tbody>
</table>
Status is more strongly related to satisfaction

- But wage workers are unhappy with their job. Why?

Reported Job Satisfaction by Status

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<th>Status</th>
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<th>Satisfied</th>
<th>Very Satisfied</th>
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<tr>
<td>Self alone</td>
<td>0.5</td>
<td>17.2</td>
<td>79.8</td>
<td>2.5</td>
</tr>
<tr>
<td>Self with others</td>
<td>0.5</td>
<td>12.7</td>
<td>83.0</td>
<td>3.8</td>
</tr>
<tr>
<td>Gov employee</td>
<td>0.2</td>
<td>9.6</td>
<td>80.3</td>
<td>10.0</td>
</tr>
<tr>
<td>Private wage</td>
<td>0.4</td>
<td>21.4</td>
<td>75.3</td>
<td>2.9</td>
</tr>
<tr>
<td>Unpaid family</td>
<td>0.7</td>
<td>19.2</td>
<td>78.1</td>
<td>2.0</td>
</tr>
</tbody>
</table>
Job satisfaction depends on expectations

Male and Highly Educated workers are less satisfied, perhaps because of higher expectations. Self-reported Job satisfaction may not be an accurate indicator of job quality.

<table>
<thead>
<tr>
<th>Effect on probability of being Satisfied (percentage points)</th>
<th>Marginal Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>7.8 pp</td>
</tr>
<tr>
<td>Age in years</td>
<td>0.3 pp</td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>−0.5 pp</td>
</tr>
<tr>
<td>Junior High</td>
<td>−0.8 pp</td>
</tr>
<tr>
<td>High School</td>
<td>−4.2 pp</td>
</tr>
<tr>
<td>College</td>
<td>−7.3 pp</td>
</tr>
</tbody>
</table>

** indicates significance at p < 0.05
Differences narrow after controlling for basic worker characteristics.

- Self-employed with others and especially government workers are more likely to be satisfied

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<tr>
<th>Status</th>
<th>Marginal Effect on being Satisfied</th>
<th>Marginal Effect</th>
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</thead>
<tbody>
<tr>
<td>Self-employed alone</td>
<td>Omitted</td>
<td></td>
</tr>
<tr>
<td>Self-employed with others</td>
<td>4 pp</td>
<td>**</td>
</tr>
<tr>
<td>Government worker</td>
<td>11.7 pp</td>
<td>**</td>
</tr>
<tr>
<td>Private wage worker</td>
<td>2.1 pp</td>
<td>**</td>
</tr>
<tr>
<td>Unpaid family worker</td>
<td>-1.5 pp</td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>16,518</td>
<td></td>
</tr>
<tr>
<td>$r^2$</td>
<td>0.054</td>
<td></td>
</tr>
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Where can data on labor markets be found? Data are scarce

Years of available data, 2000–2008
Data availability is slowly improving

- From 1988 to 1990, 78 countries reported data on labor force participation in at least one year.

- From 2006 to 2008, 104 countries did.
Sources of labor market data

- **ILO**
  - Key Indicators of the Labor Market (KILM)
    - ILO Estimates (used by WDI)
    - National Estimates
  - LABORSTA
    - ILO Short Term indicators
- **IMF**
  - International Financial Statistics
- **Private data providers**
Sources of labor market data

- National Estimates from ILO
  - KILM and Short-term indicators
    - Derived from national labor force surveys, household surveys, or censuses
  - Issues of timing...
    - KILM has a 2 year lag (2009 not yet available)
    - Short term indicators start in 2004
  - ... and limited coverage
    - Short-term indicators: 35 developing countries (2004–2009)
    - KILM: Roughly 20 developing countries (1990–2008)
Trends in developing country labor markets

- Population growth;
- employment creation;
- productivity increases;
- composition of jobs.
Although slowing, population growth remains high, especially in low-income countries.
Employment growth has been stable or falling

![Bar chart showing average annual employment growth from 1990-1994 to 2005-2009 for Low and Lower Middle Income Countries (14) and Upper Middle Income Countries (21).]
As many countries have been unable to create enough jobs for new entrants.

