

CHINA'S "GREAT LEAP" IN HIGHER EDUCATION

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Executive Summary

1. Enrolment in China's higher education has expanded rapidly since 1999. In 1995, only 5% in the age group 18-22 had access to higher education, putting China in the same rank as Bangladesh, Botswana and Cameroon; in 2007, the ratio increased to 23%.
2. The pace of expansion was unprecedented. Yearly tertiary student enrolment did not reach one million until 1997; a decade later it exceeded 5.5 million. There was an increase of about half a million every year from 1999 to 2006.
3. Thanks to the unprecedented expansion, China is now in the stage of mass higher education. With more than 20 million students, China has overtaken the U.S. in having the world's largest higher education sector since 2005.
4. Higher education expansion is an important part of the strategy of *revitalizing China through science and education*. Chinese leadership from Deng Xiaoping to Jiang Zemin and Hu Jintao has emphasized the role of higher education in modernizing the country and catching up with the developed countries.
5. The more immediate motivation, however, was economic rather than educational. Higher education expansion was expected to stimulate domestic demand following the 1997 Asian financial crisis, and to mitigate the problem of unemployment due to the large-scale restructuring of state enterprises and streamlining of government agencies.
6. With the support of the government, Chinese universities have tapped into a wider range of resources. Government expenditures have increased dramatically; the growth of non-government sources, particularly tuition fees, is even more remarkable. Bank loans and university towns have emerged as two novel ways to facilitate the quick expansion of Chinese universities.

7. Apart from the enrolment expansion, China is paying more heed to the quality of higher education. In an effort to develop world-class universities, the central government initiated Project 211 in 1995 and Project 985 in 1998 to target a limited number of universities with concentrated resources and favorable policies in hiring faculty, recruiting students and establishing international connections.
8. The long-term effect of the expansion from 1999-2006 will take years to manifest, but universities around the world have already begun to appreciate the revolution in China's higher education. As forming partnership with Chinese universities is becoming a new phenomenon, and foreign students studying in China have outnumbered Chinese students studying abroad, China's profile in the world's higher education will rise to a new level.

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From Elite to Mass Higher Education

- 1.1 With international attention focusing on China's economic rise, the unprecedented expansion of its higher education since 1999 is less well known. But to those who are closely watching China's ongoing transformation, the long-term effect of this less advertised development in China's higher education could be as revolutionary as its economic rise.
- 1.2 The expansion beginning in 1999 has greatly widened access to higher education. The number of new students in the higher education system has increased over ten-fold in the reform era, from about 400,000 in 1978 to 5.5 million in 2006. The increase was much more rapid between 1999 and 2006, with an annual growth rate of 22.2%, compared to 4.4% from 1985 to 1998.
- 1.3 By international standards, China has entered the stage of mass higher education. It reached the benchmark of 15 percent for the age group (18-22) having access to higher education in 2002, well ahead of the targeted year of 2010. In 2007, the enrolment ratio for higher education increased to 23%.¹ With more than 20 million students in higher education institutions, China today boasts of the largest higher education sector in the world, overtaking that of the United States in 2005.

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¹ See <http://edu.chinanews.cn/edu/zcdt/news/2007/09-12/1024818.shtml>.

- 1.4 China's higher education expansion has global parallels. The post-World War II period had seen developing countries expanding higher education enrolment, proliferating higher education institutions, and diversifying financial provisions for higher education development.² But with large-scale investment from both government and non-government sources, China's higher education has been expanding at a much faster pace.
- 1.5 China's higher education is expected to provide a mix of skills for its growing economy and facilitate the transformation from a labor-intensive economy to a knowledge-intensive one. Keenly aware of the importance of higher education for global competitiveness, China has set up programs to build 30 world-class research universities by 2020.
- 1.6 Partly because of the emphasis on improving quality, more and more foreign students are studying in Chinese universities. From 2000 to 2005, the number nearly tripled from 52,000 to 140,000. By comparison, the number of Chinese students studying abroad reached a peak of 125,000 in 2002, and began to decline to 118,500 in 2005, lower than the number of foreign students studying in China.³

Higher Education Prior to 1999

- 2.1 China's higher education has been expanding ever since 1977 when the National College Entrance Examination was reinstituted. Paramount leader Deng Xiaoping emphasized that priority should be given to education if China was to modernize and catch up with developed countries.⁴

² The number of adults in developing countries with some tertiary education increased by a factor of 2.5 between 1975 and 1990; meanwhile traditional research universities have been joined by polytechnics, professional schools, and community colleges, some of which are operated by private providers. See World Bank (2000), *Higher Education in Developing Countries: Peril and Promise*.

