Chapter 2
Demands and Policies for Higher Education

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2.1 Introduction

Access to higher education has been growing dramatically across the world since World War II. In 1900, there were about 500,000 students worldwide pursuing higher education; by 2000, they were about 100 million (Schofer and Meyer 2005). In 2011, according to UNESCO's Institute for Statistics, this figure had reached 190 million. Between 1940 and 1960, the number of such students worldwide increased from less than 20 to 40 per 10,000 of the population. Between 1960 and 1980, it more than doubled to 85 per ten thousand, and doubled again in the year 2000, surpassing 160 per ten thousand. This expansion is sometimes explained by the growing demand for high quality human capital in modern economies, but this functionalist interpretation is insufficient. Expansion occurred in both developed and developing economies with most of this growth taking place in nontechnical fields such as the social sciences and the humanities; consequently, in many countries higher education graduates are finding it difficult to get jobs and have to take up occupations requiring lower qualifications or migrate to other countries. Still, the private returns to higher education, compared to those completing only secondary education, tends to be higher in developing countries than in mature economies, making the incentives for achieving higher education very concrete.

Summarizing the detailed analysis of global evidence, Schofer and Meyer (2005) offered as an explanation the combination of different factors. For them, after the Second World War a new model of society became institutionalized, "reflected in trends toward increasing democratization, human rights, scientization, and development planning. This global, institutional, and cultural change paved the way for hyperexpansion of higher education" (p. 900).

The expansion of democratization and human rights, associated with the growing access to mass communications, corroded the traditional acceptance by the

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populations that societies were naturally stratified in terms of wealth and opportunities, that each person had a predefined place in the social hierarchy, and that knowledge and wisdom was a monopoly of a few. Now everyone could aspire to everything and education is perceived as a channel for social mobility and equity. "Scientization," the growing belief on the importance of scientific and technical knowledge for better public policies and the growth of wealth, does not mean that modern societies require everyone to become a scientist. "Development planning," the notion that societies should plan their economy, and, accordingly, the development of its human resources, was adopted initially in the Soviet Union and later in other Communist states, and copied to a limited extent in a few other countries such as France and Brazil, but never acquired much relevance except in centrally planned economies.

These notions did not lead to significant demands on the higher education sector to deliver more scientists and planners, but helped to spread the general perception that societies needed to provide more support and allow higher education institutions to expand. More significant, perhaps, was the role of global institutions such as UNESCO and the World Bank, private institutions such as Ford and the Rockefeller Foundations and many international agencies created in the developed countries after the World War (such as CIDA in Canada, ORSTOM and the French Development Agency in France, GTZ in Germany, USAID in the USA, DFID in the UK, SIDA in Sweden, and others) to deal with the postcolonial countries and bring to them the gospel of education. For many of these agencies, the priority was not higher education as such, but basic literacy and secondary education; but the sheer expansion of general education increased the demand and aspirations for higher levels of learning. More important than anything else, perhaps, was the extraordinary economic growth of Western Europe and the USA, shortly after the Second World War, associated with the expansion of the welfare state, creating a wave of optimism that swept most of the world. If the developed countries could do it now, then for sure the developing counties could also do it in the near future. As Tony Judt described it:

> The state thus lubricated the wheels of commerce, politics and society in numerous ways. And it was responsible, directly or indirectly, for the employment and remuneration of millions of men and women who thus, had a vested interest in it, whether as professionals or bureaucrats. Graduates from Britain's leading universities, like their contemporaries in French grandes écoles, typically sought employment not in private-sector professions, much less industry and commerce, but in education, medicine, the social services, public law, state monopolies or government service. By the end of the 1970s, 60 % of all university graduates in Belgium took up employment in the public services or publicly subsidized social sector. The European state had forged a unique market for the goods and services it could provide. It formed a virtuous circle of employment and influence that attracted near-universal appreciation (Judt 2006, p. 362).

It is this optimism and expanded aspirations, the new education and scientific gospel and the influence of global institutions that combined, explain how the expansion of higher education became a universal phenomenon, which also occurred in the BRICS, but with different timings and intensities, and leading to different responses.

The expansion not only meant that more and more people entered higher education but also that they wanted university degrees, to the detriment of vocational and technical education, which were considered less prestigious and rewarding. The consequence was a trend toward "academic drift," with different types of institutions striving to get university status for themselves and their students (Neave 1979; Van Vught 2008). They aspired not only to the degrees, but also to the market and professional privileges associated with their formal qualifications and considered access to higher education as a right or entitlement to be provided by governments, if possible for free. In societies marked by cultural, ethnic, and linguistic cleavages, the drive for access to higher education often took the shape of demands for cultural and ethnic compensation or special support, to redress historical cleavages so often related to unequal access to educational opportunities and achievements. Another consequence was the spread of academic corruption, with the development of grey or black markets for university access, degrees, and certifications (Heyneman 2007).

