

Chapter 7

Institutional Mergers in Chinese Higher Education

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7.1 Introduction

China is an old civilization with extraordinarily rich traditions in higher learning. Chinese higher education institutions are now trying to assert themselves into the international system just as China is emerging as a major player in world affairs. Well integrated with the international community, the Chinese system has become one of the most influential in the world, in terms of its population size of students and teachers, the ever-growing academic publications it produces annually, and the large numbers of students it sends to and attracts from other countries.

The process of higher education institutional amalgamation in China was launched over a decade ago in 1992 and has been implemented in domestic and international contexts, which have been undergoing fundamental change. The influences of the process are evident at national, local and institutional levels. Overall, the restructuring was aimed at improving the structure, distribution, quality and efficiency of Chinese higher education. Five major restructuring strategies were promoted, namely joint construction, cooperative administration of institutions, institutional amalgamation, transfer of jurisdiction, and participation of other social sectors in institutional operation. The restructuring which was unprecedented in terms of its scale, lasted for roughly a decade, with various features characterising its different stages. The different waves of institutional amalgamation highlight the gradual extension and upgrading of the process from provincial government into a national drive culminating in an effort to produce world-class universities.

Despite the ongoing criticism relating to the effects of implementation and limited adaptation to context, the university merger process in China has produced significant results in transforming the higher education system and benchmarking it at international level. It effectively dismantled the separation by regions, sectors

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and professions, established a more coherent higher education governance system with provincial governments playing an important role.

7.2 The Historical Context of the Chinese Higher Education System

The ancient Chinese education system was established during the Yu period (2257–2208 BC). China's early institutions of higher learning appeared in the Eastern Zhou Dynasty (771–221 BC) (Hayhoe 1989), predating the development of higher learning institutions in the West by centuries. The famous Jixia Academy was established 20 years before the Platonic Academy. The term “university” is used in the Chinese literature to denote an entirely different constellation of scholarly institutions in China. There was no institution in Chinese tradition that could be called a university throughout China's history until the late nineteenth century. The imperial examinations and the academies were key elements of ancient Chinese higher learning (Hayhoe 1996).

With the global diffusion of the European model of the university, a modern higher education system was only established in China in the nineteenth century, with the first modern higher education institution, Peiyang University, set up in 1895. By 1931 a range of institutions had been established, namely 39 universities (13 national, 12 provincial and 14 private), 17 colleges (2 national, 6 provincial and 9 private), 23 professional schools (3 national, 15 provincial and 5 private). By 1947, 207 higher institutions had been established, including 55 comprehensive universities. By 1949 when the communist government came to power, 205 universities had been founded (Hayhoe 1989).

Patterned on the Soviet model, the communist government launched in 1952 a nationwide transformation of colleges and university departments to ensure that they directly served the nation's manpower needs. It involved both a geographical rationalisation of higher education provision and a complete rethinking of curricular patterns and institutional identities. After the reorganisation, all the universities and colleges became state-run and narrowly specialised according to the manpower planning needs deriving from the central planned economy. A hierarchical, centralised system was established, characterised by the direct government leadership in implementing the unitary instructional plans, course syllabi and textbooks in all the colleges and universities throughout the country (Agelasto and Adamson 1998).

From a disciplinary perspective, the number of comprehensive universities was reduced from 49 to 13, and this was accompanied by a severe reduction of university places in the fields of the humanities and social sciences which decreased dramatically from 33.1 to 14.9 % (Ouyang 2004). The adjustment facilitated the construction of industry and the development of science and technology, producing a large amount of specialised talents for the economic development of the 1950s. It

also created problems of various sorts. A fundamental feature of the restructuring was to separate the humanities and social sciences from natural and engineering sciences. The majority of higher institutions were highly specialised, with little room for interdisciplinary research and this resulted in university graduates being narrowly trained.

Post-1952, China experienced severe political turmoil including the Great Leap Forward (1958–1960) and the Cultural Revolution (1966–1976) and higher education development was greatly affected. The Cultural Revolution was a disaster for the Chinese educational system, leading to the eradication of nearly all formal education for a decade. After 1977, higher education order was gradually restored through a series of reforms. Following a policy of economic rationalism, higher education came to be regarded as an important cornerstone in developing China into a global economic power. Higher education has since experienced the strongest development in its history both quantitatively and qualitatively.

By the new millennium, the Chinese higher education system had grown to be the largest higher education system in the world in terms of scale. In 2010, China had 2,358 regular higher education institutions (1,112 offering Bachelor degree programs and above and 1,246 offering 3/2-year associate degree programs),¹ with a total enrolment of 22.32 million and a gross enrolment rate of 26.5 %. Enrolled postgraduate students totalled 1.54 million, with 1.28 and 0.26 million respectively at Masters and Doctoral levels. Regular higher education institutions employed 1.34 million full-time academic staff members, with a teacher-student ratio of 17.33:1. In 2011, China produced 168,100 (11.1 % of the world's total) S&T papers, second only to the United States. According to the Nature Publishing Index 2012 China, authors based in China contributed 8.5 % of all research papers published in Nature branded journals in 2012, up 35 % from 2011 figures.