³ See http://news.xinhuanet.com/politics/2006-07/06/content_4799653.htm.

⁴ Deng, Xiaoping (1994), *Selected Works of Deng Xiaoping: volume II*. Beijing: the People's Press, p.48.

- 2.2 At that time China's higher education suffered a number of problems, including rigid planning and centralized control, separation of teaching, research and production, duplication of programs in small universities, narrow range of studies, low enrolment rates, and insulation from international universities.
- 2.3 To varying extents these problems persisted throughout the Deng era in part because the government lacked the financial resources to restructure the higher education system. A gap thus emerged between the expanding market economy and the still-secluded higher education. As the less educated blue-collar workers in the private sector earned higher income while the white-collar employees in the state sector got stuck with their low wages, the phenomenon of "reverse brains-brawn wage relativity" (脑体倒挂) led to a heated debate in the early 1990s on whether there was a failure of higher education in China.⁵
- 2.4 In the Deng era, China's effort to reform and expand higher education underwent several phases. From 1978 to 1984, the focus was on reopening higher education institutions, reinstituting merit-based entrance examination, and reintroducing degree programs. There was little change in the structure of higher education, with one system undertaking teaching and another conducting research.
- 2.5 From 1985 to 1992, the government began the first wave of higher education reform in order to provide the mix of skills for economic development. Universities were given new functions as centers of both teaching and research, and new freedom to enroll students outside the state plan if they were self-financed or financed by state-owned enterprises. Up to 1994, enterprise-financed and self-financed students made up nearly 30% of the student body.⁶

⁵ See Wong, John (1994). "The Xia Hai Phenomenon in China." 国际地域研究, Vol. 6, pp.1-9.

⁶ World Bank (1996), *China: Higher Education Reform*, p.3.

- 2.6 A second wave of reform began in 1993, which devolved responsibility for financial provision from ministries to provincial and lower governments, and raised tuition fees across the board for state-sponsored, enterprise-financed and self-financed students. The state also loosened its grip on the founding and operation of higher education institutions. Another change was a shift from a unified national job assignment system to a two-way selection system where students were allowed to select employers.
- 2.7 While China made substantial progress in universalizing primary education in the 1980s and 1990s, from an international perspective, its higher education expansion was much more limited. In 1995, the gross tertiary enrolment ratio was as low as 5%, putting China in the same rank as Bangladesh (6%), Botswana (5%), and Cameroon (4%). Even India had a higher enrolment ratio of 7%.
- 2.8 Compared with other East Asian economies, China had a large gap to close off as of 1995. South Korea (52%) and Japan (41%) were far ahead of China, so were Singapore (34%) and Hong Kong (26%). Up to the mid-1990s, China's effort to catch up with industrial societies in educational development was seriously hindered by its slow higher education expansion.⁷
- 2.9 Part of the problem stemmed from the low level of public spending on education. While public expenditure on education as a percentage of total government expenditure was on the rise, it did not change much as a percentage of GDP and remained as low as 2.2% in 1994, lower than the average for least-developed countries (2.8%), developing countries (4.1%) and developed countries (5.3%).⁸
- 2.10 The slow pace of expansion was also due to the high level of public spending per student in higher education. A World Bank study found that in 1990,

⁷ See World Bank (2000), *Higher Education in Developing Countries: Peril and Promise*, pp.104-107.

