

## Chapter 6

# The Giants Awake: The Present and Future of Higher Education Systems in China and India

by

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*This chapter first presents historical developments and current characteristics of Chinese and Indian higher education systems. It then examines the respective roles of China and India in increasingly globalised higher education sphere by looking into cross-border mobility and international research competitiveness. The chapter finally explores the internal challenges related to higher education access, equity and emergence of private provision in China and India. It shows that while China and India are two of the world's largest academic systems, it is less clear that these systems will be globally competitive in the near future.*

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China and India, which together have a third of the world's population and are two of the most rapidly growing economies, are awakening to the significance of higher education for technological development and for the global knowledge economy. The economic realities of China and India's rapid growth are affecting the world, from increased demand for natural resources to their roles as exporters of products of all kinds, a pattern that will continue regardless of the current economic slowdown. A growing impact of these countries is in higher education; their higher education systems are already among the world's largest; and they are major exporters of students to other countries. This trend is likely to grow in the future, as these countries expand and improve their higher education systems. Although the booms of China and India have been fuelled in the main by cheap labour and inexpensive low-end manufacturing, the situation is changing, and the economic future of both countries depends on a better-educated workforce. Universities are central in the race to provide respective workforces with skills to make them competitive in the global knowledge system.

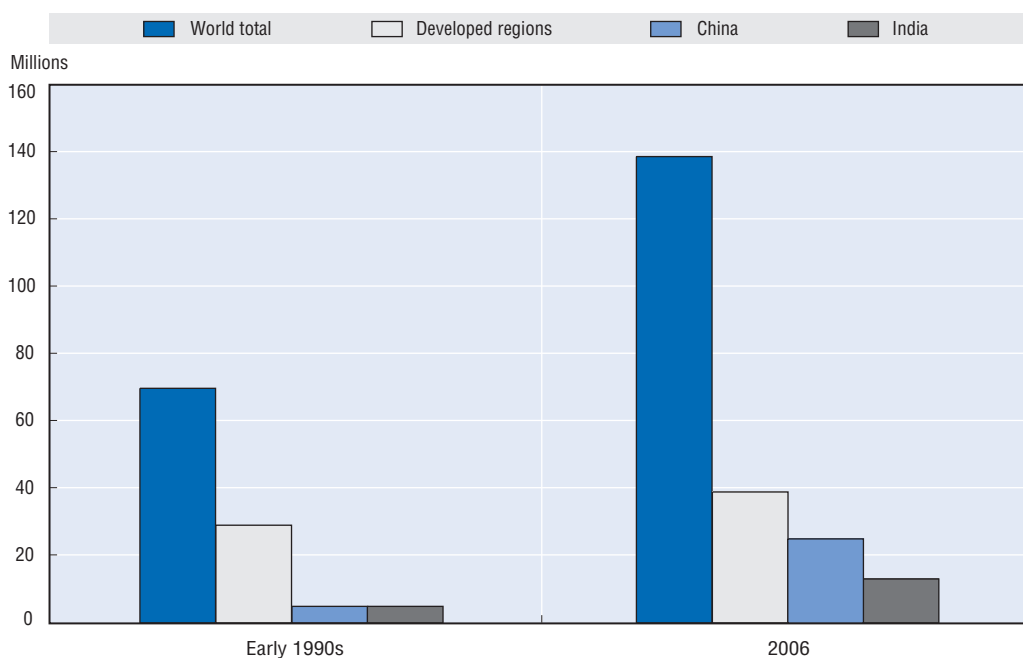
Both countries realise that higher education is key to development and recognise the necessity to expand their higher education systems and to build some world-class research universities at the top of a differentiated system. In 2006, India educated approximately 12% of its university-age population, while China enrolled about 22% (UIS, 2009). China is now number one in enrolments, with more than 25 million. India's 13 million enrolment ranks third. Both countries have been expanding rapidly in recent years. Since the early 1990s, China's postsecondary enrolments have grown from 5 million to 25 million in 2006, while India has expanded from 5 million to 13 million by 2006 (Agarwal, 2009; OECD, 2007b). Perhaps one-third of the world's 140 million postsecondary students are in Chinese and Indian institutions of higher education.

Significant quality problems exist in less-selective colleges and universities in both countries. Many of India's impressive number of engineering graduates, up to 75% according to a McKinsey report, are too poorly educated to function effectively in the economy without additional on-the-job training (Jha, 2009; Surowiecki, 2007). Part of China's growing problem of graduate unemployment is related to the qualifications of some students.

Higher education comprises a policy priority in both countries. China has for almost two decades been engaged in a significant upgrade in the quality of its top universities as well as in a major expansion of enrolments in all higher education sectors. While India has for decades recognised the importance of expanding higher education access and improving quality, only quite recently have significant resources been allocated, with the Knowledge Commission's higher education recommendations of 2006 and more recent government commitments (Tilak, 2007). Current plans, for example, call for expanding the number of top-tier higher education institutions (Agarwal, 2009).

Envisioning higher education prospects for China and India for two decades or more is highly problematical (Li, Whalley, Zhang, and Zhao, 2008). Current data, for example, often

Figure 6.1. **Number of higher education students (in millions) in the early 1990s and 2006**



Sources: UNESCO Institute for Statistics (2009); Agarwal (2009); OECD (2007b).

lack accuracy or availability, making generalisations about the contemporary situation difficult. Future developments depend on the macroeconomic, social, and political trends, and these are less easy to envisage than is the case for most OECD countries.

Basic stability and consistent policy orientations for higher education, while reasonably clear as seen from today's perspective, cannot be predicted with great certainty into the coming decades for either country. In a way, China today may be seen as too stable while India as perhaps overly unstable. India's relatively open political system may permit it more flexibility in coping with adversity, but it could fail to produce practical solutions or imaginative plans to improve higher education. China's state planning apparatus has developed higher education impressively, especially at the top of the system, but may lack flexibility. Both may be buffeted by internal forces or regional and global changes more profoundly than many parts of the world. The past shows that China is capable of dramatic and sometimes unpredictable policy shifts. India, constantly debating new directions, changes gradually and often without clear planning.

The future of higher education policy in both countries depends to a significant degree on several factors. Demand relates to the continuing expansion of the middle class that has the resources to pay tuition and other fees and educational qualifications for admission. Other population groups have an interest in higher education access as well, but the middle class is the largest force, has dramatically expanded in recent years, and is likely to continue to grow. While estimates vary considerably, many experts agree that the Indian middle class now numbers more than 50 million, and China's is similarly large. Some estimates (for example by McKinsey Global Institute<sup>1</sup>) predict that by 2025, each country will have a middle class of perhaps 500 million. A significant number of these large groups will demand access to higher education, creating huge strains on the system. Government

policy regarding funding higher education and supporting research universities and the elite sector of the system is a key factor shaping higher education prospects. As both countries join the ranks of the world's major economies, they will recognise the importance of world-class universities so as to compete globally. China has already moved to create and sustain an elite academic sector. India is beginning to grapple with this issue.

### 6.1. A difficult history

For higher education systems, history plays a role in the present. For both China and India, the academic past has created difficult and problematical results for the present – and likely the future. In common with all of the world's higher education systems, both inherited the western academic model (Ben-David and Zloczower, 1962). Both countries have largely not taken advantage of their extraordinarily rich indigenous intellectual and academic traditions. China, after all, invented national examinations with the Confucian examinations used for several millennia to choose civil servants and advanced institutions to train people for these tests. India had some of the world's oldest universities, such as Nalanada in Bihar. These academic traditions predated western universities by more than a thousand years. However, these ancient academic institutions and traditions have little salience today.