7.3 The Contemporary Context

China's higher education institutional merger has been implemented within much altered domestic and international contexts, from agenda-setting all the way to post-merger integration. Contextual influences have been evident and profound at national, local and institutional levels.

¹ China's regular higher education institutions refer to those that admit full-time students based on their performances in the national college entrance examination.

7.3.1 *The Global Context*

The 1990s witnessed increasingly intensified globalisation, with a multiplicity of linkages and interconnections transcending the nation-state, and events, decisions and actions in one part of the world affecting actions in other parts of the world. Time and space were reordered so that authority structures were no longer fixed to territory. Institutional arrangements that had been previously considered national became dis-embedded from their national context and re-embedded in sub-national, supranational or a-territorial contexts (Beerkens 2003). International and transnational forces became highly influential on domestic policies and global policy convergence increased with local policy actors becoming more and more exposed to external ideas. This was evident in the area of higher education, with higher education policy achieving prominence on the agendas of national governments and international organisations alike. While the actual dynamics and pace of change had varied across national systems, the direction of change appeared to be similar.

In the 1990s, the neo-liberal image of globalisation had acquired ascendancy in education thinking and became highly normative, propelled and legitimised by such practices of managerialism as downsizing and state deregulation and privatisation, as if they were a natural and inevitable response to the steering logic of globalisation. The restructuring of higher education worldwide informed by neo-liberal market ideologies transformed the framework of the broader changes in policy and governance, with a strong impact on the manner in which universities are financed and managed (Rizvi 2004). These approaches driven by neo-liberal discourses indicated a trend towards uniformity, demanding a convergence in thinking and an acceptance of similar diagnoses of problems confronting educational systems with widely differing social, political and economic traditions, with unprecedented scope, depth and similarity of changes. National higher education systems had been influenced through a number of normative and rule-creating activities such as global benchmarking/competition, in line with the unequal relations in the global system.

Within such a context, modern states, in domains well beyond higher education, were reconfigured and their governance modes restructured. The way in which the public sector was managed, was undergoing reform. There had been a change in the coordination mode of governance from 'positive' to 'negative' coordination (Scharpf 1994), preventing modern states from being over-burdened by welfare and social/public policy commitments. State governance of higher education was also subject to these trends and changes. In line with marketisation, corporatisation and privatisation, higher education systems also saw a restructuring of institutions. University mergers became a popular measure in response to the demands for greater efficiency and quality education alongside the reality of growing financial stringency. To maximise economies of scale, institutions merged into larger qualitatively stronger academic institutions with better management and use of administrative resources. Such an approach was adopted by a number of countries including the United Kingdom, the United States and Australia (Skodvin 1999).

7.3.2 *The Domestic Context*

As a result of the higher education restructuring in the 1950s, higher education institutions were under the direct jurisdiction of different government agencies in China, namely the Ministry of Education, non-educational central ministries and provincial/municipal authorities. National government assumed responsibility for formulating higher education policies, allocating resources, exercising administrative controls, employing teaching and research staff, developing curricula, choosing textbooks, recruiting students and assigning jobs to university graduates. University operation was tightly controlled by the central government in terms of financing. Centralised provision and management of education led to a shortage of initiatives from local governments and higher education institutions, separating the centre and the locality. This was typical of the so-called *tiao-kuai fenge* administrative system under which an institution is submitted to the administration of both the *tiao* (the Ministry of Education and its provincial and local representatives) and the “*kuai*” (the non-educational ministries, provincial or municipal governments). Such a matrix of fragmentation in higher education governance led to functional duplication, resource wastage, low economy and efficiency in higher education (Mok 2005). Furthermore, as a result of the restructuring in the 1950s, higher education institutions were generally small in scale and covering the same disciplines.²

Since 1978, reforms in higher education have attempted to develop closer links between the higher education sector and the market. With the phasing out of the planned economy and the diminishing role of the state, the government has become increasingly reluctant to continue to subsidise higher education. By the 1980s, calls for regrouping and realigning higher education institutions to resolve problems of fragmentation and duplication were increasingly being heard. Cost recovery measures were thus introduced and higher education became gradually decentralised. Governance reforms were introduced from 1985 when the government issued the *Decision on the Reform of the Educational System* to change the central government’s tight control over institutions so that institutions can build closer links to industry and other sectors and foster their own initiatives and capacity to meet economic and social needs (Guo 1995). As the market gained more prominence in China, especially in the more developed coastal and urban areas, more substantial reform policies were introduced to facilitate structural changes in education. The *Program for Education Reform and Development in China* issued by the central government in 1993 reaffirmed the 1985 Decision’s commitment for the national government to refrain from direct control over education. Instead, government was to act as a facilitator.