None of the governments could attend to all these aspirations, because of growing and unlimited costs and the fact that education is, to a large extent, a "positional" good, in the sense that the advantages of some depend on their relative standing in the educational hierarchy compared to others (Brown 2003; Hollis 1982). Although the social standing, benefits, and job opportunities created by higher levels of education is, to a significant extent, a function of privileges granted to the holders of education credentials (Collins 1979), it depends also, in the long run, on the holder's productivity and the willingness of society to pay for them. As the demand for higher education increased, governments had to pay more attention to how much it was costing and to the benefits it brought to the society.

The responses varied depending on the history, culture, and political regime of each country, but all of them had to face similar problems, including the scarcity of resources and the need to make sure that public and private monies were not being wasted in an oversized Ponzi scheme. They had also to contend with the political power and influence of academics, students, and public employees, very often associated with unions and associations, having strong links with local governments, political parties, and social movements. In all countries, governments oscillated between granting more autonomy to universities or bringing them under tighter control; into pressing them to look for resources in the market or providing them with more public resources; into granting them equal status or selecting a few for higher missions and greater public resources; to require them to link more strongly with the productive system or to allow them to define their own goals and orientations in teaching and research. It is possible to summarize the policy dilemmas in five broad issues: how to deal with the expansion, equity of access and diversification of enrolments, participation rates, number, and types of institutions; how to deal with the fiscal limitations, particularly during periods of economic stagnation or decline; how to regulate the growing market for private higher education; how to make the higher education institutions more accountable to their students, employees, and to the society as a whole; and how to improve and maintain the quality and social relevance of learning and research in higher education institutions (Johnstone et al. 1998, p. 2).

2.2   The Russian Federation

While Brazil, China, India, and South Africa started the expansion of higher education in the late 20th Century from a very small basis, Russia inherited a very elaborate system of higher education from the Soviet Union that was deeply transformed and became more similar to those in the other countries after 1990.

The Soviet Union was perhaps the extreme attempt ever to manage higher education though manpower planning, according to the functionalist understanding of higher education as a factor of production. Most higher education institutions were linked to specific industries, the government would establish what should be produced and by whom, and prepare the human resources needed to achieve the desired outputs. Priority was given to technical personnel, but the soft sciences also had a place. As described by Isak Froumin and Yaroslav Kouzminov in Chap. 6 of this volume, "each important development in the national economy, as well as social and political life was accompanied by a corresponding development in the higher education sector. For example, after the Second World War the government set up 'communist party schools' for training party apparatus and state machinery. Besides, the Academy of Social Sciences was established for training ideologists and social scientists. These institutions had the status of universities. Special institutions were set up for training specialists in diplomacy and foreign trade. Soviet nuclear production and space development programs led to the establishment of two elite universities: Moscow Physics and Technology Institute and Moscow Engineering and Physics Institute and quite a few engineering universities and departments specializing in nuclear physics and space research."

This meant also that, in principle, students did not have to look for jobs: they were assigned to work in the region and sector to which they graduated, without much choice. This functional arrangement was associated with a clear hierarchy of universities: national sectoral universities, linked to specific branches of the economy (e.g., transportation, mining), often subordinated to the specific sector ministries; regional sectoral universities, linked to their respective national institutions; and more traditional universities destined to train local political elites and teachers. In comparative terms, the size of the Soviet higher education sector was not very different from that of the developed countries in the West: 4900 students per 100,000 population in 1990, compared with 4000 in Canada, 3400 in Finland, 3500 in the UK, and 5000 in the USA (UNESCO's Institute of Statistics).

This complex arrangement was already under strain in the 1980s, given the failure of centralized planning. With the collapse of the Soviet Union and the introduction of the market economy, the Russian government had to "reinvent" higher education, as described by Mark S. Johnson in this volume (Chap. 15), in an erratic behavior that went from attempts to grant the universities full autonomy and leave them open to market competition, to attempts to regain full centralized control of the higher education sector. The demise of centralized planning meant, first, that the amount of money to support higher education was drastically reduced; and second, that the traditional manpower planning approach could no longer be used to set priorities that could guide the allocation of existing resources.