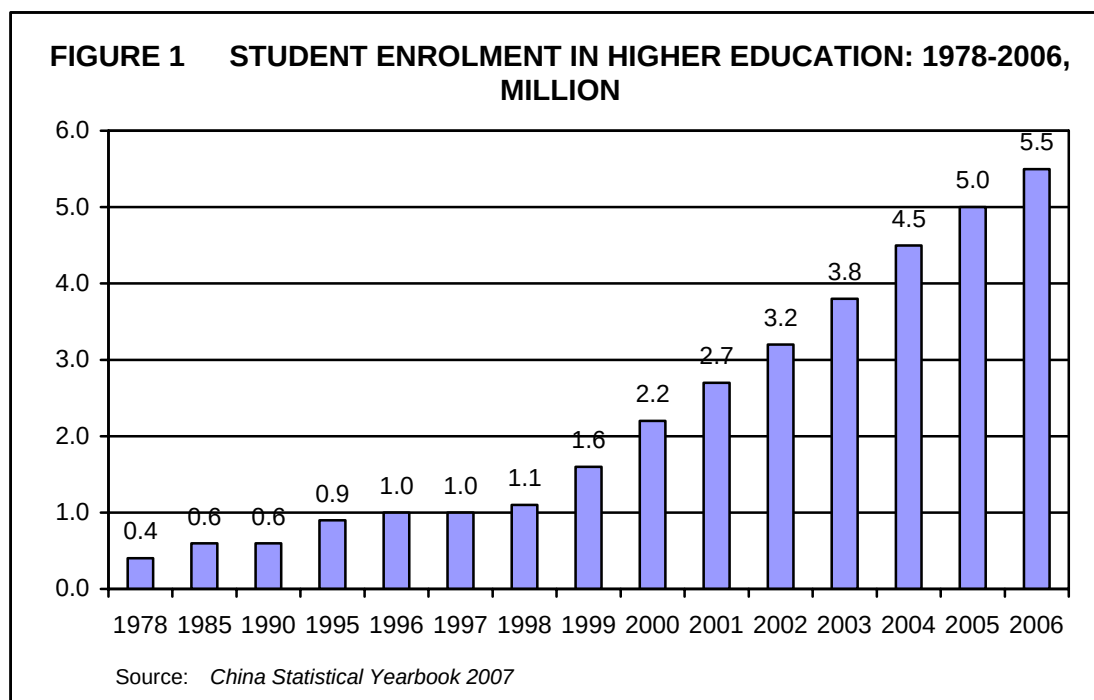
⁸ World Bank (1996), *China: Higher Education Reform*, p.XVI.

public spending per student was 193% of GDP per capita in China, substantially higher than the 1990 average of 98% for East Asian countries.⁹ The high unit cost made it extremely difficult for China to rapidly expand its higher education enrolment.

Higher Education Expansion Since 1999

- 3.1 By the end of the 20th century, the demand for higher education was on the rise as better educated job seekers were able to find better paying jobs. The constraint on higher education expansion came more from the supply side. Against this backdrop, China decided to accelerate higher education expansion. In 1999, the State Council approved *The Plan of Revitalizing Education in the 21 Century* proposed by the Ministry of Education. The Plan set a target for China to reach the tertiary enrolment ratio of 15% by 2010.
- 3.2 The Plan pushed China's higher education into a booming stage. The number of new students increased 50% in the first year, from about 1.1 million in 1998 to 1.6 million in 1999. In subsequent years up to 2006, on average there was an increase of about half a million students every year. As a result, about 5.5 million new students were enrolled in higher education in 2006. The dramatic pace allowed China to increase its tertiary student enrolment ratio from below 10% to 23%.

⁹ *Ibid*, pp. XVII.