Chinese higher education institutions were urged to take the initiative in designing their own teaching plans, selecting textbooks and organising teaching activities, while faculties and/or departments within university also enjoyed greater autonomy

²For instance, disciplinary duplication in the three institutions merged into Guangdong University of Technology was 40, 60 and 40 % (*People’s Daily*, 14 August 2000).

in matters relating to teaching, research, personnel and resource allocation. A move from a state controlled model to a state-supervised model was in the making (Neave and van Vught 1994). Coupled with the strong push towards decentralisation was a strengthened role for provincial governments. The market was also further incorporated into China's higher education system. Against this backdrop, a process of higher education institutional amalgamation was launched in 1992 to make the system more efficient (Yang 2000). Overall, the restructuring was aimed at improving the structure, distribution, quality and efficiency of Chinese higher education. To a certain extent, its origin could be traced back to the restructuring process launched in the 1950s. In 1995, the central government issued *Suggestions on Deepening Higher Education Structural Reform*, recommending the following four major restructuring strategies: joint construction, transfer of jurisdiction, merging, and cooperation to restructure the higher education system. In January 1998, a national forum consolidated reform proposals into five major restructuring strategies: joint construction, cooperative administration of institutions, institutional amalgamation, transfer of jurisdiction, and participation of other social sectors in institutional operation.

7.3.2.1 Joint Construction

Joint construction refers to a merger process where, while financial resources remain basically the same, the central and provincial governments each exercise leadership in administering and developing institutions. Later, this extended to the lower reaches of government and administration, and some new forms of merger emerged, such as those between ministries of the central government, provincial capital and sub-capital cities, or between the provincial and municipal governments, or between ministries and corporations. The primary significance of joint construction is to change, or at least reduce, singular jurisdiction, including the removal of barriers between ministries of the central government and provincial governments. It is also aimed at strengthening the capacity of provincial governments to take a strategic approach (taking the whole situation into account), and enabling institutions to serve local society actively. Secondly, joint construction builds closer relations between institutions and the provinces/cities. Thirdly, joint construction can help raise funds. By so doing, institutions gain more financial support than would have been possible from a single source, improve their institutional running conditions, and optimise their resource allocation. Up to July 1996, 56 higher learning institutions had been constructed jointly in different ways. Of these, 27 institutions fell directly under the State Education Commission, while 29 belonged to various ministries or commissions (Deng 1997).

7.3.2.2 Institutional Amalgamation

Institutional amalgamation refers to the bringing together of previously separate institutions in response to new needs. The process includes: a rapid organisation of centralised leadership, planning, and administration; the readjustment of areas of specialisation, curricula, disciplines and faculty, as well as the teaching administration and the allocation of teaching resources; and corresponding to this a reform of institutional management systems. The purpose is to help make the advantages of merging personnel training yield strong results, improve educational quality, and therefore, enhance institutional strength for further development. After amalgamation, the overall number of China's higher education institutions decreased substantially. By July 1996, 103 institutions had been merged into 42. The total number of institutions was reduced from 1,080 in 1994 to 1,032 in 1996. The amalgamation process helped to address duplication between institutions, overly small scale institutions, and the isolation of single-subject institutions (*China Education Daily*, 26 August 1997).

7.3.2.3 Cooperative Administration of Institutions

Cooperative administration of institutions covers a range of cooperation arrangements between institutions of different types but operating at a similar level. These are entered into on a voluntary basis and allow the institutions' financial resources to remain unchanged. Forms of co-operation may vary from that between two institutions to multi-institution co-operation. These cooperative arrangements are aimed at exploiting resources to the full, supplementing the advantages that each institution offers, providing interdisciplinary programmes, and developing co-ordination, so as to improve educational quality and secure institutional benefits. During the period up to 1997, experiments were carried out to various degrees in Beijing, Shanghai, Guangzhou and Wuhan, whereby institutions broke out of their state of isolation, and made good use of each other's collective resources. By 1997, such co-ordination was extended throughout the country, and 178 institutions became involved in some form of cooperation. Among them, 28 were institutions under the Ministry of Education, 96 belonged to other ministries or commissions, and 54 were linked to provincial governments. Co-operative actions among various institutions had clearly played a positive role in the structural reform of China's higher education system (Deng 1997).

7.3.2.4 Transfer of Jurisdiction

The transfer of jurisdiction over higher learning institutions can take place at various levels: between ministries of the central government, and from higher education bureaux of provincial governments to provincial education commissions.