In the 19th century, forward-looking Chinese recognised the need to modernise so as to compete with the West and develop economically. Western academic models were chosen – through a small number of European-style universities established in the late 19th century along China's east coast in areas controlled by European powers (Hayhoe, 1999). Peking University was established with American assistance and the support of the waning imperial government. Christian religious organisations worked actively in China at the time and established several universities. Thus, by the time that the imperial system was overthrown in 1911, a small number of western-style universities existed, and many Chinese had been educated in the West and in Japan.

While the new republic moved to strengthen the existing universities and establish more institutions, civil war, economic disruption, and Japanese invasion prevented much progress from being made. At the time of the establishment of the People's Republic of China, in 1949, the higher education system was small and weak. The entire higher education system in China had only 205 universities, mostly concentrated on the east coast and in Beijing and a few other large cities, and a total of 116 504 students (Hayhoe, 1999). The new Communist regime looked to the Soviet Union for academic leadership and reorganised higher education in the Soviet model, by splitting up many of the existing universities into smaller specialised and vocationally oriented institutions in most cases linked to operational ministries. Research academies were established separate from the universities. Normal academic development was frequently disrupted. Academic freedom was limited and the emergence of an effective academic profession hindered. Few Chinese students or scholars gained an opportunity to study abroad, and those who had a chance were limited to the Soviet Union and the eastern European socialist countries.

The most severe disruption came with the Cultural Revolution, of 1966 to 1976, which closed the entire higher education system, sent many professors and students to rural areas to work, and destroyed a generation of academics. Few countries have suffered such a dramatic academic cataclysm. With the end of the Cultural Revolution in 1976 and the subsequent opening of China to the world, the universities were reopened and efforts were

made to look to the West for academic guidance. Chinese students were able to study abroad. Universities were permitted to look abroad for new academic ideas and were given funds to re-establish themselves. The Soviet pattern of highly specialised vocational institutions was in part dismantled. Political control was loosened as well. By the 1990s, as China's economic boom began, the university system was poised to expand.

India was a British colony for more than two centuries, ending with independence in 1947, and this experience shaped higher education and continues to influence it. The British did not give much support to higher education in their colonies. Higher education first expanded mainly due to the initiative of the growing middle class in the mid-19th century and recognition by the British that an educated civil service was needed to administer India. In 1857, the first universities were founded in Calcutta, Bombay, and Madras. The Indian colleges and universities were British in organisation. These institutions, teaching exclusively in English, displaced the few traditional schools left, which simply withered and died. Higher education was based on an organisational pattern where the universities constituted examining bodies more than teaching institutions. Most of the teaching took place in undergraduate colleges affiliated to the universities; examinations and curriculum were by and large controlled by the universities. This structure enabled centralised control over the colleges. A small number of British academics were recruited to teach and lead the universities and colleges. Indians had an opportunity to study in Britain, and most returned home to serve in the administration, including in the colleges and universities. Moreover, many became involved in nationalist organisations that eventually played a leading role in bringing independence to India (Basu, 1974).

From the early 19th century, almost all higher education in India was entirely in English; no Indian language was used for instruction or examination. The curriculum was largely limited to fields useful to the administration and to India's emerging professional classes – such as law, the social sciences, and related fields. While the academic system remained quite small – at the time of independence with 369 000 students studying in 27 universities and 695 colleges (Agarwal, 2009) – it succeeded in educating a cadre of graduates who provided the leadership of India, Pakistan, Sri Lanka, and, later, Bangladesh. As late as 1961, only 1.5% of the relevant age group participated in postsecondary education (Agarwal, 2009). There was little research capacity at India's colleges and universities at the time of independence, as there had not been interest in spending money on research there; and since higher education was in English, more than 90% of the Indian population was excluded from access (Agarwal, 2009). India's higher education system at the time of independence was small, highly bureaucratised, restrictive on academic freedom, provided in a language most Indians did not understand, and had a restricted curriculum.

Despite many reports and much criticism, higher education expanded between independence and the end of the 20th century although there were few structural changes. Enrolments expanded from little more than 100 000 in 1950 to 9 million by the end of the century (Agarwal, 2009). Annual growth sometimes was 10%. Most observers agree that overall quality declined and that the basic structure of the system remained quite similar to the colonial period (Kaul, 1974).

The university arrangements inherited by both countries in the mid-20th century were not helpful for the development of an effective higher education system. In the following years, China made many changes in its universities, most followed Soviet patterns, but the actions were not effective in building universities that could compete internationally or

serve the needs of China's modernisation. India, on the other hand, expanded higher education slowly in the years of independence and more rapidly later but made few structural changes. As a result, universities were less than effective in meeting the needs of Indian society.

## 6.2. Contemporary characteristics

### **Governance**

Both countries emerged into the mid-20th century with somewhat dysfunctional academic organisations and continue to be characterised by little self-governance and strong, often governmental, bureaucratic controls. Both countries have yet to establish academic governance arrangements for their universities that maximise the decision-making input of the professoriate.

The model, which China followed after 1950, dismantled many of the comprehensive universities into smaller specialised institutions attached to the relevant operational ministries rather than the Ministry of Education. These smaller institutions were, for the most part, narrowly vocational and did not do much research. Research was mainly in the hands of the institutes of the academies of science that were divided by discipline or field and were not part of the university system. It was only after the Cultural Revolution that the specialised institutions were slowly reintegrated into universities. The dual Chinese administrative structure that continues to the present time has been questioned in terms of its academic effectiveness. China's unique combination of academic and political governance arrangements, with an academically selected president and an executive vice president chosen by the Communist Party, sometimes creates administrative tension and reduces self-governance by the academic community. In recent years China has however been looking toward an American-style academic leadership model. Some universities have been strengthening academic leadership, especially in the office of the president, and have been trying to give more authority to department chairs and other senior administrators and to implement a faculty responsibility system that includes accountability for research and teaching (Min, 2004).

India's post-independence academic system was inherited from the British. The universities, to which almost all of the 700 undergraduate colleges were affiliated, were mainly examining bodies, with small post-baccalaureate programs. These colleges, generally small with around 500 students, were affiliated to universities that determined the curriculum, set and administered examinations, guided admissions, and awarded degrees. The undergraduate colleges possessed little autonomy. This affiliating system continues to the present. There are not more than 18 000 undergraduate colleges. A few of the universities were single-campus "unitary" institutions without affiliated colleges, and these resembled academic institutions in the West with undergraduate and graduate as well as professional degree programs. A few research organisations in specialised fields do advanced basic research in some scientific disciplines. While much has been added to the Indian higher education establishment, little has changed in the basic structure of the universities (Jayaram, 2004).

### **Differentiation**

Effective mass higher education systems are generally differentiated by function and often by funding sources and other variables. Most include a private sector as well.

Typically, differentiated academic systems are characterised by a hierarchy of institutions, with highly selective elite research-intensive universities at the top, comprehensive universities in the middle, and an array of less-selective and often non-baccalaureate colleges at the bottom. An array of specialised institutions also compose part of the system. The elite sector typically enrolls only a small proportion of the students and is, disproportionately, generously funded. Except in the United States and Japan, almost all elite universities are public.

China has moved consciously toward a differentiated academic system, having so far paid special attention to the top of the system, especially to the 150 or so research universities that are the responsibility of the central government. Most of China's approximately 1 700 universities are funded by and responsible to the provincial governments and in some instances to municipal authorities. These universities tend to be in the middle and toward the bottom of the academic hierarchy. There is currently a move to expand the non-baccalaureate sector in ways fairly similar to American community colleges. The emerging private sector tends to be at the bottom of the hierarchy. While China has not formally developed a coherent and articulated academic system with clearly defined missions and variable patterns of funding, it seems that such a system is emerging. It is likely in the coming decades that a clearly articulated and differentiated academic system will develop with input from both the central government and the provinces.