Annual average employment and workforce growth (2000-2007)

Annual growth in adult population (2000-2007)
Leading to declines in employment as a share of the adult population

- Low and Lower Middle Income Countries (17)
- Upper Middle Income Countries (27)
But economic growth is increasing

Both in sample with employment information

As well as much larger sample of countries
Sustained by large productivity gains even in low income countries

Productivity Growth

- Low and Lower Middle Income Countries (14)
- Upper Middle Income Countries (21)
At least in the 35 Countries with productivity data
(in at least one year in the four 5–year periods from 1990–2009)
Productivity increases in low and middle income countries, driven by shifts out of agriculture.

For Low and lower-middle income countries:
- Agriculture
- Industry
- Services

For Upper middle-income countries:
- Agriculture
- Industry
- Services
Unemployment has remained stable

Unemployment rate

Low and Lower Middle Income Countries (12)

Upper Middle Income Countries (13)
Even among young people (though youth unemployment remains persistently higher)

![Bar graph showing youth unemployment rate for Low and Lower Middle Income Countries and Upper Middle Income Countries from 1990-1994 to 2005-2009.](image)

- Low and Lower Middle Income Countries (11)
- Upper Middle Income Countries (15)
There has been limited growth in wage & salaried employment

- Low and Lower Middle Income Countries (10)
- Upper Middle Income Countries (14)
And small reductions in unpaid family labor

![Graph showing share of employment in family work from 1995 to 2009 for Low and Lower Middle Income Countries (9) and Upper Middle Income Countries (13).]
Trends in East Asia, relative to other regions

Some differences; many similarities.
Population growth is slowing in EA also
And population growth projected to fall only gradually in the future

Source: World Bank (HNPStats Population Projections)
Productivity of labor has risen steadily

Value added per worker, by period

Source: II0 KILM. EAP countries are: Cambodia, China, Indonesia, Malaysia, Myanmar, Philippines, Thailand, Vietnam
Partly reflecting shifts out of agriculture

Source: ILO KILM. EAP countries are: China, Indonesia, Malaysia, Thailand, and Philippines
Leading to increases in wage & salaried employment

Source: UNESCO. EAP counties are: Indonesia, Malaysia, Thailand, and the Philippines
And reductions in unpaid family work

Percent family workers

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EAP (4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECA (10)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAC (17)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MNA (2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAR (3)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: ILO KILM
“Dependent” wage & salary work arrangements remain low in East Asia

In six developing East Asian countries, 40% of workers are salary and wage workers.

Impact of the Global Financial Crisis

... and recovery since. East Asian economies weathered the storm better than most.
After the contraction, GDP is recovered more quickly than employment or earnings

Note: Countries in the sample are: Argentina, Armenia, Belarus, Brazil, Bulgaria, Colombia, Kazakhstan, Macedonia, Mexico, Moldova, Poland, Romania, Serbia, South Africa, Sri Lanka, Tajikistan, Thailand, Turkey, Ukraine, Venezuela, and West Bank and Gaza
Employment recovery had yet to appear by Q2 2010, except in Latin America

Sources: IMF, ILO, CEIC data Company, and national statistical offices.
Note: Countries in the sample are: Belarus, Bulgaria, Colombia, Lithuania, Moldova, Poland, Romania, Thailand, Ukraine, Brazil, Chile, Peru, and Serbia.
Contrasting “MIC Region” experience with employment recovery

Latin America & others

- Argentina
- Venezuela
- Mexico
- Brazil
- Colombia
- Peru
- Chile
- South Africa
- Thailand
- Sri Lanka
- West Bank and Gaza

Europe and Central Asia

- Latvia
- Romania
- Bulgaria
- Lithuania
- Serbia
- Moldova
- Macedonia
- Ukraine
- Armenia
- Tajikistan
- Belarus
- Poland
- Kazakhstan
- Turkey

Pre-crisis, Crisis, Post-crisis, Latest
Growth in East Asia recovered more quickly, although the 2009 slow-down did not lead to higher unemployment.

Real GDP growth

Unemployment rate

Sources: International Monetary Fund, International Labour Organization, CEIC Data Company, and national statistical offices.
In contrast to other regions, the rate of employment growth in EAP rose, although earnings growth slowed.
In 2010 and 2011, despite a slow-down in growth, unemployment remains steady.
Summing up

- Labor trends give reason for optimism
  - Increasing labor productivity
  - Structural transformation
  - Signs of recovery from crisis

- But challenges remain
  - Sustaining labor productivity increases
  - Addressing inequality of opportunity
  - … and of outcomes
  - Increasing resilience to shocks