The transfer process plays an important role in doing away with the overlap of jurisdiction over institutions by central and provincial governments in the same area. It also rationalises institutional distribution geographically, and reduces waste of educational resources caused by barriers between higher and lower levels and different departments or regions. Although only eight institutions under the control of ministries of the central government were transferred to provincial governments (*China Education Daily*, 26 August 1997), the reforms afforded successful experiences, and new opportunities for development.

7.3.2.5 Participation of Other Social Sectors in Institutional Operation

Another type of structural reform is the effort to encourage the participation of enterprises, holding companies and research agencies in the management and administration of institutions in order to promote greater institutional responsiveness to social demands, to link them closely with enterprises and research institutes, and to strengthen the integration between education, research and production. Statistics show that 1,744 large and medium-sized enterprises and research institutes participated in this reform with 170 institutions nationwide (*China Education Daily*, 26 August 1997).

By the end of July 1996, 316 higher education institutions had participated in these five types of structural reform of management. Among those that took part in the reform, 211 were under direct administration of the central ministries or commissions, making up 66.8 %; 105 belonged to provincial governments, making up 33.2 %. They constituted 30 % of the total number of China's institutions of higher learning, and involved 47.3 % of the total number of students of regular higher education institutions in China. The average number of undergraduates and those undertaking 2/3 years training in each institution had increased from 1,901 in 1991 to 2,972 in 1996, and student/teacher ratio rose from 6.63:1 to 9.6:1 (Min et al. 1995).

7.4 Waves of Mergers

The restructuring lasted for roughly a decade, with various features characterising its different stages. As noted above, mergers were introduced to answer calls from the 1985 Decisions policy and were not implemented extensively until the 1990s when the Outline for Reform was announced. This was an unprecedented reform in terms of scale. By 1997, 30 provinces, 48 ministries, and 400 higher education institutions had become involved (Lin 1998). From 1992 to 2003, there was an annual average of 27.5 institutional amalgamations. During 1996–2001, 385 higher education institutions were merged into 164 (Zhang 2004). The reform peaked in 2000 when 203 higher education institutions merged into 79 in 105 amalgamations. Within the process, some mergers took place only once but involved many institutions, such as Guangzhou University which took over nine previous peers. Other

mergers were undertaken in several steps such as the present Tongji University which is the result of three amalgamations (Xu 2003).

7.4.1 Wave I (1992)

University mergers started with regional institutions with the following results from March to May 1992: a number of provincial institutions in Jiangsu (three institutions into one in March and six institutions and one training centre merged into one in May), Jilin (two institutions merged), Chongqing (two institutions merged), Shanxi (two institutions merged), and Guizhou (six institutions merged to form three). Overwhelmingly the institutions involved were small in size, narrow in specialisation and low in terms of their professional level. Institutional amalgamation was thus necessary and beneficial to achieve better resource allocation and economy of scale. In the initial process, governments acted only as a matchmaker, while the institutions maintained the option to go ahead or not. But the push from governments became stronger later on. At the same time, China's higher education governance reforms continued underway. In 1992, the then State Education Commission experimented in Guangdong to jointly build the South China University of Technology and Sun Yat-sen University with Guangdong provincial government. Both institutions had been directly under the jurisdiction of the central government. This marked the first breakthrough in the matrix fragmentation to strengthen the role of provincial government in higher education governance. The choice of Guangdong was based on the relatively better incorporated market forces together with an open mind-set.

7.4.2 Wave II (1993–1997)

University mergers subsequently spread quickly and were upgraded into a national drive, no longer being confined to regional institutions. Within a year, various ministries of the central government and a number of national key universities joined the merger drive process.³ During this period, hundreds of higher education

³ During the earlier years of the newly established People's Republic of China, the central government identified some universities and invested on them focally. They were usually under the jurisdiction of either the Ministry of Education or other ministries of the central government. A list of 16 national key universities was first promulgated in 1959. In 1960, another 44 universities were added to this list. By 1978, there were 88 National Key Universities. At the end of the 20th Century, after reforms to the system of higher education in China, the Chinese government instituted a two tier system of universities, respectively under the jurisdictions of the central government and provincial governments. Only a small proportion of higher education belongs to this category.

institutions became involved in amalgamations, especially those under the administration of provincial governments. The usual form of amalgamation was that weaker institutions were taken over by stronger ones. In some cases, weak higher education institutions merged to form a stronger institution. For example, Jiangxi University and Jiangxi University of Technology merged in March 1993 to form Jiangxi University, the first key national university in the province. More typically at provincial level, institutions merged into stronger local peers. For instance, Shenzhen University took over a local teacher training college in March 1995. In February 1997, Guizhou College of Agriculture, Guizhou College of Arts and Guizhou College of Agricultural Management merged into Guizhou University, and Ningxia Institute of Technology, Yinchuan College and Ningxia College of Education became part of Ningxia University. In March 1997, Guangxi College of Agriculture merged into Guangxi University. Five months later, Qinghai College of Animal Husbandry and Veterinary Medicine merged into Qinghai University. At the end of 1997, Yan'an Medical College became the Faculty of Medicine of Yan'an University.

