Dancing with Giants
China, India and the Global Economy

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  L. Alan Winters and Shahid Yusuf

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Main Messages from the Study

• Huge growth ‘surprise’
• General gains, but potentially large adjustment in manufacturing; largest for intermediate suppliers
• Lower asset accumulation, more non-reserve assets
• Energy: one time opportunity on emissions; the Giants are not THE global problem
• Inequality major political challenge; some attenuation of trends is feasible in China
• Governance not a puzzle; some fragility
This presentation

• The growth ‘surprise’
• The growth assumption (manufacturing)
• Possible constraints on growth:
  – Energy and emissions
  – Poverty and Inequality
  – Governance
• Lessons for other countries
### Historical Precedents

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<td><strong>Initial share (%)</strong></td>
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<td><strong>Annual growth %</strong></td>
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<td>2.1</td>
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<td><strong>World growth %</strong></td>
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<td><strong>Excess growth %</strong></td>
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<td><strong>No.of years</strong></td>
<td>26</td>
<td>25</td>
<td>120</td>
<td>50</td>
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Post-war growth spurts
## Growth Assumptions

<table>
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<tr>
<th>Country</th>
<th>Share % (2004 prices)</th>
<th>real growth % pa</th>
<th>contribution to world growth</th>
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<td>China</td>
<td>4.7</td>
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<td>Japan</td>
<td>11.2</td>
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<td>Germany</td>
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<td>1.5</td>
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<td>1.5</td>
<td>2.4</td>
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<td>World</td>
<td>100.0</td>
<td>100.0</td>
<td>3.0</td>
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<td>Product</td>
<td>China</td>
<td>India</td>
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<tr>
<td>-----------------------------</td>
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<tr>
<td>Rice</td>
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<td>13.8</td>
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<td>Steel Production</td>
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<td>8.5</td>
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<tr>
<td>Coal</td>
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<td>20.6</td>
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<td>Oil</td>
<td>7.4</td>
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<td>25.3</td>
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</table>
Industrial Trends

• Services not sufficient for India
  – IT is 6% of services, employs 3 million
• Keys are labour and middle-class market
• Market for final industrial goods (p.a.)
  $1 trillion in China, $300 billion in India
China

• Labour-intensive manufactures
  – Inland: lower wages but requires infrastructure
  – Developing countries – incl. India
• Higher education – spread thinly
  – Continued demand for imports of sophisticated capital goods
• Intermediates - Lower tariff incentives
  – Close to markets
  – Technological upgrading
India

• Manufacturing success but not all labour intensive:
  – Textiles clothing
  – Pharmaceuticals

• Other potential
  – Steel, white goods, electronics
  – But for home market
  – Requires infrastructure, education, incentives

• Not likely to be ‘disruptive’
Energy Markets and Emissions

• Local and global pollutants
• Energy prices; Ch+Ind are not THE problem
• Trends
• Projections
  – Business-as-Usual (BAU) energy use
  – Alternative more energy efficient paths (ALT)
  – Domestic policy choices and investment to achieve ALT
Projections

• 2050

• IMACLIM-R model
  – long-run growth model
  – learning by doing
  – vintage capital
  – transitional disequilibria,
BAU Scenarios

• Assumed growth rates of GDP
  – India: 5-6%, China 6-7%

• Modest progress on renewables or substitutes for oil, so coal and oil dominate

• Ch-Ind. CO₂ emissions (currently 22% of wld) 50% by 2050

• China 11% of world oil, India 5% by 2050

• Oil price – approx $62 pb 2020;
Higher Growth

• Add 1.25% pa to growth rates
• Big effects by 2050:
  • Emissions +37% (China) +100% (India) grow to 60% of world
    – Because margin comes from (dirty) coal
  • Oil share 14% and 8%,
• Share of coal increases
Efficiency scenarios

• Supply (requires heavy investment):
  – Hydro 20%, nuclear 30% of new, bio to 10%,
  – 15% gain in new industry use of coal,
  – 8% gain in new generation from coal

• Demand: changes by 2050 (little investment)
  – 25% efficiency in production energy use
  – 60% improvement in h’hold equip.
  – 50% increase in car fuel efficiency
Efficiency scenarios outcomes

• Leads to 21% cut in CO₂ emissions by 2050
• Declines in oil (≈2%) and coal (≈8%) prices
• Very small GDP losses
  – In China and India depends on modeling assumption
  – RoW – tiny effects
• High investment costs – about $20 billion each in 2020 - locally manageable - just.
Divergence between Regions

Per-capita GDP of province(state) in 1978(1980) relative to poorest province(state)

Annual growth rate (%) of per-capita state GDP between 1978/1980 and 2004

Indian states • Chinese provinces
Sectoral Growth

The diagram shows the average annual growth rate (%) of different sectors in India and China from 1980-1985 to 2000-2005. The sectors include Agriculture, Industry, and Services. The bars are color-coded to represent the different time periods:
- Brown: 1985-1990
- Blue: 1990-1995
- Teal: 2000-2005

India and China have different growth patterns across sectors and time periods.
Trends in Inequality

![Graph showing trends in inequality in China (income) and India (consumption) from 1978 to 2003. The Gini coefficient of inequality is depicted on the y-axis, and the years 1978, 1983, 1988, 1993, 1998, and 2003 are marked on the x-axis.]
Good and Bad Inequalities

• Good (pro-growth and anti-poverty):
  – incentives for skill, effort, risk, agglomeration
  – Structural - Kuznets

• Bad:
  – poverty traps (exacerbated by high reliance on local finance of services),
  – exclusion especially from
    • human capital formation – facilities and standards,
    • productive locations (cities)
Governance

• Paradox I: ‘does governance matter?’

• Three factors behind late-70s take-off
  – High returns – removal of prohibitions 1970s
  – Improvements to average governance levels in 1970s, reversal of decline in India
  – Better than other poor countries

• Paradox II: widely different systems
  BUT both delivered checks and balances on top level government
Constraints on opportunism

• China – no overt contests, but
  – Favours for cadres (TVEs)
  – Benefits for population (Hhold responsibility, FDI)
  – Balance becoming more difficult

• Credibility to cadres
  – Collective leadership – succession more orderly
  – More objective promotion and succession criteria
  – Expense of implementation

• Balance becoming more difficult
  – Outside options better
  – Popularity or growth shocks could disturb
• India
  – Deterioration over late-1960s and 1970s
    • Populism, nationalisation etc
    • Powerful Congress government 1971
    • Emergency 1975
  – 1977 Janata government
    • showed feasibility of challenge
    • arrested decline
    • restored checks and balances
  – But politics still clientilist – weak incentives
  – Robustness – checks and balances continue
Lessons for Other Countries

• Generic:
  – Investment climate: Infrastructure, human capital
  – Flexibility
  – Improve own energy efficiency

• Specific – can’t be precise
  – Low income – prepare for vacated markets,
  – Middle-income – upgrading via FDI (Asia), local innovation (LAC); skills, design,
  – High-income – don’t panic
Export growth shocks

(A) Index of export growth relative to world (omitting S Korea)

(B) Evolution of Share of World Export

- China
- Germany
- Japan
- South Korea
- Taiwan
## Growth of Exports (G&S) %

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</table>
Increase in oil use, 2001-2005

Increase of crude oil demand relative to 1Q '01 (mbd)

- China
- India
- Other non-OECD
- OECD
India Energy Use and GDP