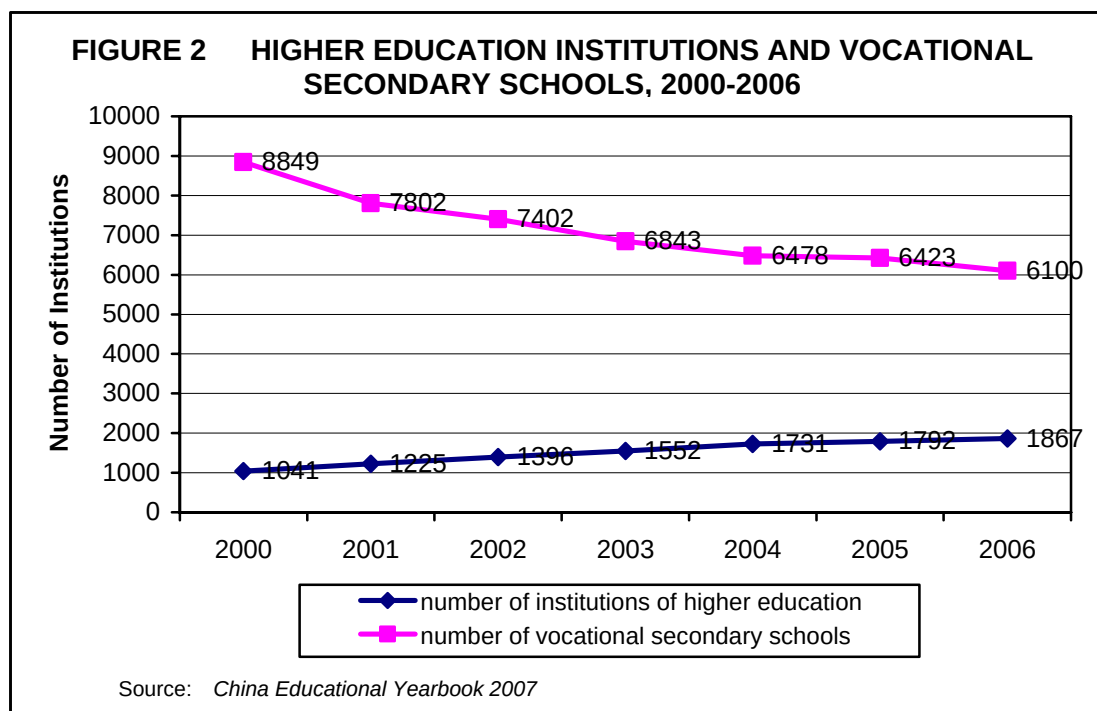
- 3.3 China's post-Deng leaders—Jiang Zemin and Hu Jintao—also emphasized the importance of science/technology and education in modernizing China and catching up with the developed countries. The booming higher education since 1999 was made possible in part because China adopted *the strategy of revitalizing China through science and education* under Jiang Zemin, which stressed the role of higher education and knowledge-centered technology in promoting economic development.
- 3.4 The strategy of revitalizing China through science and education provided a foundation for long-term higher education expansion; for the period of 1999-2006, however, higher education expanded out of an immediate concern that had little to do with the long-term plan of revitalization.
- 3.5 The trigger was the 1997 Asian financial crisis, which slowed down China's economy in the second half of 1997. Due to sluggish external and internal demand, the situation did not improve in 1998 despite the government's pro-active policy. Rising urban unemployment from the restructuring of state enterprises raised another concern. Over three million high school graduates

could only worsen the problem if most of them were heading toward the job market instead of higher education.

- 3.6 As a partial solution, some scholars, including Tang Min from the Asian Development Bank and Hu Angang from Tsinghua University, proposed to expand higher education. In early 1999, a plan was formed to increase enrolment in higher education by 20%. A few months later, policymakers felt that an increase of 20% was not enough, and raised the target to 47%.¹⁰
- 3.7 The rapid expansion of student enrolment was closely associated with the growing number of regular higher education institutions¹¹ from 2000 to 2006, which was the second period of high growth for higher education institutions. The first period was between 1978 and 1985—from 598 to 1,016 institutions—when higher education was recovering from the turmoil of the Cultural Revolution. As a substantial number of smaller universities merged with larger institutions over the last few years, the increase was even more dramatic for the second period.

¹⁰ Bai, Limin (2006), “Graduate Unemployment: Dilemmas and Challenges in China’s Move to Mass Higher Education.” *The China Quarterly*, Vol.185, pp.128-144.

¹¹ This category excludes adult higher educational institutions (成人高等教育), private higher education institutions (民办高等教育机构), and independent colleges (独立学院). What constitutes an independent college will be explained in the coming section.



3.8 Despite criticism of too much emphasis on engineering and science, engineering still attracts the largest number of new students. In 2006, among 5.5 million new students, 2 million or 36.5% chose to study engineering, followed by social sciences (28.2%) and humanities (21.4%) (see Appendix 1). In contrast, science was not a hot choice, accounting for only 5.2% of enrolment. In the period of expansion, the percentage of students choosing engineering remained stable. The same was true of humanities and medicine. But social sciences gained substantially from 19.1% in 1998 to 28.2% in 2006 while sciences and agriculture shrank by half (from 11.1% to 5.2% and 3.5% to 1.8% respectively). This change reflected the expansion of law and managerial professions and the relative decline of agriculture in China.

3.9 China's growing economy has made large-scale investment possible for the expanding higher education, from both government and non-government sources. In absolute terms, total expenditure on higher education increased six-fold from 1997 to 2005. In relative terms, total expenditure on higher education nearly doubled its share in total expenditure on education from 17.2% in 1997 to 31.6% in 2005, and more than doubled as a percentage of GDP.

