Human Capital Development & Management in Economic Growth in China

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Economic Growth in China

- “Enormous Success” (Stiglitz, 1999)
- A “Development Miracle” (Todaro & Smith, 2006)
- China’s contribution to the “Millennium Development Goals” (e.g. Eradication of extreme poverty and hunger. World Bank, 2007)

<table>
<thead>
<tr>
<th>Year</th>
<th>Shanghai</th>
<th>Shenzhen</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>3812</td>
<td>835</td>
<td>142</td>
</tr>
<tr>
<td>2000</td>
<td>9279</td>
<td>32800</td>
<td>1930</td>
</tr>
<tr>
<td>2008</td>
<td>26412</td>
<td>89814</td>
<td>22168</td>
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</table>

Table 1. Economic Growth in China, 1990-2008: GDP per capita (Yuan)

Economic Growth in China

- Correspondence with education growth in the same development period!
- Any connection with Human Capital?
- Its development & management?

<table>
<thead>
<tr>
<th>Year</th>
<th>Shanghai</th>
<th>Shenzhen</th>
<th>China</th>
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<tbody>
<tr>
<td>1982</td>
<td>24</td>
<td>0.8</td>
<td>0.6</td>
</tr>
<tr>
<td>1990</td>
<td>30</td>
<td>4.5</td>
<td>1.4</td>
</tr>
<tr>
<td>2000</td>
<td>70</td>
<td>8.1</td>
<td>3.6</td>
</tr>
<tr>
<td>2005</td>
<td>120</td>
<td>12.7</td>
<td>5.2</td>
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</tbody>
</table>

Table 2. Population with Senior Secondary or above Education (per 100)

Table 3. Population with University or Above Education (per 100)
Economic Growth

- Traditional Economic Growth Theory:
  - Output = f (Labor, Capital, Land)
  - Economic Growth mainly depends on:
    - Labor input (number of workers)
    - Capital input (machines, buildings, … & land)
- Two Problems:
  - From empirical observations on the Growth Rates:
    - 1. “Non-converging” notwithstanding diminishing returns to labor & capital inputs separately
    - 2. “Unexplained residual” in the growth function
- Education, Technology & Growth
  - The New Growth Theories (endogenous growth)
    - Technology change is the most important
    - Technology change & improvement in production depend on the technology level of the economy at large
    - “Technology begets Technology” & “Education begets Education”
  - Education and Technology Change
    - R&D, research, invention & innovation
    - Leadership: adoption, assimilation & improvement
    - Absorptive capacity: adaptation & adjustment (ability to learn & willingness to accept new things)
  - Human capital and its management in China

Explanation Attempts

- Why no “convergence” in economic growth between the developed & developing countries?
  - Growth rates in the developed countries remain high and continue to lead…
  - Because of education increase and technology change
- What causes for the huge unexplained growth in “the residual of the ignorance”?
  - Technology & growth interactions
  - Human capital (education & skill level: quality of labor)

What is Human Capital? (Schultz, 1961)

- Human Capital
  - Skills, knowledge & human capacity: general & specific skills (G. Becker)
  - Ability to deal with disequilibria: allocation of resource (T. Schultz)
  - Ability to deal with change: workplace competencies (H. Levin)
- Investment in Human Capital (HC) (Schultz, 1961)
  
  | Ability: | Education & training to enhance skills & knowledge |
  | Health: | Better food & living condition to improve capacity |
  | Application: | Migration & employment for more productive life |
  - Development & management of HC

Developing & Managing Human Capital in China:

1. Provision of Education & Training

- Basic general education for whole population
  - Compulsory education: years & enrollment rates
  - Finance & quality of basic education: adequate & hi-minimum level
- University education & Research capacity
  - State support: research, scholarship, & the needy
  - Private investment: the incentive system
- Adult & continuing education
  - Adult literacy
  - Adjustment to change, modernity & the “creative destruction”

Table 4. Average Education Level in China, 1980-2008 (Year)

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<tbody>
<tr>
<td>Shanghai</td>
<td>5.20</td>
<td>6.30</td>
<td>7.60</td>
<td>8.50</td>
</tr>
<tr>
<td>Shanghai</td>
<td>5.50</td>
<td>6.70</td>
<td>8.96</td>
<td>10.17</td>
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<tr>
<td>China</td>
<td>5.20</td>
<td>6.50</td>
<td>7.80</td>
<td>8.80</td>
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Attempts
Developing & Managing Human Capital in China:

2. Improvement in Health Conditions

- Food: consumption & healthy diet
- Sport & Exercise
- Medical expenditures
- Infant mortality rate & “Head-Start” support
  - For age-5 & below, proxy for child health
- Maternal mortality rate
  - Proxy for general community health
Developing & Managing Human Capital in China:

3. Liberalization in Migration & Employment

- Liberalization in internal migration
  - Residence policy: Special Economic Zone & other cities
  - Assistance to the migrant/ temporary population
    e.g. Education for children of the “migrant workers” (A. Lewis)
- Liberalization in employment
  - Factory workers from agricultural sector: structural change in economic growth (A. Lewis)
  - Higher education for mobility & residence to major cities & SEZs
- Adult education for factory workers

Effects on Economic Growth

- Enormous Success & Development Miracle!
  -> Contribution of human capital
- China’s major successes in managing HC:
  - Explored and found evidence in:
    1. Education development & ability enhancement
    2. Health improvement
    3. Migration & employment liberalization

Table 10. Enrollment in Adult Higher Education (1980 = 1)

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<tbody>
<tr>
<td>Shanghai</td>
<td>0.55</td>
<td>6.89</td>
<td>10.40</td>
<td>25.16</td>
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<tr>
<td>Shenzhen</td>
<td>0.07</td>
<td>1.14</td>
<td>2.45</td>
<td>6.25</td>
</tr>
<tr>
<td>China</td>
<td>0.45</td>
<td>1.00</td>
<td>2.76</td>
<td>7.35</td>
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Managing Human Capital in China

- Human Capital Development & Management for Economic Growth in China

  - What more can be done?
    1. Addressing disparity in quantity & quality of basic general education
      (e.g. IT penetration with the “Sesame Street”; Education development in the Western provinces; …)
    2. Continuous improvement of child health
      (e.g. The “Milk-Program”; Free-lunch in the “Head-Start” program for the disadvantaged; …)
    3. From migration of workers to “migration of factories”
      (e.g. Development & employment for farmers in the under-developed areas; Farmland reform; Assisting industrial development in the Western provinces; …)

Thank You!