During this period, there was a wave of institutional upgrading throughout China, mainly vertically from senior junior vocational schools to 2/3-years specialised colleges and from 2/3-year specialised colleges to 4-year colleges/universities, and also horizontally from single-disciplinary institutions to multi-disciplinary colleges/universities. At this time, Chinese officials could not estimate the precise numbers of tertiary institutions because every day the number was changing. Meanwhile, the participation by local government intensified efforts to work with central government to redress the matrix fragmentation, with particular focus on issues of overlapping and poor regional allocation. Some mergers during this period appeared to be poorly matched, more than likely due to governmental pressure. It is also highly possible that the mismatch was incentivised by attractive “betrothal money” and/or “dowry” leading to unhappy marriage (Xiao 2006).

7.4.3 *Wave III (1998–2000)*

Starting from 1998, university mergers began to be linked with China's bid to achieve world-class status for its universities.⁴ At the celebration of Peking University's 100th anniversary in May 1998, the then Chinese President and the General Secretary of the Chinese Communist Party elaborated the government's policy of education and science to revitalise the nation, and called for China to establish world-class universities. Under this guiding idea, more and more national

⁴ Internationally, although the goal of world-class status is clear, the definition of world-class status is often not. In China, the most noted essential attributes focus overwhelmingly on institutional size, multiplicity of disciplines, operating revenues (especially for research), research productivity, and numbers of postgraduate and international students. In contrast, much less emphasis has been placed on more fundamental issues such as academic freedom, institutional autonomy and university governance. For further discussion of this, see Yang and Welch (2012).

key higher education institutions participated in mergers. Many provincial institutions merged into national major institutions under the jurisdiction of ministries of the central government. In September 1997, Shanghai's local college of preschool teacher training was taken over by East China Normal University which is under the Ministry of Education. In November 1999, a local college of economics and technology in Hefei merged into University of Science and Technology of China which is under the Chinese Academy of Sciences.

The year 2000 witnessed more small institutions, both provincial and national, swallowed by flagship universities: Beijing Medical University (under the Ministry of Education) merged into Peking University which is under the Ministry of Education; Xi'an Institute of Finance and Xi'an Medical University into Xi'an Jiao Tong University which is under the Ministry of Education; Shanghai Railway University (under the then Ministry of Railways) into Tongji University which is under the Ministry of Education; Nanjing Railway Medical University (under the then Ministry of Railways) and Nanjing Vocational College of Transport into Southeast University which is under the Ministry of Education; Wuhan Institute of City Construction, Tongji Medical University (under the then Ministry of Health) and Wuhan College of Science and Technology Staff into Central China University of Technology which then changed its name into Central China University of Science and Technology; Shanghai Medical University (under the then Ministry of Health) into Fudan University; Harbin University of Architecture into Harbin University of Technology; Jinlin University of Technology, Norman Bethune University of Medical Science (under the then Ministry of Health), Changchun University of Science and Technology (under the Ministry of Land and Resources), Changchun College of Posts and Telecommunications (under the Ministry of Industry and Information Technology) into Jilin University which is under the Ministry of Education.

During this period, the participation of key institutions pushed the merger drive to peak levels. At the same time, there was much discussion about world-class universities giving a highly coloured account of the size and comprehensiveness of world-class universities. Temporarily, institutional amalgamation was portrayed as a shortcut to world-class status. After 2000, the drive for university mergers abated and only some occasional institutional amalgamations took place, mainly targeting an upgrading of their status.

7.5 Features of the Merger Process

In comparison with China's other higher education reform policies in recent decades, this round of institutional mergers has proven highly challenging to implement. It will have strong impact on the development of the higher education system in the future. The mergers not only involved jurisdictions of the Ministry of Education, other ministries of the central government and provincial/municipal governments, but also touched upon a wide range of academic disciplines and higher education institutions at different levels, as demonstrated by Tables 7.1, 7.2 and 7.3.

Table 7.1 Details of the institutions before merging into Wuhan University

	Wuhan University Luo-Jia-Shan, Wuchang	Wuhan Technical University of surveying and Mapping Donghu, Wuchang	Wuhan University of Hydraulic and Electronic Engineering Luo-Jia-Shan, Wuchang	Hubei Medical University Donghu, Wuchang
Geographical location				
Year of establishment	1893	1956	1954	1943
Jurisdiction	Ministry of Education	National Bureau of Surveying and Mapping	Ministry of Water Conservancy and Electric Power	Hubei Provincial Government
Personnel training	Undergraduate and post- graduate programs	Undergraduate, postgraduate, with some associate degree programs	Undergraduate and postgraduate programs	Mainly undergraduate, with some postgraduate programs
Featured disciplines	Humanities, social sci- ences and natural sciences	Surveying and mapping technology	Hydraulic and electronic engineering	Clinical medicine