While the Indian higher education system can overall be characterised as differentiated, it is noteworthy that this differentiation is neither coherent nor conscious at a system level and there is less differentiation within higher education sub-sectors. Indian academe has grown without planning in response to massification and the need for new kinds of institutions to serve an expanding economy. Responsibility for higher education is divided among several agencies in the central government, the states (which have different policies and perspectives), an increasingly powerful private sector, and occasionally the courts. There is no formal division of responsibility for access or research (Jayaram, 2004). Over the years, efforts to reform higher education have sidestepped the traditional universities and rather have added new institutions alongside them.

India has a widely respected small elite sector of specialised academic institutions, most notably the Indian Institutes of Technology, now numbering 13. There are 380 universities, mostly under the jurisdiction of Indian states, which have primary responsibility for education in India's federal system. These universities are, however, largely undifferentiated from each other. The 24 universities under the control of the central government tend to be somewhat better funded, and of higher quality than the rest, but there is no clear differentiation among the universities. India has a total of more than 18 000 postsecondary institutions – more than 17 000 of these are colleges offering mainly undergraduate degrees (Agarwal, 2009), but there is no differentiation among the colleges, although a few have taken advantage of legislation that permits high-quality colleges to separate from their sponsoring universities and offer their own autonomous degrees. These colleges are recognised as more prestigious than the rest. There are also a variety of other kinds of postsecondary institutions. So called "deemed" universities are university-level institutions, mostly specialised, recognised by the University Grants Commission, a central government agency, and thus have degree-granting authority. Additional technical institutions are recognised and evaluated by the All-India Council of Technical Education, another central government agency.

As of 2009, India has not as yet attempted to define a strategy for moving toward a coherently differentiated academic system. The variety of institutions, sponsorship, and jurisdiction make the emergence of such a system very unlikely under current circumstances. The government recently announced that it will establish an additional 8 Indian Institutes of Technology and 7 Indian Institutes of Management, along with 30 new research-oriented central universities, 10 National Institutes of Technology, 2 Indian Institutes of Science, and 1 000 new polytechnics (*Hindu*, 2008).

### **Funding**

Both countries face significant challenges in funding their rapidly expanding higher education systems (Agarwal, 2009; OECD, 2007b). While the two have experienced rapid economic growth in recent years – 10% or higher GDP expansion – they remain developing economies. China, in 2008 had a per capita purchasing power parity income of USD 5 370, while India's was USD 2 740 (World Bank, 2008b). Overall, India spent 0.8% of GDP on tertiary education in 2005, against 0.8% in 2000 (UIS, 2009). China spent 0.4% of GDP on higher education in 1999 (UIS, 2009, later internationally comparable figure is not available). These figures are under expenditures for other emerging economies and well under the 1% or more spent by developed countries. In both countries, increasing tuition costs in both public and private sector institutions has shifted a growing burden for funding higher education to students and their families. Neither country contains an adequate system of grants or loans to ensure equal access to higher education, although both have some financial aid programs in place and have made efforts to provide access for poor students and students from disadvantaged populations.

The funding provided by public sources for higher education in China and India is inadequate in meeting demands for both quality and access. Public funding for higher education comes from a variety of sources and there seems to be relatively little coordination among them. In both countries, the bulk of funding emerges from the state and provincial governments, which have a large measure of autonomy relating to the amounts spent on higher education and how allocations are made. Some states and provinces prioritise higher education, while others do not. The central authorities in China and India are mainly concerned with funding the top tier of universities and ensuring that research is appropriately supported. China provided much more funding to the research universities in part through the 985 and 211 central-government-funded support programs – approximately 150 universities have participated in these key projects. The top universities also receive funding from local and provincial authorities. For example, the Shanghai government has provided resources to its research universities, as have other cities and provinces. The Indian government, largely through the University Grants Commission, sponsors 20 universities and provides funding for innovative programs university-based research, and to some other institutions.

Calculating private funding for higher education in China and India is quite difficult. Both countries have growing private higher education sectors, and public universities all charge tuition fees to students. Tuition fees for first degrees, in purchasing power parities, varied between USD 1 640 and USD 3 820 in China in 2004 and between USD 20 and USD 37 in India in 2001 (Marcucci and Johnstone, 2005). In India the large majority of students study in private colleges, some of which have public support from the state governments and a growing number that are “unaided” and have no public support. There are also 11, as of 2007, fully private universities that receive no government funding. Tuition levels vary in



the private sector and are in some cases regulated by government authorities. The situation in China is similarly complicated. The *min ban* private universities and colleges are quite diverse in purpose and role. A small number are recognised by government authorities to grant degrees. All are dependent on tuition, and costs vary. Many Chinese public universities sponsor affiliated semi-private branches or other degree-offering programs that are not state funded and charge higher tuition. These programs are intended, in part, to provide needed revenues for their sponsoring universities as well as to increase access. Some critics have accused them for having low academic standards and a controversy has risen relating to the degrees offered.

### 6.3. China and India as international higher education players

#### **Cross-border mobility**

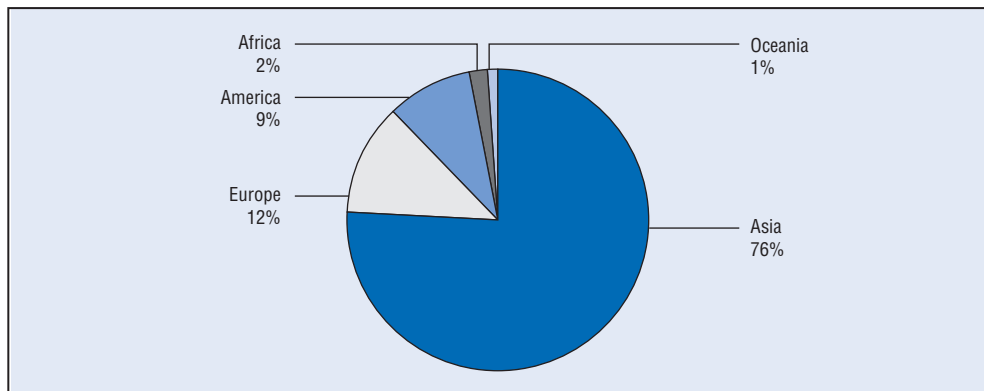
In very significant ways, both countries loom large on the international higher education scene and will become much more central in the future. Currently, their importance is largely unrelated to their own policies but results from the exodus of students and professionals to the West and elsewhere since the 1970s. China and India are the top two exporters of students and have been so for the past two decades. In 2008, approximately 200 000 Indians and 892 000 Chinese were studying abroad; these numbers constituted close to half of the world's total of international students (Agarwal, 2008). Regardless of enrolment expansion, the two countries are likely to remain at the top of the export lists in the coming decades for several reasons. The main reasons, in India particularly but also in China, consist of the insufficient number of places in elite universities for the brightest students. The prestige of a foreign degree from a top western university has considerable cachet. An insufficient number of places in the academic systems exist for the expanding numbers of students seeking entry, and an unknown number of young people will seek foreign education as a first step toward emigration (Agarwal, 2008; Altbach, 2006). For students who do not score at the top of the university entrance or other examinations, obtaining a degree abroad may often be seen as preferable to studying in a less-prestigious local university. The growing middle class in both countries can increasingly afford to send their children abroad. Growing numbers of Chinese and Indians will continue to go abroad for study.

