

Human Capital Development & Management in Economic Growth in China

Chung, Yue Ping
The Chinese University of Hong Kong

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Economic Growth in China

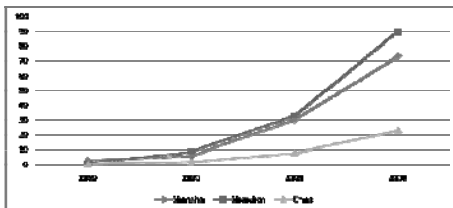
- “Enormous Success” (Stiglitz, 1999)
- A “Development Miracle” (Todaro & Smith, 2006)
- China’s contribution to the “Millennium Development Goals” (e.g. Eradication of extreme poverty and hunger. World Bank, 2007)

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Table 1. Economic Growth in China, 1980-2008: GDP per capita (Yuan)

	1980	1990	2000	2008
Shanghai	2725	5911	30047	73124
Shenzhen	835	8724	32800	89814
China	463	1644	7858	22640



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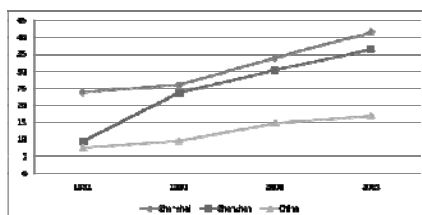
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Economic Growth in China

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

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

	1982	1990	2000	2005
Shanghai	24	26	34	42
Shenzhen	9	24	30	36
China	7	9	15	17

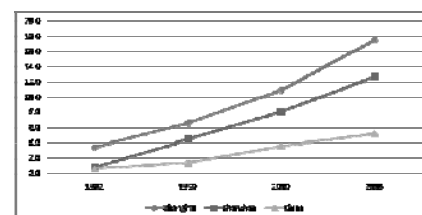


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Table 3. Population with University or Above Education (per 100)

	1982	1990	2000	2005
Shanghai	3.5	6.5	10.9	17.5
Shenzhen	0.8	4.5	8.1	12.7
China	0.6	1.4	3.6	5.2



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Economic Growth

- Traditional Economic Growth Theory:
 - Output = f (Labor, Capital, Land)
 - Economic Growth mainly depends on
 - Labor input (number of workers)
 - Capital input (machines, building, ... & 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

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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)

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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

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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) (Shultz, 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

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Developing & Managing Human Capital in China :

1. Provision of Education & Training

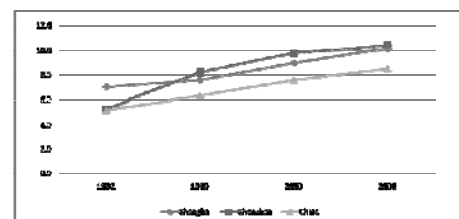
- Basic general education for whole population
 - Compulsory education : years & enrolment rates
 - Finance & quality of basic education: adequate & hi-minimum level (黄斌 Hung Bin)
- University education & Research capacity
 - State support: research, scholarship, & the needy (陆根书 Lu Genzhu)
 - Private investment: the incentive system (占德丽 Zhang SL, 陈雷棠 Chen ST)
- Adult & continuing education
 - Adult literacy
 - Adjustment to change, modernity & the “creative destruction” (杜平 Du Ping, 王蕊 Wang Rui)

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

	1980	1990	2000	2008
Shanghai	7.03	7.60	8.96	10.17
Shenzhen	5.29	8.23	9.77	10.43
China	5.20	6.30	7.60	8.50

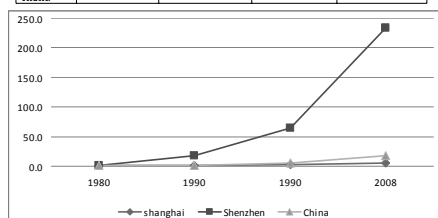


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Table 5. Enrollment in Higher Education (1000)

	1980	1990	2000	2008
Shanghai	74.0	112.8	198.2	413.1
Shenzhen	0.22	4.0	14.1	51.5
China	1143.7	2062.7	5560.9	20210.2



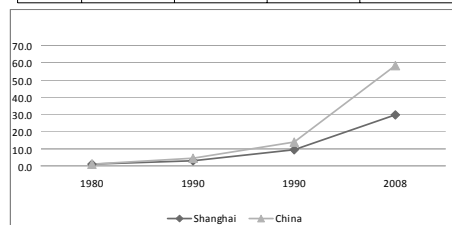
Growth in Higher Education Enrollment (1980 = 1)

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Table 6. Enrollment in Post-graduate Education (1000)

	1980	1990	2000	2008
Shanghai	2.7	8.53	28.58	89.8
Shenzhen	—	0.006	0.112	7.464
China	21.6	93.0	301.2	1283.0



Growth in Postgraduate Enrollment (1980=1 for Shanghai & China; 1990=1 for Shenzhen)

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Developing & Managing Human Capital in China :

2. Improvement in Health Conditions

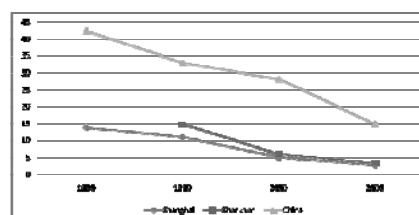
- Food: consumption & healthy diet
- Sport & Exercise
- Medical expenditures
- Infant mortality rate & “Head-Start” support
 - For age-5 & below, proxy for child health
- Maternal mortality rate
 - Proxy for general community health

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Table 7. Infant Mortality Rate (per 1,000)

	1980	1990	2000	2008
Shanghai	13.78	10.95	5.05	2.96
Shenzhen	—	14.80	5.99	3.43
China	42.50	32.89	28.38	14.90

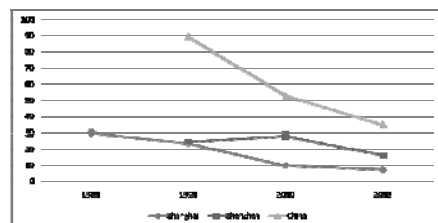


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Table 8. Maternity Mortality Rate (per 100,000)

	1980	1990	2000	2008
Shanghai	30.12	23.76	9.61	6.91
Shenzhen	—	24.70	28.36	16.16
China	—	88.90	53.00	34.20

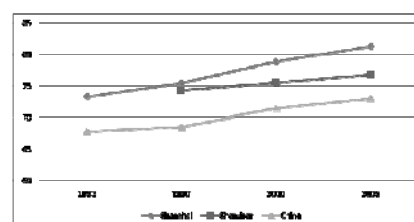


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Table 9. Life Expectancy (year)

	1980	1990	2000	2008
Shanghai	73.33	75.46	78.77	81.28
Shenzhen	—	74.32	75.49	76.75
China	67.88	68.55	71.4	73.00



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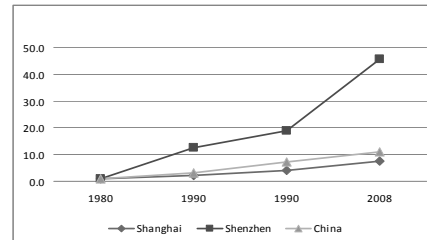
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3. Liberalization in Migration & Employment

- 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” (雷方鹏 Lei 方)
- 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 (肖今 Xiao Jin)

Table 10. Enrollment in Adult Higher Education (1000)

	1980	1990	2000	2008
Shanghai	28.2	60.9	114.9	213.8
Shenzhen	0.55	6.89	10.40	25.16
China	497.5	1561.2	3536.4	5482.9



Growth in Adult Higher Education (1980 = 1)

Managing Human Capital in China

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

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 !