Table 7.2 Details of the Institutions before Merging into Central China University of Science and Technology

	Central China University of Technology Yu-Jia-Shan, Wuchang	Tongji Medical University Hankou	Wuhan Urban Construction Institute Ma-An-Shan, Wuchang	Wuhan College of Science and Technology Staff Donghu, Wuchang
Geographical location				
Year of establishment	1953	1907	1952	1979
Jurisdiction	Ministry of Education	Ministry of Health	Ministry of Housing and Urban-rural Development	State Science and Technology Commission
Personnel training	Undergraduate and postgraduate programs	Undergraduate and postgraduate programs	Undergraduate	Non-degree training
Featured disciplines	Mechanical and electronic engineering, mechanics, optics and automatic control	Clinical medicine	Civil engineering	

Table 7.3 Details of the institutions before merging into Wuhan University of Technology

	Wuhan University of Technology	Wuhan Automotive Polytechnic University	Wuhan Transportation University
Geographical location	Ma-Fang-Shan, Wuchang	Ma-Fang-Shan, Wuchang	Yu-Jia-Tou, Wuchang
Year of establishment	1958	1958	1946
Jurisdiction	Ministry of Construction Materials Industry (Ministry of Education after merger)	China Automobile Industry Corporation	Ministry of Transport
Personnel training	Mainly undergraduate, with some postgraduate programs	Mainly undergraduate, with some postgraduate programs	Mainly undergraduate, with some postgraduate programs
Featured disciplines	Materials science and engineering, civil engineering	Vehicle engineering, business administration	Naval architecture and marine engineering, transport

The merger drive is firstly characterized by its overall approach as a nationwide adjustment or restructuring process. Various departments of the government in different regions were involved. It effectively dismantled the separation by regions, sectors and professions, established a more coherent higher education governance system of the central (Ministry of Education) and provincial governments, with the latter playing an important role. Such a reform was expected to have profound implications for the future development of China's higher education.

The second feature of the merger process is its complexity. Institutional amalgamation necessarily touches on issues relating to many aspects of higher education. Institutionally, they include organisational structure, disciplinary restructuring, campus planning, and even the name to use after the merger. It has impacts on the personal work and living conditions of staff members from their career development, benefits to emotions and identities. From agenda-setting to integration, mergers cannot be implemented effectively simply through the introduction of mandatory plans imposed from above. They demand detailed work at every step of the process, especially at the stage of integration.

Third, mergers involve a process of innovation. Some institutional cases were far more successful than others. While much planning was involved in every case, there was never a shortage of surprises and disappointments. Each institutional case was unique and there was no one-size-fits-all approach. The merger process needed to address a range of aspects from organisational structure to teaching and research administration, and further to disciplinary adjustment. Pre-merger, institutional histories and uniqueness needed to be taken into account, and if possible, carried forward. At the same time, global, national and local contexts had to be considered and incorporated carefully. All these were great challenges, demanding fresh perspectives and new ways of thinking.

7.6 The Effects and Outcomes

The effects and outcomes of the merger process can be measured differently at national, provincial and institutional levels. Overall, China's experience from a national perspective has been perceived positively. It has effectively reduced the notorious fragmentation and duplication of the pre-merger period (Chen 2006). The Chinese experience with mergers differs significantly from the Australian experience in the 1980s which was reported by Curri (2002) to have failed to achieve the intended organisational change. In contrast, it is more similar to the Norwegian case in that the mergers were much more forced by the government and perceived as successful (Kyvik 2002).

7.6.1 Governmental and Institutional Perspectives

From the perspective of central government, the 1990s round of university mergers was unprecedentedly substantial in both scale and length of time. It has built up the framework of China's higher education for future development, and has laid a sound foundation for future enhancement of the quality of education and research. Specifically, achievements of the merger process are particularly evident in the reform of governance and structural layout of higher education in China. First, many higher education institutions originally under the administration of various ministries of the central government have been transferred to be under the Ministry of Education, in cooperation with local governments. This is a major step to tackle the chronic problem of fragmentation in higher education governance between *tiao* and *kuai*. By restructuring higher education institutions, the mergers also contributed to involving local governments effectively in administering and financing higher education, linking institutional operations closely to social economic developments nationwide at both local and national levels.

For higher education institutions involved in the reform, the mergers helped to strengthen a number of academic fields where the institutions had clear advantages in comparison with their international peers. A group of highly comprehensive universities have been created paving the way for cross- and multi-disciplinary teaching and research which facilitate students to form more open and informed perspectives. While the effects vary for different institutions, many relatively weak institutions in the pre-merger period were merged into stronger peers. In some cases, a few institutions merged together to form a stronger institution. In both cases, the institutions clearly fared better after the merger in the domestic student market in terms of both the number and quality of the students they attract and the research funding they receive from the society (Xu 2003). Relations between institutions have changed from competition during the pre-merger period to collaboration. This, at least in theory, has created favourable conditions for interdisciplinary collaboration in teaching and research. Meanwhile, it has been possible to achieve cost-reduction through the improved use of human and financial capital (Min 1991).