TABLE 1 TOTAL SPENDING ON HIGHER EDUCATION: 1997-2005

Year	Total spending on higher education (billion yuan)	% of total spending on all levels of education	% of GDP
1997	43.6	17.2	0.6
1998	59.8	20.3	0.7
1999	76.5	22.8	0.8
2000	98.3	25.5	1.0
2001	124.8	26.9	1.1
2002	158.3	28.9	1.3
2003	187.4	30.2	1.4
2004	225.8	31.2	1.4
2005	265.8	31.6	1.5

Source: *China Statistical Yearbook*, 1999-2007.

Note: Total spending on higher education includes government expenditures, tuition fees, investments by organizations and individuals running schools; donations and fundraising for schools

3.10 Diversifying sources of funding has been a definitive feature of China's higher education expansion. Government spending remains important, but innovative and entrepreneurial ways to finance the unprecedented expansion have emerged, from a wide range of sources that include private providers, bank loans, social donations, and tuition fees.

Government spending

3.11 Government spending on higher education nearly tripled from 1998 to 2005, thanks to the booming economy and the rapidly increasing government revenue. It accounted for an increasingly higher share of government spending on education. In sharp contrast to the 1980s and the early 1990s when the government was financially constrained to expand higher education, China was in a much better position to finance higher education in the new millennium. Despite the rapidly growing government spending on higher education, as a percentage of GDP or a percentage of total government expenditure, there was little change from 1998. From a comparative perspective, the government spent more on higher education—in relative terms—in Hong Kong and Singapore than Japan and South Korea, with China

in between, suggesting that funding for higher education is more diversified in Japan and South Korea.

TABLE 2 GOVERNMENT EXPENDITURES ON CHINA'S HIGHER EDUCATION: 1998-2005

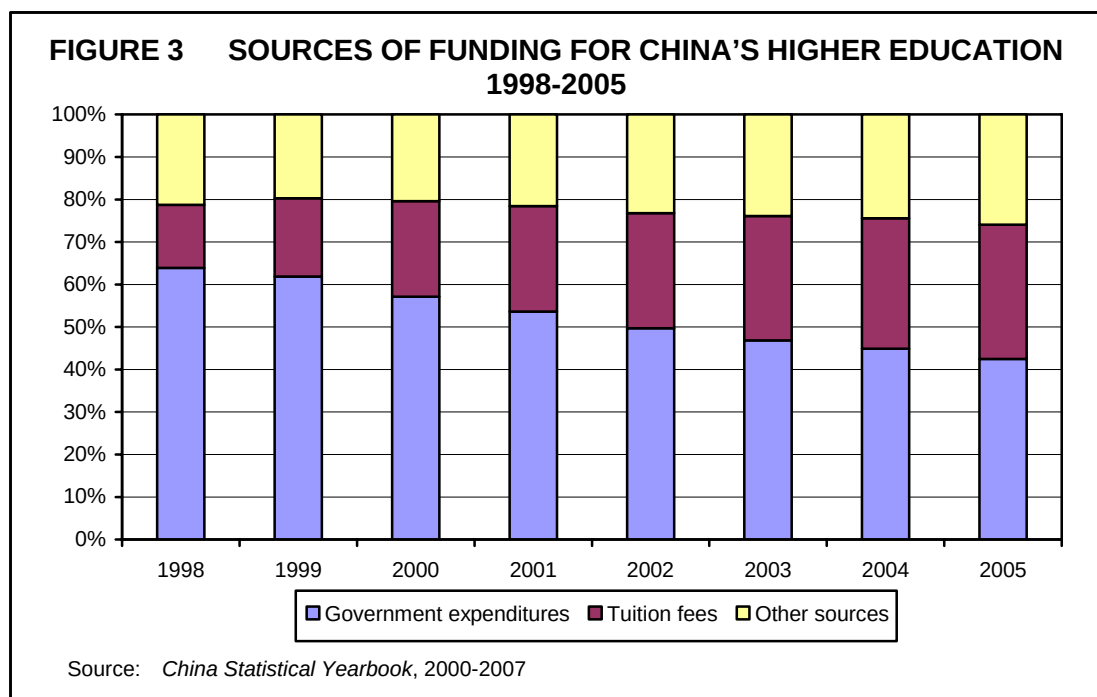
Year	Government spending on higher education			
	Amount (billion yuan)	% of government spending on all levels of education	% of GDP	% of total government expenditure
China				
1998	38.8	18.9	0.5	3.6
1999	47.3	20.7	0.5	3.6
2000	56.4	22.0	0.6	3.5
2001	66.6	21.8	0.6	3.5
2002	78.8	22.6	0.6	3.6
2003	87.7	22.8	0.6	3.6
2004	101.0	22.6	0.6	3.5
2005	112.9	21.9	0.6	3.3
For comparison				
Japan (2002-05)	----	14.0	0.5	1.4
Korea (2002-05)	----	13.0	0.6	2.4
Hong Kong (2002-05)	----	32.0	1.3	7.4
Singapore (2002-05)	----	23.0	0.9	--

