AGGREGATE LABOR MARKET IMPACTS OF THE FINANCIAL CRISIS IN SELECTED MIDDLE-INCOME COUNTRIES

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OBJECTIVES

- Document how labor markets in MICs adjusted during the 2008-2009 financial crisis?
  - Present empirical evidence based on secondary sources
  - Explore patterns across regions, income levels, severity, currency regime

- Explore main adjustment mechanisms:
  1. Employment, hours worked, wages, sectoral shifts
  2. Changes in sectoral productivity.
  3. Changes in employment elasticity
Outline of presentation

1. The data
2. Which countries experienced the largest labor market effects?
3. When were they hit?
4. How did labor markets adjust?
   1. Aggregate trends
   2. Employment vs. earnings vs. hours
   3. Sectoral shifts
5. What happened to productivity and the sectoral allocation of employment?
6. What happened to employment elasticities?
THE DATA

- **Data Sources:** Published results from labor force surveys and employment surveys
  - Private data providers (CEIC/EMED, Haver Analytics)
  - ILO Laborstat
  - Country statistical offices
- **Frequency:** Quarterly
- **Coverage:** 45 middle income countries. Largely Latin America, East Asia, and Eastern Europe and Central Asia.
- **Period:** January 2006 to September 2009
Data Caveats

• Different sources for earnings and employment data
  • Employment data → mostly Labor Force Surveys
  • Earnings data → 60% from Establishment Surveys.
  • Look at growth in wage bill (Earnings*Employment) anyway.

• Sample of 45 middle income countries.
  • Only 37 of them have data on both employment and GDP.
  • Only 28 have data on employment, GDP and earnings.

• Data may not cover all workers
  • 16% of the countries limited to urban employment
  • 8% limited to formal employment
  • 29% do not include earnings in the agricultural sector
## Countries covered

<table>
<thead>
<tr>
<th>Employment</th>
<th>Countries</th>
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<tbody>
<tr>
<td>Albania</td>
<td>Armenia</td>
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<tr>
<td>Egypt</td>
<td>Georgia</td>
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<td>Lithuania</td>
<td>Macedonia</td>
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<td>Morocco</td>
<td>Peru</td>
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<td>South Africa</td>
<td>Sri Lanka</td>
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<td>China (urban)</td>
<td>Colombia (urban)</td>
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<td>Ecuador (urban)</td>
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<td>Venezuela</td>
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<td>Brazil (urban)</td>
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<td>Argentina (urban)</td>
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<td>Dominican Republic</td>
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<td>Latvia</td>
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<td>Serbia</td>
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<td>Ukraine</td>
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<td>Earnings</td>
<td>Countries</td>
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<td>Belarus</td>
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<td>Latvia</td>
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<td>Paraguay</td>
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<td>Romania</td>
<td>Russia</td>
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<td>Thailand</td>
<td>Turkey</td>
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<td>Ukraine</td>
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<td>Argentina (urban)</td>
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<td></td>
<td>Colombia (urban)</td>
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<td>Indonesia</td>
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<td>Mexico</td>
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<td>Uruguay</td>
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<tr>
<td>Hours Worked</td>
<td>Countries</td>
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<td>Latvia</td>
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<td>Romania</td>
<td>Serbia</td>
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<td></td>
<td>Turkey</td>
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<td>Argentina (urban)</td>
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<td>Poland</td>
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<td>Colombia (urban)</td>
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<td>Ecuador (urban)</td>
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<td>Uruguay</td>
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<td>West Bank and Gaza Strip</td>
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<td>Brazil (urban)</td>
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</tbody>
</table>
Which types of countries experienced the largest decline in wage bill growth?
When were they hit?
Decline in wage bill started early and accelerated in early 2009.
Employment growth fell only slightly during the crisis
Pre-crisis decline in real earnings growth due to rising inflation
How did the labor markets adjust?
The labor market can adjust via...