7.6.2 An Example: Fudan University

Shanghai Medical University was merged into Fudan University in April 2000. While Fudan University is a leading university at national (in some cases international) level in arts, social sciences, natural sciences, engineering and commerce, it did not offer medical studies, an area in which Shanghai Medical University had a prominent advantage. The strong-strong merger provided a solid platform for the new Fudan University to aim realistically at world-class status. After the merger, in comparison with the total enrolment of both institutions before merger, Fudan

University benefited from unprecedentedly high enrolment numbers, with a 20 % increase at postgraduate level and a 10 % increase at undergraduate level, indicating a better use of resources after the merger.⁵ The proportion of postgraduate to undergraduate students continued to increase, from 46 % in 1998 to 62 % in 2001, a ratio similar to that of world renowned research-intensive universities (Xu 2003).

In line with the quantitative growth of student numbers, the high standard of student quality of the pre-merger Fudan University was reported to be maintained while that of Shanghai Medical University was further enhanced. The gap between the entry scores of local Shanghai students between the two pre-merger institutions was narrowed by 25 %. This was considered minor as Shanghai Medical University had already been nationally famous.⁶ Together with the improvement of student quality, the merger led to a growth of research productivity and funding.⁷ The total numbers of published monographs and journal articles in social sciences and the humanities grew considerably, with an increase of 33.9 and 9.1 %, respectively in the first year after the merger, while publications in science and technology fields were maintained. International publications increased substantially especially in some prestigious journals such as *Nature*. There are signs of great potential for breakthroughs in the biological studies with the coming together of the Fudan University and Shanghai Medical University research teams.

The reduction of educational costs was a major target of the merger. Post-merger Fudan University experienced a fast increase of students together with a slight decrease of staff members. Its student-teacher ratio changed from 7.85:1 to 11.8:1 within 3 years. Teachers had relatively light teaching-loads pre-merger, with an average of three contact hours per week. It was not unusual for some to have no teaching for an entire semester. This situation changed. However, 261 new non-academic staff members were employed after the merger, the majority of which were hired to provide inter-campus bus services. Due to the long distance between the two campuses, many administrative departments could not be merged and in this respect the merger was thus not highly successful in reducing administrative structures. Such factors added much to management costs, comparing the Fudan University's merger unfavourably with many others in China, including Zhejiang

⁵ Similarly, undergraduate enrolment number at post-Yangzhou University increased consecutively for 6 years with an average increase of 6.13 %, from 12,600 to 18,000.

⁶ The enhancement of student quality was much more substantial in many other provincial institutions such as Guangdong University of Technology.

⁷ In terms of increase of research funding, some universities achieved more substantially through merger relative to Fudan University. Most institutions reported substantial post-merger increase in research funding. Zhejiang University, for example, had 1,743 new research grants in the first year after merger, an increase of 30 % on the previous year, topping the nation in both National Natural Science Foundation of China and National Youth Science Fund grants. Similarly, Yangzhou University increased its research funding from 5 to 20 million RMB 6 years after merger, with an annual increase of 25.99 %.

University and Guangdong University of Technology.⁸ Post-merger Fudan University experienced continuous increase of administrative expenditure. Yet, due to the much greater growth of student enrolments, costs per student dropped.

7.7 Issues of Concern

In looking at the merger process retrospectively, the gap between policy rhetoric and reality is clear and there has been no shortage of criticism from the very beginning of the merger process. Some questioned the guiding ideology of the mergers, and insisted that the reform was patterned too much on foreign experiences, following somewhat blindly the international tide and believing uncritically in the scale of an institution. Many commentators focus on implementation process and the integration following it.

7.7.1 *Integration*

Post-merger integration was much anticipated. However, many pre-merger assumptions have remained open to question. The government based its policies on the assumption that the creation of larger institutions would lead to economies of scale as well as being more conducive to high quality teaching and research. The argument was that changes in organisational structure and physical location of staff and education programmes would have positive effects on collaboration patterns. The reality has been that mergers do not easily lead to integration as integration takes much longer to materialise. While mergers solved some old governance problems, they also created new challenges (Zhang 2004). Large academic units are not necessarily better environments for teaching and research, even though they offer larger breadth. Some observers even criticise the assumption about big-size universities that underpinned the merger process as a misperception of Clark Kerr's multiversity and a mistaken belief in sheer volume of a university (Xiao 2006), arguing that it is inappropriate to take it for granted that large physical size itself necessarily leads to comprehensive and strong academic capacity of a university.