Source: *China Statistical Yearbook*, 2000-2007. Data for Japan, Korea, Hong Kong and Singapore refer to the most recent year available during 2002-05; see *Human Development Report* 2007/2008.

Tuition fees

3.12 While government spending on higher education has increased rapidly, the growth of non-government resources is even more remarkable, resulting in the declining share of government spending in total expenditure on higher education. In 1998, the government contributed 64% of the total expenditure on higher education; in 2005, its contribution dropped to 42.5% (see Appendix 2). In contrast, tuition fees increased more than 17 percentage points to 31.5%. The rapid expansion of enrolment and the rising tuition fees have made tuition fees the second largest source of funding for higher education after government spending.¹²

¹² Official statistics categorize funding into three types of non-government education funds: investments by organizations and individuals running schools; donations and fundraising for schools; and tuition fees.



Bank Loans

3.13 Elsewhere bank loans are rarely used for financing higher education expansion. But in China, banks have been deeply involved in higher education since 1999. In many cases local governments took the initiative to encourage cooperation between banks and public universities (银校合作), giving rise to the impression that the government would eventually come to their rescue if universities are to default on payment. Relentless lending thus occurred, amounting to an estimated 150-200 billion yuan as of 2006, substantially more than what the government spent on higher education in any single year.¹³

Private Higher Education Institutions

3.14 The government has loosened its grip on the founding of private/non-state universities by individuals or social organizations without government financing. There are two types of private/non-state university: *sili daxue* (private university) if the university is established by individuals, and *sili*

¹³ Ru Xin, Lu Xueyi & Li Peilin. (2005). *Analysis and Forecast on China's Social Development: 2006*. Beijing: Social Sciences Academic Press.

minban daxue (private people-run university) founded by social organizations. Most fall into the second category. While most are not officially recognized, 295 qualified for accreditation by the Ministry of Education as of May 2007.¹⁴

Independent Colleges (独立学院)

3.15 Since 1999 many public universities have been allowed to establish independent colleges, which are operated like private higher education institutions.¹⁵ An independent college is founded by a public university and/or other entities (such as municipal government, and public or private companies). Independent colleges often share faculty and facilities such as library with their parent universities, but have to pay for using parent universities' resources. Unlike their parent universities, independent colleges are not entitled to government appropriation, therefore they are classified as non-state/private higher education institutions in official statistics. To survive, they charge higher tuition fees while lowering admission requirements.¹⁶ Independent colleges have developed rapidly since 1999, totaling 295 as of 2005.¹⁷ The enrolment size of independent colleges rivals that of private universities. Independent colleges enrolled 443,400 students in 2005, compared to 436,100 for private universities.¹⁸

¹⁴ For the full list of these private higher educational institutions, see <http://www.moe.edu.cn/edoas/website18/level3.jsp?tablename=322&infoid=28372>

¹⁵ The first independent college in China, City College of Zhejiang University, was founded by Hangzhou Municipal Government, Zhejiang University and Zhejiang Telecom Industry Group in 1999.

¹⁶ In most cases, independent colleges' annual tuition fee is around 15,000 RMB, triple that in public universities.

¹⁷ For the full list of these independent college, see <http://www.moe.edu.cn/edoas/website18/level3.jsp?tablename=577&infoid=7067>

¹⁸ See *Educational Statistical Yearbook of China 2005*, p.4.

University Town (大学城)

3.16 University towns represent another innovative yet controversial way to expand higher education in China. Occupying a large site area, university towns provide new space for established universities to expand and for new universities to jump start. Promoted by provincial or city governments and supported by bank loans, university towns are able to spread quickly ever since their first appearance in 2000, with over 70 university towns established or being built nationwide.¹⁹

BOX 1 CHINA'S UNIVERSITY TOWNS

In Europe there has been a long history of towns growing around universities. In recent decades, interest shifted to university towns as the center of innovation and entrepreneurship where university graduates established high-tech companies. The most famous case is Stanford University, located at the heart of Silicon Valley.

