China’s Ongoing Economic Transformation

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China in 2009

- 2nd largest economy in the world
- 3rd largest trading country
- Largest recipient of FDI
- Major creditor ($US 2.2 trillion in reserves)
- But, per capita income of a low “middle” income country
  - ~$US 8,000 in PPP (2008)
Several Big Questions?

- What have been the sources of this growth?
- How long can the high growth be sustained? Where are the constraints?
- Can the rising expectations of an emerging middle class be met?
- How does China deal with the problem of a high and rising inequality?
Several Keys to China’s Success

- Policy of domestic market and institutional reform combined with economic openness
  - Facilitated transfer of technology and know-how
  - Increased competition
  - Enabled reallocation of capital and labor
  - Improved governance

- A reformist political economy
  - Decentralization
  - Political competition
  - Emerging consensus on the priority of growth
Sources of Growth to Now

Extensive margin (55-60%)

- Expansion in the labor force
- High rates of investment → increases in capital per worker
- Rising skill levels of the workforce
Sources of Growth to Now

Intensive margin: Rising Productivity (40-45%)

- Reallocation from low to high productivity sectors
  - Agriculture to non-agriculture
  - State to non-state
- Within-sector increases in productivity
  - Agriculture (6.2% per annum)
  - Mfg (5.0%)
  - Services (1.2%)
Sources of growth in the future?

- **Extensive margin?**
  - Returns largely exhausted
  - Investment share of GDP already exceeds 40 percent, and will likely fall over time
  - Size of the labor force will peak in less than 10 years

- **Intensive margin?**
  - Key to future growth
  - Linked to upgrading of capabilities, competitive pressures on firms to invest in R&D and innovate, and entry/exit
  - Constrained by:
    - Continued inefficiency and biases in the financial sector
    - Industrial strategy in key sectors promoting China’s counterparts to Japan’s *keiretsu* and Korea’s *chaebols*
How Important Is China’s Foreign Trade?

China's Trade Ratio
(Total Foreign Trade/GDP)

Year

Ratio

The Forgotten Domestic Economy

Role of Manufacture Goods Produced and Sold Domestically

<table>
<thead>
<tr>
<th>Year</th>
<th>Share of Gross Output</th>
<th>Share of Value Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>1.0</td>
<td>0.9</td>
</tr>
<tr>
<td>1990</td>
<td>0.9</td>
<td>0.8</td>
</tr>
<tr>
<td>1995</td>
<td>0.8</td>
<td>0.7</td>
</tr>
<tr>
<td>2000</td>
<td>0.7</td>
<td>0.6</td>
</tr>
<tr>
<td>2005</td>
<td>0.6</td>
<td>0.5</td>
</tr>
<tr>
<td>2007</td>
<td>0.5</td>
<td>0.4</td>
</tr>
</tbody>
</table>
China and the Global Wheel Loader Market

2/3 of WW unit sales
- Chinese Domestic WL Unit Sales
- Rest of World WL Unit Sales

1/3 of WW $$ sales
- Chinese Domestic WL $$ Sales
- Rest of World WL $$ Sales
Growth of Chinese Auto Market

Sales (Million) vs. Year

- Annual Sales


Sales (Million)
### Who is Capturing the Domestic Market in Manufacturing?

<table>
<thead>
<tr>
<th>Year</th>
<th>Size of Domestic Market</th>
<th>Chinese Firms</th>
<th>Foreign Firms</th>
<th>Imports</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Trillion RMB</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>1995</td>
<td>4.7</td>
<td>68.3</td>
<td>13.3</td>
<td>18.4</td>
</tr>
<tr>
<td>2004</td>
<td>16.1</td>
<td>59</td>
<td>21.8</td>
<td>19.1</td>
</tr>
</tbody>
</table>
### Heterogeneity Across Sectors

<table>
<thead>
<tr>
<th>Market Share of FIEs (Percent)</th>
<th>Percentage of All Sectors</th>
<th>Illustrative Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>14.5</td>
<td>Chemical fertilizers; optical instruments; metallurgy equipment; lead and zinc smelting; irrigation equipment</td>
</tr>
<tr>
<td>5-15</td>
<td>28.1</td>
<td>Spinning and weaving; machine tools; tractors; electric fans; transformers</td>
</tr>
<tr>
<td>15-25</td>
<td>22.6</td>
<td>Air compressors; construction equipment; paper products; optical glass; aluminum products</td>
</tr>
<tr>
<td>25-50</td>
<td>26.2</td>
<td>Apparel; motorcycles; electronic components; air conditioners; metal packing materials and containers;</td>
</tr>
<tr>
<td>50+</td>
<td>8.6</td>
<td>Vehicles; polyolefin plastics; communication terminal equipment; integrated circuits; television sets</td>
</tr>
</tbody>
</table>
Heterogeneity within Sectors