Some institutions were neither truly interested in the merger nor did they understand the merger process. They were motivated simply by the short-term benefits offered by the governments, often in financial terms and/or in the form of land-grant. Such institutions had rarely given the merger much thought, let alone careful, long-term planning. Under such circumstances, post-merger integration

⁸The situation differed from institution to institution. Within 6 years after merger, Yangzhou University reduced its administrators from 36 to 9 at senior management level and from 444 to 253 at middle management level, and reduced its administrative departments from 99 to 24.

was often like an arranged marriage. Policy rhetoric cannot be translated into practice. In some cases, the larger size even led to weaker overall performance. Many disciplines were influenced in a very limited way by the merger; as merely bringing related fields superficially together generates limited impact. There has however been some improvement in teaching and research performances.

Governments usually played a significant role (some would argue too strongly) in promoting institutional amalgamation without taking fully into consideration institutional histories and conditions. Many institutions have largely continued to operate with their pre-merger organisational structures, failing to respond swiftly to societal and market needs. Some institutions enjoyed a long-fostered national reputation before the merger and resented being dominated/influenced by others. In some cases tensions and even conflicts in educational ideology and approaches emerged between various parts of the newly merged institution.

7.7.2 *Costs*

Institutional amalgamations led to large size and scale of operation, which did not necessarily lead to improved efficiency. The reform did not come without costs, and cost reduction has proven to be highly difficult to achieve for a number of reasons. Every merger involves a process of long negotiations with government at various levels. All sides involved in the process participate in the merger based on their own calculations of costs and benefits. After amalgamation, new negotiations on integration start, involving seemingly endless negotiations costing human and financial resources. The costs increase drastically when conflicts arise. Inter-campus transportation is another major cost, especially when the distance is significant and there is a considerable movement of people and goods between campuses. Another cost relates to cultural conflicts between pre-merger institutions. It is often invisible yet it can have chronic effects. Unless properly resolved, such conflicts can play a long-term, detrimental role with serious implications for post-merger integration.⁹

7.7.3 *Institutional and Regional Disparities*

China is a country with vast land and striking regional economic, cultural and educational disparities. Regional demands for higher education differ dramatically and a nationally unitary plan is bound not to fit the needs of all regions and therefore to require adaptation. Moreover, China has thousands of higher institutions. While

⁹ Here, a typical example is the pre-merger Tsinghua University and Central Academy of Arts and Design. Their strikingly different cultural ethos has made it very hard to reach an integrated culture of the new Tsinghua University.

in general they all pursue the three functions of modern higher education institutions, namely teaching, research and social service, this does not mean that all institutions should perform all these roles equally comprehensively. Based on their nature, institutions might have their own strengths and weaknesses in various roles. As institutional and regional diversities are vitally important in modern higher education systems, it is significant for institutions to position themselves strategically, without always hitting all fronts. Such an understanding and protection of diversity appears to have been neglected in China's recent university merger process.

7.8 Conclusion

Undertaken as Chinese society was transforming from a centrally managed to a market economy, the university merger process in the 1990s was designed to adapt the higher education system to changes in the social environment, in order that it could serve more directly the needs of socio-economic development via highly-planned, well-organised reforms. It attempted to improve institutional functioning through a restructuring of the higher education system, with a focus on the institutional level, under the direct administration of the central government. It was a process of self-remoulding and self-improvement of the system, an innovation of the existing methodology of higher education management designed to improve operational efficiency and quality of output of the higher education system. The reform was based on the assumption that the existing higher education sector was inadequate and lacked efficiency, a view that was a direct influence of the international context, in which a wind of efficiency was blowing through education. Institutions have since developed greater autonomy from the state, and greater importance has been attached to the interests of specific government departments, regions, and the institutions themselves. Service to the local economy has been emphasised.

However, the merger process has received criticism. During these reforms, institutional amalgamation often became the most important orientation without sufficient consideration being given to the differing traditions and characteristics of the participating institutions, or the variety of existing conditions and factors restricting their development. In some cases, reducing the number of institutions was in itself the prime goal of the reform. A rationale for the reform was to create 'comprehensive universities' to correct China's previous over reliance on the Soviet model, but policy makers did not take into account the fact that a simple institutional amalgamation may not be sufficient to achieve this. While criticising the former "comprehensive universities" for not being comprehensive enough, they were encouraging the amalgamation of several specialised institutes as a response, which however does not automatically lead to the emergence of genuine comprehensive universities. Another driving impetus for the reform was to create a group of world-class universities. While the merger has established a platform for

achieving these high ambitions, the intended post-merger integration has proven difficult to achieve. As a combined result of both domestic and external forces, higher education institutional merger in China clearly reflects an increasingly global agenda. Its actual effects, however, depend mainly on local and national contexts. The Chinese experience offers other countries interesting contrasts as well as implications.

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