University towns are a new phenomenon in China. Unlike the usual sequence in which the university precedes the town, China's university towns are built on a new site for the purpose of providing space for universities to expand or relocate. In China as in elsewhere, university towns are expected to feature a clustering of education and research institutions, a mix of housing, shops, banks, entertainment and other supporting facilities, and a high degree of facility sharing. But far from fostering interaction, innovation, entrepreneurship and sharing, Chinese universities often maintain their organizational boundary within the university town.

Provincial and city governments have been highly supportive of building university towns. They provide land at very low prices and underwrite bank loans. But exactly because of strong government promotion, many university towns have over-expanded, characterized by overinvestment and overcapacity. For instance, Nanjing—the capital city of Jiangsu province—planned to build three university towns, large enough for 600 thousand students to study and live. However, on average only 200 thousand high school students sit for the national college entrance examination in Jiangsu every year, with 25% eventually going to universities in other provinces. This means that these three university towns would be large enough for all Jiangsu students. The university town in Guangzhou, claimed as the largest in China, invested more than 30 billion yuan (nearly 4 billion US dollars) on a site of 43.3 square kilometers. Bank loans were the main source of investment, but it is clear by now that universities fail to generate enough revenue to pay those bank loans. Even in China's west where the economy is much less developed, there are large university towns under construction. The university town in Kunming, the capital city of Yunnan province, is proposed to be as large as half of the city. The two university towns in Chongqing city are even larger. They are double the size of Kunming university town.²⁰ In the years to come, overinvestment and overcapacity will continue to plague university towns.

¹⁹ Zhang Li. (2006). University Town is "Policy Mistake" or "Value Deviation from Construction and Management". *Modern Urban Study*, Vol. 9: 72-80.

²⁰ Chen, Xiangyuan and Zhu Jingjing. (2006). *Dongfang daxuecheng zhaiwu heidong* (Black hole of the debt of the Eastern University Town), pp.456-464 in Zhan Jiang and Zhu Gui (eds.) *Zhongguo yulun jiandu niandu baogao 2003-2004* (The annual report on China's watchdog journalism 2003-2004), Vol.2, Beijing: *Shehui kexue wenxian chubanshe*.

Aiming at Excellence

- 4.1 Expansion of student enrolment is only part of China's catch-up effort. A twin goal is to improve the quality of higher education, create a number of world-class universities, and ensure that China will not lose out in the transition to the knowledge-based economy where high technology drives economic growth and wealth creation.
- 4.2 Chinese leaders strongly believe in the importance of developing world-class higher education for ensuring China's global competitiveness and innovation capability. According to the *Academic Ranking of World Universities* released by Shanghai Jiaotong University, China's definition of world-class universities mainly focuses on the quantity and quality of research output, especially in the fields of science and technology which have direct impacts on economic development.²¹
- 4.3 In an effort to develop world-class universities, the central government initiated Project 211 (211 工程) in 1995 and Project 985 (985 工程) in 1998 to target a limited number of universities with concentrated resources and favorable policies in hiring faculty, recruiting students and establishing international connections.

²¹ See <http://ed.sjtu.edu.cn/ranking.htm>.

BOX 2 DEVELOPING WORLD-CLASS UNIVERSITIES

To develop high quality research universities in China, the government initiated two important projects in the 1990s: Project 211 and Project 985. Project 211 has been carried out since 1995, with around 100 universities on the list.²² From 1995 to 2000, different levels of government had invested approximately US\$20 billion on these universities to improve their facilities and curricula.²³ Out of the total 602 specializations which received the government's 211 fund, 119 (20%) are in humanities and social sciences, while the other 483 (80%) are in engineering sciences, fundamental sciences and other sciences.

After 2000, Project 211 ceased to invest in most listed universities. In 1998, the government initiated another important development plan, Project 985. Thirty-eight universities selected from Project 211 universities received money from this project.²⁴ For example, two top universities in China, Peking University and Tsinghua University, each received US\$ 225 million from 1999 to 2003. Meanwhile, many Project 985 universities are also given more freedom in recruiting students and opening new programs. Project 985 particularly encourages universities to establish connections with foreign universities through holding international conferences, attracting world-renowned scholars, and founding joint-degree or cooperative research programs with foreign top universities and institutes.