- Labor force participation
- Unemployment rate
- Employment
- Total wage bill
- Earnings
- Wage rates
- Hours
- Sectoral reallocation of employment
Large declines in growth of earnings and hours worked

<table>
<thead>
<tr>
<th>Change in total wage bill</th>
<th>Number of countries</th>
<th>2 Year Pre Crisis Average</th>
<th>Post-crisis</th>
<th>Difference between Post and Pre Crisis</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>9.4</td>
<td>1.1</td>
<td>-8.3</td>
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<tr>
<td>Percent change in employment</td>
<td>41</td>
<td>2.0</td>
<td>-0.1</td>
<td>-2.1</td>
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<tr>
<td>Percent change in earnings</td>
<td>31</td>
<td>6.7</td>
<td>1.3</td>
<td>-5.4</td>
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<tr>
<td>Percent change in wages</td>
<td>14</td>
<td>5.1</td>
<td>5.8</td>
<td>0.6</td>
</tr>
<tr>
<td>Percent change in hours.</td>
<td>14</td>
<td>1.4</td>
<td>-4.3</td>
<td>-5.6</td>
</tr>
</tbody>
</table>
Most of the decline in wage bill growth is due to falling earnings growth.

**Contribution to change in wage bill growth**

- 26% due to employment
- 74% due to earnings

**Contribution to change in real wage growth**

- % due to nominal wages
- % due to prices

**Contribution to change in earnings growth**

- % due to real wages
- % due to hours
Importance of employment, earnings and price adjustments vary
Hours worked growth fell most sharply in LAC, and Serbia and Turkey

Change in hours worked growth

- Serbia
- Urban Ecuador
- Turkey
- Urban Argentina
- Mexico
- Urban Brazil
- Peru
- Urban Colombia
- Poland
- Romania
- Latvia
- Bulgaria
- West Bank & Gaza
- Uruguay
What happened to productivity and the sectoral allocation of employment?
Smaller changes in employment hide significant labor shifts, mostly towards services

Shift in non agricultural employment from industry to services

- All (26)
- EAP (5)
- ECA (16)
- LAC (4)
- MEA (1)
- Low-end MICs (19)
- Middle MICs (11)
- High-end MICs (5)
- Mild impact (5)
- Moderate impact (11)
- Severe impact (7)
- Fixed peg/currency board (7)
- Independently floating (6)
- Managed floating (12)
Large declines in productivity

Change in the growth of GDP per adult

Percentage points

-20  -15  -10  -5   0   5

All (33)  EAP (6)  ECA (15)  LAC (8)  MEA (4)

| mild (10) | moderate (16) | severe (7) | fixed peg/currency board (12) | independently floating (7) | managed floating (4) |

- due to activity
- due to employment
- due to productivity
The fall in productivity may be the result of a sectoral shift in employment.
How did employment elasticities change during the crisis?
Aggregate labor market impact closely correlated to growth deceleration

(change in wagebill growth vs change in GDP growth)

Simple correlation = 0.55
Employment elasticity may have declined during crisis...

The blue plots are for non-crisis periods, and the red are for crisis.
... But the relationship is non-linear
Summing up

• Adjustment came more through earnings than employment
  • Limited evidence suggests adjustments through hours worked rather than wage rates.

• Institutions matter
  • Fall in employment concentrated in ECA, higher income MICS and fixed peg regimes
  • Industrial employment fell most in severely hit and high income countries
Policy implications

• Winners and losers depends on nature of adjustment
  • Employment declines concentrate losses on unlucky few
  • Earnings declines spread losses more evenly

• Affect desirability of different policy responses.
  • Falling earnings growth better addressed by income maintenance programs such as cash transfers or tax credits
  • Policy responses during past crises tend to focus on employment generation and unemployment insurance
Policy implications

• Preliminary evidence suggests that effective policy packages should include earnings and income support.
  • Responses in European OECD countries include partial unemployment insurance, expanding cash transfers to poor workers, and temporary wage subsidies.
  • These may be priority interventions in those countries where hours and earnings adjustments dominated.