Large numbers – statistics are unavailable – of Chinese and Indian scholars and researchers are working abroad. Probably a majority of these expatriates obtained their doctorates abroad and did not return to their home countries. From 1992 up to 2001, the average stay rate for Chinese and Indians who obtained their doctorates in the United States rose from 65% to 96% and from 72% to 86%, respectively (OECD, 2007a), although many have academic and other relationships with their home countries. According to the Chinese ministry of education, 815 000 students went abroad to study between 1978 and 2004, and 198 000 returned. Statistics for other western countries are likely similar in terms of non-return rates. Since the 1990s, more graduates appear to be returning home due to the improved economic and academic conditions in China and India, and there are deeper relationships between the diasporas and the home country. Both countries have worried about their “brain drains” and have sought, with very limited success, to attract their nationals home.

China has implemented an international education policy since 2000, and India is debating its approach to international higher education. China's multifaceted policy

includes aggressive plans to attract international students to China. More than 200 000 international students were studying in China in 2007, with three-quarters of them from Asian countries (Figure 6.2). China awards more than 10 000 scholarships as well (China Scholarship Council, 2007). Many Chinese universities have expanded their campus facilities for international students. Chinese universities see hosting international students partly as a way of earning income as well as adding a valuable international dimension to the institution. Government-sponsored Confucius Institutes, now numbering more than 292 with plans for 1 000 by 2025, provide Chinese-language instruction and cultural programs, mainly on university campuses worldwide.

Figure 6.2. **Distribution of international students in China's higher education (2005)**



Source: Data from the China Scholarship Council, 2005, <http://en.csc.edu.cn/>.

India's international efforts lag behind those of China. In 2008, approximately 20 000 international students studied in India, most from South Asia, Africa, and from the Indian diaspora. Few Indian universities have either facilities or staff for international students. Some policymakers see a significant potential for India because much of the higher education system teaches in English. However, without significant investment in infrastructure, as well as a more coherent policy, Indian initiatives are unlikely to succeed (Agarwal, 2006).

Of special significance are the respective roles of China and India as regional higher education powers. China is already a key partner with its neighbours in northeast Asia – hosting, for example, 35 000 students from Korea. India, with South Asia's largest academic system, hosts students and has exchanges with Sri Lanka, Nepal, Bangladesh, and Bhutan. Political differences have so far prevented collaboration with Pakistan.

Other countries see China and India as major markets for their higher education initiatives. Foreign involvement is already significant in both countries, and considerable potential for expansion can be envisaged. For example, 11 000 students are studying in China for British academic degrees through various kinds of collaborative arrangements, and 200 British institutions have programs in China. American academic institutions, such as Johns Hopkins University, the University of Michigan, and many others including numerous small colleges, are also active in China. It is estimated that well over 1 000 foreign academic institutions have some kind of collaborative arrangement in China, including two full-fledged branch campuses of British universities (Fazackerley, 2007). At least 150 foreign academic institutions had various kinds of joint-degree or other collaborative arrangements in India, with the largest number (66) from the United States,

second largest (59) from Britain (Helms, 2008). Most collaborations offer professional programs. News reports indicate strong international interest in India, and once legislation is in place the pace of collaboration and involvement is likely to increase significantly.

While China has had legislation in place that regulates foreign collaboration since 2003, India is still in the process of implementing rules. The role of independent branch campuses, ownership of institutions, the role of the private and the for-profit sectors, quality assurance for foreign institutions, the role of franchised overseas degree programs, and other complex issues have proved controversial. A complication in rule making and implementation for both countries are the varying jurisdictions of the central and provincial governments, as well as changing perspectives among policymakers. They seek to maintain control over foreign institutions and programs on their territories while welcoming international involvement (Helms, 2008; Agarwal, 2008).

Both countries, because of their size, the scope of the higher education market, the rise of the middle class, and academic potential, are of great interest to the international academic community. China and India are to play a key international role in higher education – mainly as a source of students and academics and as a place to do higher education “business”. This would require both countries to implement transparent policies and regulations concerning foreign collaboration and involvement, in order to protect their own national interests and ensure quality as well as to clarify arrangements for potential overseas partners.

### **Research universities**

At the pinnacle of any academic system are research universities (Altbach and Balán, 2007), which tend to be the link to the international network of science and scholarship, producers of much of the research in the academic system, and educators of the elites for key positions in society. Countries like China and India, with large academic systems and complex economies that are increasingly knowledge based, would tend to benefit from having a number of research universities that can compete with the top universities worldwide and serve the national academic system and rapidly growing economies. Both countries recognise the need for research universities at the top of the academic systems.

In 2008, neither country constituted an academic powerhouse, although China is moving in that direction. Neither country has a single university in the top 100 of the 2008 Shanghai Jiao Tong University’s academic ranking of world universities, which mainly measures research productivity (SJTUIHE, 2008). China has two (Peking University and Tsinghua University) and India none in the top 100 of the 2008 *Times Higher Education/QS* ranking, which measures academic reputation as well as performance (*Times Higher Education*, 2008). Hong Kong, which is part of China but not integrated into the Chinese academic system, has several universities in the top ranks of these league tables. However, both systems have ambitions to join the top ranks of research superpowers.

For historical reasons, China and India have specialised research institutions that are separate from the universities. In the Chinese case, the research academies are part of the Soviet legacy of academic organisation. Most of India’s research institutes stem from the pre-independence period. The institutes of the academies of science in China have excellent working conditions and generally higher prestige than the universities, and often attract the best talent. The number of research institutes in India is smaller, and their role is not quite so central. Some of the institutions sponsored by the Chinese Academy of

Science (CAS) and the Chinese Academy of Social Sciences offer Master's and doctoral degrees. For example, 30 000 graduate students are enrolled in CAS institutions. Similar institutes in India in some cases offer advanced degrees as well. It is viewed as better to have research and teaching in the same institutions, and some efforts have been initiated in China to integrate the institutes with neighbouring universities.

China has a multifaceted program to build world-class research universities, and well over USD 20 billion in purchasing power parity have been spent on building an elite sector in Chinese higher education since 1990s. At the core are several strategies. A series of mergers of more specialised universities were implemented in the 1990s to form the basis of some institutions, essentially re-establishing the comprehensive universities that existed prior to the Soviet-style changes in the 1950s. The most important effort included two major initiatives supported by the central government: the 1993 211 Higher Education Project that identified 100 universities for upgrading and establishing them as research-intensive institutions; in 1998, at the time of Peking University's centenary, the 985 project was inaugurated, aimed at creating 40 "world-class" universities in China (Liu, 2007; Ma, 2007). The 985 project built on China's existing research-oriented universities in all parts of the country but with the predominance in the coastal provinces and in Beijing. Central government funds were provided for infrastructure, including a number of impressive new campuses, and for a range of interdisciplinary centres and other upgrades. Provincial and other authorities gave additional support. For example, the Shanghai government has supported its four 985 project universities, adding resources to those of the central authorities. In some cases, neighbouring universities were merged, new campuses built, and emphasis placed on the research mission. A few additional universities, supported by provincial governments, have also attempted to join the ranks of the research universities.