Moreover, the Chinese government has initiated a series of programs to attract and nurture talents for higher education institutions. One of the most famous programs is *Changjiang Scholars Program* (长江学者计划) of the Ministry of Education. From 1998 to 2006, around 800 renowned professors had been recruited in Chinese higher education institutions under this program, and 94% of them had international work or study experience.²⁵

In another effort to cultivate top-level talents, the Ministry of Education and the China Scholarship Council (国家留学基金委员会) launched a five-year plan in 2007 to send about 5000 students a year to the world's best universities. Candidates are chosen from the best graduate students from the top 49 universities, and priority is given to those studying energy and natural resources, environment, agriculture, manufacturing, information technology, biology and new materials.²⁶

4.4 In sum, in the past decade China has expanded its higher education at an unprecedented pace and completed the transition from elite to mass higher education. But the rapid expansion has given rise to a number of strains and problems, prompting the government to slow down the expansion from 2006 and shift the priority from the expansion of enrolment to the improvement of quality. In the years to come, China will face the challenge of consolidating its higher education.

²² For the full list of 211 project's universities, see <http://www.eol.cn/article/20030911/3090736.shtml>.

²³ See <http://www.moe.edu.cn/edoas/website18/level3.jsp?tablename=724&infoid=5610>.

²⁴ For the full list of 985 project's universities, see <http://edu.people.com.cn/GB/8216/31559/31603/4363859.html>.

²⁵ See <http://www.cksp.edu.cn/news/16/16-20070319-136.htm>.

²⁶ http://english.peopledaily.com.cn/200706/05/eng20070605_380921.html

APPENDIX 1 NEW UNDERGRADUATES BY FIELD OF STUDY, SELECTED YEARS FROM 1978-2006

Year	Total Enrolment	Humanities		Social Sciences		Engineering		Medicine		Sciences		Agriculture	
		Enrolment	% of Total Enrolment	Enrolment	% of Total Enrolment	Enrolment	% of Total Enrolment	Enrolment	% of Total Enrolment	Enrolment	% of Total Enrolment	Enrolment	% of Total Enrolment
1978	401,521	42,822	10.7	46,880	11.7	----	----	----	----	----	----	----	----
1985	619,235	83,822	13.5	128,296	20.7	----	----	----	----	----	----	----	----
1990	608,850	60,787	10.0	128,880	21.2	----	----	----	----	----	----	----	----
1995	925,940	190,264	19.7	184,633	19.9	352,463	38.1	65,695	7.1	100,295	10.8	32,590	3.5
2000	2,206,072	474,527	21.5	478,061	21.7	832,124	37.7	149,982	6.8	202,466	9.2	68,966	3.1
2005	5,044,581	1,091,289	21.6	1,437,968	28.5	1,809,426	35.9	338,563	6.7	270,147	5.4	97,188	1.9
2006	5,460,530	1,167,717	21.4	1,538,593	28.2	1,992,426	36.5	380,083	7.0	281,691	5.2	281,691	1.8

Source: *China Statistical Yearbook 1990-2007*.

Notes: Humanities include philosophy, education, literature and history; social sciences include economics, management and law. Engineering, medicine, science and agriculture combined to account for 311,819 new undergraduates in 1978 (77.7% of total enrolment), 407,117 (65.7%) in 1985, and 419,183 (68.8%) in 1990.

**APPENDIX 2 SOURCES OF EDUCATIONAL FUNDING FOR
HIGHER EDUCATION: 1999-2005, BILLION YUAN**

Year	Total expenditure	Government spending		Tuition fees		Other sources	
		amount	% of total expenditure	amount	% of total expenditure	amount	% of total expenditure
1998	59.8	38.8	64.2	8.5	14.3	12.5	21.5
1999	76.5	47.3	61.8	13.8	18.0	15.4	20.2
2000	98.3	56.4	57.3	21.7	22.0	20.2	20.7
2001	124.8	66.6	53.4	31.2	25.0	27.0	21.6
2002	158.3	78.8	49.7	42.6	26.9	36.9	23.4
2003	187.4	87.7	46.8	54.9	29.3	44.8	23.9
2004	225.8	101.0	44.7	69.4	30.7	55.4	24.6
2005	265.8	112.9	42.5	83.8	31.5	69.1	26.0

Source: *China Statistical Yearbook, 2000-2007.*