Three segments within each sector: low, medium, high
Shifting Center of Gravity in the Chinese Car Market

Passenger Car production in China, 2000

Passenger Car Production in China, 2007
Manufacturing Productivity

Total Factor Productivity Growth in Industry

- 1999: 2.00%
- 2000: 4.00%
- 2001: 6.00%
- 2002: 8.00%
- 2003: 10.00%
- 2004: 12.00%
- 2005: 14.00%
- 2006: 12.00%
- 2007: 10.00%
### The Dynamics of Productivity Growth

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Contribution to Productivity Growth</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Continuing Firms</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Net Entry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>1998-2007</td>
<td>33%</td>
<td>67%</td>
</tr>
<tr>
<td>US</td>
<td>1977-1987</td>
<td>74%</td>
<td>26%</td>
</tr>
</tbody>
</table>
Implications

- More room for productivity growth
- Continued exit and entry, and likely acceleration in M&A activity
- Rising expenditure on R&D, as well as overseas acquisition by Chinese firms
- Increasing consolidation, but heterogeneity across sectors (state-lead vs market-lead)
- Spillover effects on global markets
But, the Ever-present State
Widening Gap in Capital-Labor Ratios

Capital-Labor Ratio: State vs Non-State


K/L State Sector
K/L Non-state Sector
Widening Gap in Productivity
Widening Gap in Returns to Capital

![Graph showing the returns to capital for non-state and state sectors from 1978 to 2006. The graph indicates a widening gap in returns between the two sectors over time.](image)
China’s Continuing Achilles Hill

(54.12 Trillion RMB)

- State owned Banks: 51%
- Joint Stock Banks: 18%
- Policy Banks: 8%
- Rural Commercial Banks: 1%
- Rural Credit Cooperatives: 8%
- Urban Commercial Banks: 6%
- Urban Credit Cooperatives: 2%
- Foreign Owned Banks: 6%
- Other: 0%
<table>
<thead>
<tr>
<th>Source</th>
<th>Billion RMB</th>
<th>% of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Loans by Banks</td>
<td>3,743.3</td>
<td>14.9</td>
</tr>
<tr>
<td>IPOs in China</td>
<td>459.4</td>
<td>1.8</td>
</tr>
<tr>
<td>Of which: 15 Largest IPOs</td>
<td>404.6</td>
<td>1.6</td>
</tr>
<tr>
<td>10 Largest</td>
<td>354.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Private Foreign Equity Investment</td>
<td>76.8</td>
<td>0.2</td>
</tr>
</tbody>
</table>
Why Is this So Important?

- Reallocation of capital would allow same growth rate in 2007, but at GFCF’s share of GDP in 1998 (32%) rather than 2007 (42%)
- Narrow differences in K/L ratio, and likely help increase demand for labor
- Take pressure off export growth as a source of demand for labor
- Because of complementarity between physical capital and skills, may help reduce rising wage inequality
China’s Rising Inequality
## Estimated Returns to Education in Urban China

<table>
<thead>
<tr>
<th>Year</th>
<th>Average Years Schooling</th>
<th>College versus High School</th>
<th>Technical versus High School</th>
<th>High School versus Junior High</th>
<th>Junior High versus Primary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>4.7</td>
<td>16.6</td>
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</tbody>
</table>

Source: Cai, Park and Zhao, 2008
China’s Educational Gap

Average Years of Education, by Cohort and Hukou

- For the cohort ranging from 0-15, the average years of education are similar for those with Agricultural Hukou and Non-agricultural Hukou.
- The average years of education increase from 16-25 years old, with a slight advantage for those with Non-agricultural Hukou.
- A peak is observed in the 26-35 age group, with a clear advantage for Non-agricultural Hukou.
- The trend continues with a slight decrease in the 36-45 age group.
- In the 46-55 age group, the advantage for Non-agricultural Hukou remains, though the gap narrows.
- Further age groups show a trend of decreasing advantage, with a slight increase in the 56-65 and 66+ age groups.

Legend:
- Blue: Ag. Hukou
- Red: Nonag. Hukou
What does all of this mean?

- Issues of growth, rebalancing, and problems of inequality are linked.
- Despite some progress in reforming financial system, biases persist, and state continues to grab significant portion of GDP through it.
- China’s current political economy makes it very difficult to eliminate these rents.