China's research universities identify with the top world research universities and especially seek to emulate the top American research universities. In this respect, the Academic Ranking of World University – the Shanghai Jiao Tong ranking – emerged from a benchmarking effort of a prominent Chinese university. The 985 project emphasises graduate programs, interdisciplinary centres, and teaching courses and in some cases entire degree programs in English, publication in recognised international academic journals, and hiring faculty with international qualifications. The current Ministry of Education policy will not expand the number of 985 universities but will rather further strengthen the existing institutions. These reforms have had a profound impact on the top level of Chinese higher education. The infusion of funds has permitted impressive new facilities, including some entirely new campuses, to be built. Re-organisation has emphasised interdisciplinary work. Mergers have in some cases created centres of excellence. New organisational structures have strengthened academic productivity and a more effective career structure. The reforms have also diversified the academic system in general and created much greater inequalities between institutions and sectors. The variations in quality, funding, mission, and other factors between the top and the middle and bottom of the academic system are much greater than prior to the reforms.

India has no world-class research universities (Jayaram, 2007). The global higher education rankings include just a few Indian institutions, mainly the Indian Institutes of Technology, which are not universities but rather small high-quality technology institutions. While a small number of India's 431 universities have excellent research-focused departments and institutes, it is fair to say that few if any can claim overall excellence as research universities. The 25 universities sponsored by the central government tend to be of

higher quality than the 230 state universities. Six of the central and 114 of the state universities have affiliated colleges – some 20 667 in all (Ministry of Human Resource Development, 2009). The highly regarded Indian Institutes of Technology and Indian Institutes of Management and a handful of other specialised institutions are recognised as internationally competitive. The Indian Institutes of Technology, for example, have a total enrolment of around 30 000 combined – more than half at the undergraduate level. But they are all small specialised institutions. Their research productivity, while impressive, is limited by the size and mission of the institutions (Indiresan, 2007).

The Achilles' heel of Indian higher education indeed represents the traditional universities. The state universities, particularly, are characterised by endemic underfunding, political interference, often a significant degree of corruption in academic appointments and sometimes admissions and examinations, and inadequate and ill-maintained facilities (Indiresan, 2007). The tremendous burden of supervising the affiliated colleges saps the energy and creativity of most universities. The University of Mumbai, for example, has 364 affiliated colleges, while the University of Calcutta has 170 and Delhi University 83. Although most of the students are located in the undergraduate colleges, the universities are responsible for examinations of huge numbers – for Mumbai, Calcutta, and Delhi, respectively. It is hardly surprising that the few successful reform efforts in the past half-century have bypassed the traditional universities and have established entirely new institutions, such as the Indian Institutes of Technology. The fact is that unless the traditional universities can be reformed and improved, Indian higher education will not be able to progress beyond the excellent periphery of the Indian Institutes of Technology and related mainly specialised institutions.

While many official reports have called for the reform of university and college affiliation, almost nothing has been accomplished in a half-century. Starting with the University Education Commission (Radhakrishnan Commission) in 1948-49 and proceeding to the 1964-66 Education Commission (Kothari Commission), numerous thoughtful recommendations for higher education reform were made, including proposals to foster research universities, “decouple” the colleges from the universities, and many others. Yet, the reforms have been targeted in establishing, for example, the Indian Institutes of Technology, the Indian Institutes of Management, and other innovations all, while ignoring the traditional universities. A combination of the lack of political will, entrenched academic and at times political interests, a divided political system, and resource constraints have contributed to this gridlock (Jayaram, 2007, pp. 74-6).

Current government plans to build new universities do not address the perplexing problems of reform. Initiatives to establish new Indian Institutes of Technology, central universities, technological institutes, and other institutions also do not grapple with the problems of the existing universities, nor do they indicate how these new universities will improve upon the existing organisation or other practices of the existing institutions. Indeed, the beacons of excellence in Indian higher education are likely to continue to be outside the traditional universities.

China is well on the way to creating world-class research universities and has devoted major resources and considerable planning to them. Significant challenges remain – including building an effective academic culture, academic freedom and other issues – but a very promising start has been made. India remains far from creating globally competitive research universities.

### ***The Academic profession and academic culture***

At the centre of any postsecondary institution stands the academic profession. Without well-educated and committed professors, no academic institutions can be academically successful. China and India, in part because of the scale of their academic systems, face major challenges in developing and sustaining a professoriate capable of providing instruction and leadership. The large number of academics needed for these expanding systems of higher education is unprecedented. Providing training at the doctoral level for a substantial proportion of the academic staff will be difficult to accomplish. Creating and sustaining conditions for academics to do their best work and to retain the “best and brightest” in the profession is also a concern. Finally, establishing an “academic culture” that promotes meritocracy, honesty, and academic freedom is mandatory for a successful academic system.

More than 550 000 full-time academics are teaching in Indian colleges and universities and 1 200 000 in China. An additional 350 000 part-time instructors work in Chinese higher education and a small but growing number in India. The large majority of academics are teachers of undergraduate students and do little, if any, research. Most academics in both countries do not have a doctorate and some have earned only a bachelor’s degree; only 9% have doctorates in China, although 70% hold doctorates in the research universities, and around 35% in India, again with a higher proportion of PhDs in research-oriented university departments. Teaching loads tend to be quite high for those exclusively teaching undergraduates. Conditions for academics in colleges and universities located in rural areas and less-developed regions compare unfavourably with urban institutions. On the other hand, the small minority of academics, probably under 3% of the total, who teach graduate (postgraduate) students and are appointed to research-oriented departments in the better universities, are much better off in terms of remuneration and working conditions. In India, only academics holding positions in university departments and in specialised research institutions are expected to do research. Most, if not all, of these academics have doctoral degrees, often from distinguished universities in the West (Chen, 2003).

China and India face special problems because of the size, diversity, and organisation of their academic professions (Chen, 2003; Jayaram, 2003). Both academic systems have a long tradition of highly bureaucratic university management and major constraints on academic freedom. In the case of India, there was limited academic freedom and great deal of bureaucracy aimed at keeping academics, and students, under control prior to independence (Basu, 1974). China has seen a great deal of societal disruption, including the decade-long Cultural Revolution that closed the entire academic system, and frequent policy changes that have affected the academic profession.

Academic freedom is a central issue in both countries, although India can claim a better environment in this area. In India, academic freedom is official policy throughout the academic system. The problem concerns local adherence to its norms. A combination of overweening administrative power, sensitivity to religious and ethnic sensibilities, and some political inference in academic matters affects academic freedom. Despite these constraints, scholars can in general publish without restriction in academic journals or in newspapers or other publications. Violations of academic freedom are more the exception than the rule.

The situation in China differs considerably, although conditions are improving (He, 2002). Informal yet widely acknowledged restrictions on academic freedom exist in some

fields. Academics, especially in the social sciences and some humanities fields, understand that some areas of research and interpretation are “off limits” and certain kinds of criticism may result in sanctions, including dismissal and on rare occasions prosecution. Academic journals, while providing more leeway than the popular media, exercise some controls over what can be published, and self-censorship is common. As Chinese universities seek to compete globally, academic freedom is becoming more recognised as a necessary part of a world-class university.

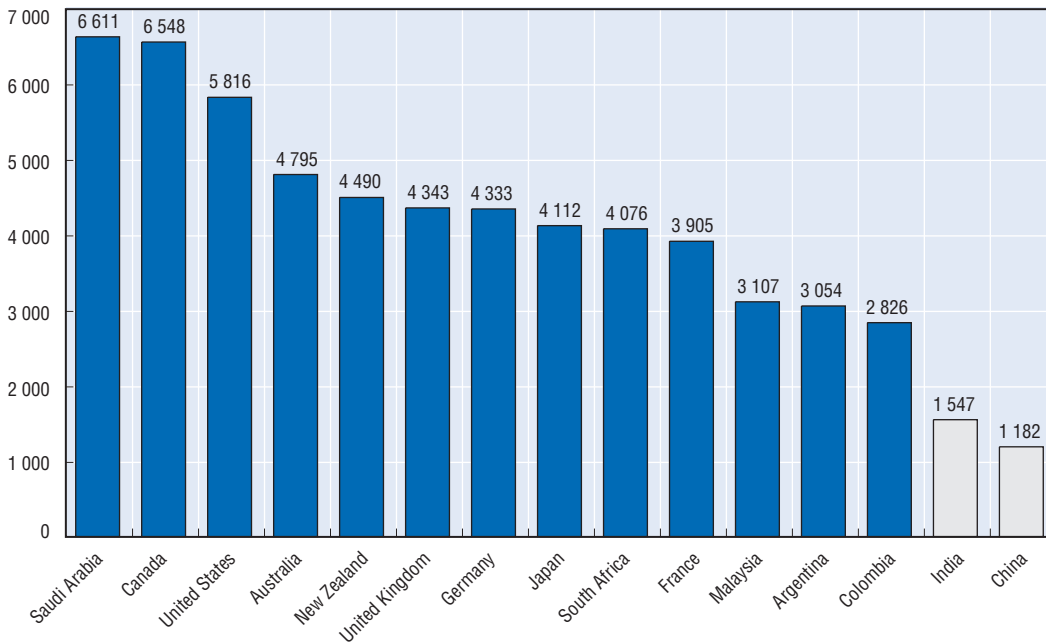
An effective academic culture must be free of corruption. Yet, some problems of corruption exist in both countries. In China, the most visible aspects of academic corruption are in the occasional reports of plagiarism and the misuse and at times falsification of data. In some less prestigious universities, there have been reports of bribery for admission or grades. When discovered, offenders are often humiliated and punished. Yet such corruption seems embedded in academe at least to some extent if one can judge from newspaper and Internet reports. The problem in India is much more widespread and generic, involving some plagiarism and related misconduct. In addition, academic administrators and sometimes professors may practice bribery in the admission of students, falsifying examination results, selling exam questions and answers, and other kinds of malfeasance. Academic corruption is more serious in some parts of India and in some institutions than it is in others. For example, the elite Indian Institutes of Technology, Indian Institutes of Management, and other top institutions have seen very few cases.

In order to build an effective academic system, the academic profession must be adequately paid and enjoy adequate campus working conditions. In a recent international survey of academic salaries, China and India were at the bottom of a group of 15 countries (Rumbley, Pacheco, and Altbach, 2008). At an average of USD 1 182 for China and USD 1 547 for India, salaries were about 25% of US averages and about 30%-35% most western European salaries yet permitting academics in both countries to live in the middle class of their countries. These comparisons are made on the basis of 2008 purchasing power parity. Further, unlike in many countries, most Chinese and Indian academics acquire full-time appointments. Many were able to earn more income through additional allowances. It is noteworthy that Indian salaries are on average higher than those in China, despite India's lower GDP. Moreover, the Indian government has recently announced plans for a significant salary increase. However, the fact that academic salaries do not compare favourably with the remuneration of similarly educated professionals at home or with academics in the developed countries may mean that many of the best-qualified people choose not to work in universities (see for example Marginson and Van Der Wende, 2009). The profession may not be able to retain the “best and brightest” in many cases.

Building an academic culture and providing adequate salary and working conditions for the professoriate are crucial for the entire profession, especially important for the top of the academic hierarchy. Indeed, building competitive research universities requires a reasonably well-paid professoriate with working conditions at least somewhat comparable to global standards, since top academics are part of a global labour market (Pacheco, Rumbley, and Altbach, 2008). China's top universities, such as Peking University and Shanghai Jiao Tong University, have a flexible remuneration policy that can pay top Chinese academics salaries significantly above local norms and in some cases permitting “star” professors to hold part-time appointments abroad. India has no such policies and, as a result, is unable in most cases to attract its best scholars to return home.

Figure 6.3. **Average academic salaries, selected countries**

USD, 2008 PPP



Source: Rumbley, Pacheco, and Altbach (2008).

The common practice in both countries of hiring one's own graduates for teaching positions, while common in many countries, can create problems for building a productive and independent academic culture. The university's own graduates may not be the best possible candidates for positions, and they have been socialised into the culture of the institution and can find it difficult to do their best creative work. They fit too easily into existing departmental and faculty hierarchies. China's top universities have recognised "inbreeding" as a challenge and have put rules into place to stop the practice, but most of the Chinese academic system still uses this hiring practice. Inbreeding is also frequent in India (Jayaram, 2003). Undergraduate colleges affiliated to a university generally hire graduates of that university. In some colleges, applicants for academic jobs can be expected to provide payment to persons hiring them or to the hiring institution – clearly a corrupt practice.

Both countries have elements of an effective academic culture in some of their top institutions as well as in other parts of the academic system. But the challenge remains to embed a transparent and competitive academic culture to reward merit in hiring and promoting academics up the ranks. Petty corruption persists at some institutions, as do overly bureaucratic controls, formal and informal limitations on academic freedom, the practice of inbreeding, and other problems. These issues hinder creating a world-class academic culture.

## 6.4. Societal challenges

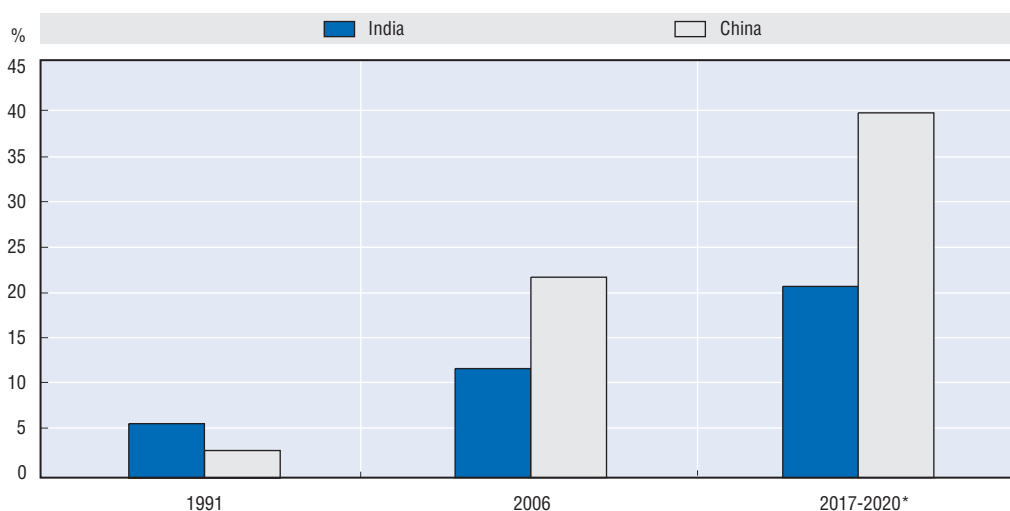
### **Access and equity**

The population of China exceeded 1.3 billion and that of India 1.1 billion in 2007 (World Bank, 2008b). One of the greatest challenges to higher education in both countries consists of providing access to the growing segments of the population demanding



postsecondary education. A related issue is providing equity to population groups underrepresented in the student population. At present, India is still at the “elite” stage of access, with 12% higher education gross enrolment ratio in 2006, up from 6% in 1991 (World Bank, 2008a ). The government has recognised the need to expand access to from 10% (Trow, 2006) to 15% of the age cohort during the 11th Five-Year Plan (2007-12) and to 21% by the end of the following plan, in 2017. This expansion would be the largest in India’s history and will require a dramatic growth in institutions as well as expenditure. China, already at a 22% participation level in 2006 against 3% in 1991 (World Bank, 2008a ), is approaching mass access. It builds from a higher base, but significant expansion will take place as well. In 2005, the minister of education indicated that the participation rate would be 40% by 2020. Indeed, the majority of the world’s enrolment growth in the coming two decades will take place in just these two countries (Kapur and Crowley, 2008).

Figure 6.4. **Higher education participation in China and India (gross enrolment ratio 1991-2006, official targets for 2017 and 2020)**



\* Official targets

Sources: World Bank (2008a); Kapur and Crowley (2008); Trow (2006).

Both countries recognise the need to focus more on postsecondary education, and they have seen dramatic expansion in the past decade and plan on continued growth in the coming decades. A variety of strategies are evident, and they are similar in both countries. The private sector is a major source of “demand absorption”. The countries have permitted the continuing expansion of private institutions, although both are ambivalent about the conditions under which the private sector should function, the role of for-profit institutions, and other topics (see the following section).

Not the same issue as access, equity involves higher education for population groups that may be underrepresented in the system and includes, depending on the country or region, gender and socio-economic inequalities, rural and urban disparities, and ethnic or other minority groups. The urban and rural divide, both in China and India is immense, with implications for access and equity. In common with many developing countries, a majority of the population lives in rural areas. Even with the dramatic urbanisation in both countries, a substantial majority of the population is still rural, where income, literacy, access to education at all levels, life expectancy, and quality of life measures are all lower

than for the urban areas. Access to higher education is dramatically lower, and quality tends to be lower as well.

Equity is in many ways a more difficult challenge than higher education access. Historically, equity has been a major concern of Chinese and Indian government planners. Many of the top universities have regional quotas so that applicants from all over China can get access. In the past few decades, equity has become a less important priority than access. In higher education as in other aspects of the society and economy, the disparity between the affluent coastal areas and the vast interior is significant. Rates of access to higher education in western China are significantly lower than in the coastal provinces and the large cities, as is the overall quality of the universities (OECD, 2007b). Fewer data are available concerning access rates for China's minority groups and disparities according to gender or social class. From the beginning of the People's Republic, China has devoted considerable attention to these inequalities by encouraging expansion of access in western China. In the 1980s, loan programs were implemented to permit students from poor backgrounds to participate in higher education. However, major inequalities persist. It is possible that the continued prosperity in the high growth regions of the country may raise inequalities, although data are unavailable.

The most controversial issues in Indian higher education include the array of policies aimed at improving access and equity for tribal groups, lower castes, and *dalits* (a self-designation of the traditional "untouchable" or lower groups in the Hindu caste system). Policies relating to what in India is called "positive discrimination" are politically charged and often the subject of acrimonious debate, legal acrimony, and litigation. Since independence in 1947, positive discrimination, also called reservations, throughout the public employment system and in higher education in India has meant that *dalits* and some additional lower castes (known as Other Backward Castes) and tribal groups have proportions of seats in colleges and universities, positions in the civil service, and some other sectors reserved for them. This means that postsecondary institutions are required to hire, and enrol, a fixed percentage of these groups – almost half of the total. While positive discrimination has been a policy of the Indian government for decades, a considerable debate is still under way about both the justification and the effectiveness of the policy. Positive discrimination has been claimed as largely ineffective in raising the status of the groups it is intended to help and a mistaken social policy in a meritocratic society (Mahajan, 2007). At the same time, court orders have expanded the scope of the "reservation" system to institutions, such as the Indian Institutes of Technology, where it was not fully in place before. A 2008 government decision mandating that the Indian Institutes of Technology, seen as bastions of meritocracy, must hire professors according to the strictures of the positive discrimination laws has renewed debate about the policy in general.

In many parts of the world, despite years of policy innovation, equity remains a key dilemma and access still of concern for some social groups. For China and India, as well as other countries, access is in some ways the easiest problem to solve. Permitting the expansion of the private sector, various kinds of affirmative action programs, building postsecondary institutions in remote areas, providing financial incentives to students from disadvantaged groups, and other policies have helped to varying degrees. But inequality remains a characteristic of higher education systems, and China and India are no exceptions. Their challenges are greater in scale than those facing other countries only because of the large populations and the combination of disadvantages endemic in their societies.

### **Private provision**

Worldwide, private higher education is the fastest-growing segment of postsecondary education (Altbach, 2005). China and India both have significant private higher education sectors, even though China's private higher education sector remains a relatively small part of total enrolments and number of institutions. About 4 300 000 students attend private postsecondary institutions – 1 600 000 in private universities, 1 800 000 in second-tier colleges of public universities, and 870 000 in other kinds of institutions (China, Ministry of Education, 2007). In addition, there is a large private vocational sector, and many of the private institutions are not authorised to grant degrees. A small number call themselves universities, and a smaller proportion has been awarded the right by the Ministry of Education to offer university degrees. Some of the new private schools are nonprofit entities, while others are owned by business enterprises, families, or other arrangements. While accurate statistics concerning the total number of private institutions in all categories – including many that are not authorised to offer degrees – are unavailable, the number is well over 1 000. Permission to establish private higher education institutions has occurred relatively recently, between 1982 and 1986, and most private institutions have been in existence for only a decade or two.

Semiprivate colleges have also been established. Some Chinese universities, to earn extra income and meet local demand for access, have established private affiliated colleges that have a relationship with the sponsoring university. Classes are taught by regular university staff for the most part. Some problems involve the degrees offered by these affiliated institutions. Many students expected that regular university degrees would be offered, although the actual degrees were not from the sponsoring institution. Conditions of study vary in these affiliated colleges. In some cases, students sit in the same classrooms with regular students, while in others they attend in the evening. In still other cases, the affiliated colleges are entirely different buildings.

In general, the private sector has grown in response to the demand for access to higher education and an interest in some vocational courses that cannot be met by the existing universities. The regulations concerning earning profits from higher education institutions are not entirely clear, and many different arrangements, often far from transparent, seem to be in place. Government agencies try to maintain some quality and fiscal control over the private sector. However, regulations change, and the numbers of institutions have been growing rapidly, problems of management, financial transparency, and quality assurance exist (OECD, 2007b). Nonetheless, the private sector is expanding and is becoming more diversified as a few private universities seek to compete with some of the better Chinese universities. For the present, however, if a student has a choice of enrolling in a public or a private institution, he or she will consistently choose the public institution, not only because of the cost of tuition (ranging between RMB 2 000 and RMB 6 000 in public institutions, against RMB 8 000 and RMB 13 000 in private ones [OECD, 2007b]) but because of prestige as well. A few private universities have partnerships with overseas institutions. This may change in the coming decades as the private sector develops and perhaps partners with overseas universities, but the future is far from clear for the private sector. It is now a visible part of the Chinese higher education landscape and will likely expand to meet growing enrolment demand.

The situation in India is immensely more complicated (Gupta, Levy, and Powar, 2008). Technically speaking, most Indian undergraduate students study in private colleges;

perhaps 95% of these institutions are managed by private agencies such as religious organisations, cultural agencies, philanthropic groups, and others. Many, however, receive significant funds from government sources. These colleges are called “aided” institutions. Other colleges may receive no funding from government. These include many medical colleges (medicine is an undergraduate subject in India). Almost all are affiliated to universities.

A small number of private universities have been approved by state or central government authorities to offer degrees. These institutions do not receive any government funding and rely on tuition and in some cases philanthropic donations for funding. In addition, there are private specialised post-secondary institutions, mainly business schools. Some have degree-awarding authority while others offer only certificates because they lack government degree-granting approval. Almost all are financed by tuition payments.

Several of the older private universities have achieved considerable respect. The Birla Institute of Technology and Science, established in the 1900s and upgraded to “deemed university” status in 1964, is one of the top institutions in the country. Manipal University, founded in 1953 as a medical school, now has 24 colleges and 80 000 students in many disciplines and branches in Nepal, Malaysia, Dubai, and the Caribbean. Several of India’s large corporations are in the process of starting universities, among them Reliance Industries, Mahindra and Mahindra, and the Vedanta Group. They are stimulated, among other things, by a recognition that many of India’s existing universities are of low quality.

The growth of the private sector in India has been dramatic. Currently, 43% of the institutions and 30% of student enrolments are in private unaided institutions (Agarwal, 2009, p. 70). While accurate statistics are unavailable, the large majority of these institutions are for-profit or quasi for-profit, and many are family owned.

The expansion of the private sector has been facilitated by the complex and often dysfunctional regulatory framework for higher education in India. The state governments, along with central authorities, have the power to recognise colleges and universities. For example, in 2002, the state of Chhattisgarh, in a less-developed part of India, suddenly passed legislation for the recognition of private universities; 134 quickly applied and 97 were approved. Most of these were not located within the state but were in all parts of India. Some other states also recognised new private institutions. The University Grants Commission, seeing this anarchic situation, stepped in with new regulations, and after considerable dispute, the Indian Supreme Court recognised the authority of the University Grants Commission over the state governments in 2004. This example illustrates the complexity and the lack of overall direction relating to aspects of higher education policy making in India.

Financial and ethical lapses can be seen in some of the new private institutions. Enforcement of standards is lax and regulatory frameworks inadequate – leaving room for such problems as charging high fees for admission, a practice called “capitation fees” (substantial fees charged at the time of matriculation), tuition fees higher than those allowed by regulations, corrupt practices in admissions, hiring, and the award of degrees, and others. These issues have tarnished the reputation of the private sector (Gupta, 2008).

Private higher education in China and India is expanding. It is already a significant part of the higher education system, and its expansion will continue for a simple reason: the public sector is simply unable to provide the financial resources needed to provide the

access demanded by growing populations. It is likely that the private sector will continue to function mainly at the bottom of the academic hierarchy, will be largely vocational in nature, and, as the economists say, will be mainly “demand absorbing”. Both countries face a significant challenge to create a stable and transparent regulatory framework that provides both ground rules for the private sector and procedures for quality assurance and financial accountability. Questions such as the role of the for-profit sector and whether foreign private providers can link with local private universities and colleges remain mainly unanswered. While a few relatively high-quality private institutions now exist in both countries, fully comprehensive private research universities in the American or Japanese models are unlikely in China or India. The cost of starting and sustaining such universities is just too high.

## 6.5. The future

China and India are already major global forces in higher education (Altbach, 2007). As they move toward international norms of access to higher education, China and India could together be expected to account for over half of the global increase in student numbers. This will mean a dramatic expansion in the academic profession, as well as the need for more laboratory equipment and facilities, advanced computers, and other infrastructure. Some of the demand can be met internally, but it is likely that China and India will look abroad as well. Part of the expansion will be at the level of advanced graduate training. Both countries now have inadequate capacity for producing master’s and doctoral degrees. The cost of adding facilities is high. Both countries will be required to provide significant additional financial support for higher education over the coming decades.

Part of the expansion will depend on the continued growth of the private sector and on distance education. The countries have yet to fully integrate the private higher education sector into the higher education system or to create appropriate regulatory and quality assurance frameworks for the private sector. Some ambivalence about the private sector continues. In the coming years the private sector must be integrated into the mainstream if expansion is to be fully accomplished.

China and India will play a major role in global higher education. These two countries are likely to continue to send large numbers of students abroad for advanced study and are likely to account for more than one-third of the total worldwide overseas student population. It is quite likely that large numbers of Chinese and Indian graduates will remain abroad although the proportions returning home will probably increase substantially given better opportunities for positions at home. Over the past several decades, about 80% of graduates from the two countries have not returned home (Agarwal, 2009). That percentage is likely to drop substantially although the proportion of returning will depend on salaries and working conditions at home. China, especially, has been creating opportunities in its universities for foreign-trained graduates.

Both countries could increasingly become hosts for students from abroad. To attract international students, China is already initiating plans and achieving considerable success. Providing that higher education institutions are upgraded, the Chinese and Indian economies rise in the world economy and these countries are seen as academic centres, students from abroad will be attracted. The largest numbers could be expected come from East and South-East Asia in the case of China, and South Asia in the case of India.

China and India may turn into major markets for higher education initiatives from abroad. As of 2009, both countries are considering a philosophy concerning foreign educational providers and are implementing regulatory frameworks to permit foreign involvement. Expansion requirements and efforts to improve quality can both benefit from international participation, although each country would need to develop a nationally beneficial policy framework for working with foreign providers. The issues are complex (see also McBurnie and Ziguras, 2009; Knight, 2008), and it is as yet unclear how a possible implementation of the General Agreement on Trade in Services (GATS) might impact on national policies (OECD, 2007a).

Will China and India emerge as “research superpowers” and develop world-class research universities in the coming decades? It is quite likely that China will have considerable success in building internationally competitive research universities. The universities developed with assistance from the 985 and 211 projects are making major progress. Continued development requires sustained support. A few globally competitive research universities do not prove that China will become a research superpower, but it will likely join the ranks of the major research-producing countries. Its top universities are likely to be among the key research institutions in the world in the coming two decades if current trends continue. It is much less likely that India will achieve this level of success. Its current top institutions, the Indian Institutes of Technology, and a few others, are too small and specialised to become world-class research universities, and current plans do not show that India is developing a realistic strategy. Despite the use of English as the main academic language and the existence in India of many extraordinarily well-trained and bright scholars and scientists, it seems unlikely that India will have internationally competitive research universities in the coming several decades.

Both countries show signs of making better use of their academic diasporas, as large numbers of often highly qualified Chinese and Indian researchers and scholars are working abroad. This key group can be mobilised to assist academic development and link with the international academic community.

While it is certain that China and India are two of the world’s largest academic systems, it is less clear that these systems will be globally competitive. As noted, China has made considerable progress with its top institutions and India has illustrated with the Indian Institutes of Technology and a few other institutions that high standards are possible. Yet, the overall excellence and effectiveness of the systems themselves need improvement. The problem of quality, and the related issues of whether graduates are qualified for the labour market, remain in question. Generally, the overall standards tend to decline in an academic system that is expanding dramatically. It is rather unlikely that these countries can avoid that phenomenon. It seems that China and India will, at the least, not see significant reform in the overall academic quality of higher education. An effective quality-assurance system can help to ensure standards, but neither country has such a system in place currently capable of overall supervision. The systems will probably become more stratified, with a small number of research universities at the top and very large numbers of fairly unselective colleges and universities at the bottom.

A complex and diversified higher education system that includes some world-class universities is needed for the future economic development of China and India as both countries build more sophisticated economies and require larger numbers of highly educated personnel and research. Future expansion of numbers and institutions can be

anticipated. Qualitative improvement is likely as well, but less assured. It is clear that higher education in China and India will undertake a significant impact both within these key countries and on the global higher education system.

## Note

1. [www.mckinsey.com/ideas/mgi/](http://www.mckinsey.com/ideas/mgi/).

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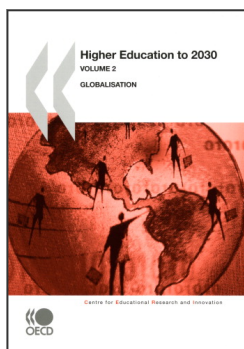


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