In the first 10 years after *Perestroika*, the Russian government allowed higher education to expand with little or no effort to drive it to a specific direction, without much interference and with dwindling support. After 2000, however, under President Putin, higher education gained priority, absorbing 23.1 % of the country's education expenses, up from 16.1 % in 2000, while expenditure per pupil as a proportion of GNP per capita went up from 10.9 to 14.2 % (UNESCO's Institute of Statistics). This new emphasis was associated with several attempts to introduce quality assurance mechanisms and increase the role of the central government in the steering of the higher education sector. The new measures included a sharp differentiation between federal and local institutions, the establishment of a unified entrance examination for higher education in specific fields, and competitive funds for research and innovative institutions. Institutions were also persuaded to work together with public and private corporations, to introduce business-like managerial practices and to look for additional sources of income besides those coming from the government. In recent years the government moved toward the creation of a three-tiered system of higher education institutions. At the top, there was a small number (10–15) highly competitive, federal, and world-class universities. Secondly, 150–200 regional universities were supported mostly by regional governments; and a third tier of institutions were left on their own and destined to disappear eventually. There was also a movement to link the top universities with the research establishment based on the Academy of Science, and to bring Russia closer to Europe, the country joined the Bologna Process of higher education reform (Fig. 2.1).

While, in the Soviet period, most students were directed toward studies in engineering, production, and construction, now about half of them are in the humanities, social sciences, business, and law. On average, a university degree still means a significant increase in salaries compared with those with secondary education (98 % for men, 55 % for women according to one estimate) (Gerber and Schaefer 2004) and also a protection against unemployment, meaning that the demand for higher education is not likely to taper off. There are important differences however, depending on the prestige of the institutions, the specialty, and gender, with the higher benefits accruing to men who are able to be admitted to prestigious institutions and to study full-time and for free.

The Russian Federation is a multinational society, with almost 200 recognized ethnic groups and more than 50 minority languages. One would expect large differences in access for members of non-Russian minorities and residents of faraway regions to higher education, particularly to the most prestigious universities of Moscow and St. Petersburg. However, the existing statistics and documents related to Russian higher education seldom mention these differences, giving an image of social homogeneity and equity of access that is clearly misleading.

This is an ongoing process and its outcome is not clear. Summarizing his detailed overview of these policy changes and initiatives, Johnson writes that "the cumulative effect of these ambitious reform initiatives and new state investments is that while the 'modernization' of Russian higher education is neither as coherent nor as successful as the authorities and university leaders often seem to assert, there are,

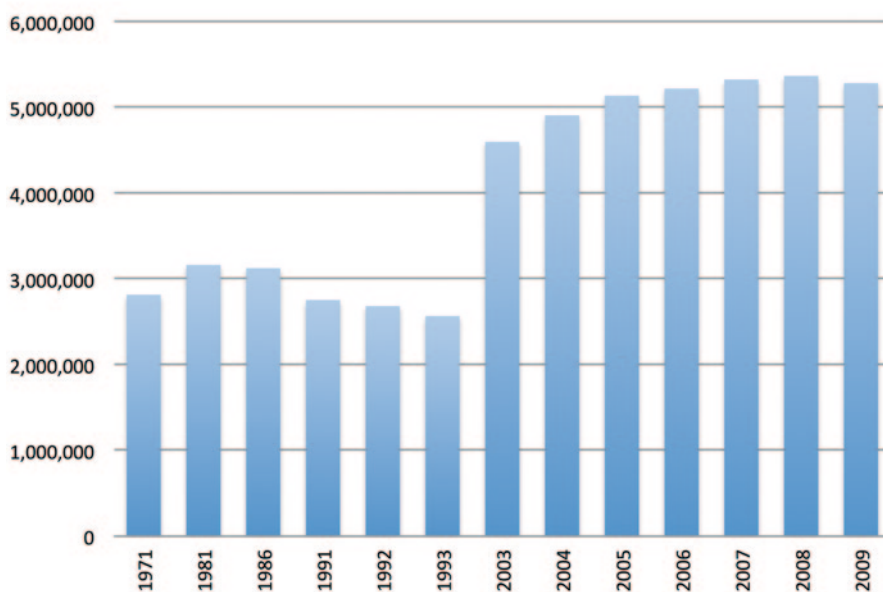## Russia, Enrolments in Higher Education, 1971-2009

Fig. 2.1 Enrolments in Russian higher education (1971–2009). (Source: UNESCO Institute of Statistics)

nonetheless, significant sector-wide changes underway that could prove transformational in the years ahead. If successful, the reformed universities could play a leading role as Russia carves out its own distinctive path towards (re)modernization and integration with the global economy provided, of course, that Russia's chronic problems of overbearing bureaucratic power, intellectual isolation, patron-client factionalism, and institutional corruption can be mitigated or overcome."

2.3   China

Historically, China had a distinguished tradition of sophisticated education and scholarship along the Confucian tradition, with the Civil Service Examinations, which was, however, restricted to a very small segment of mandarins. The Nationalist government since 1911 developed a modern university system that, by the end of the Second World War, comprised 141 higher education institutions enrolling 84,000 students. As described by Ruth Hayhoe, "modern universities were varied in form, but achieved a degree of autonomy and intellectual freedom that enabled them to be an effective independent force in the wartime struggle, contributing in positive ways to national development, yet resisting negative aspects of Nationalist

regimentation. Also in this period, modern higher education finally reached most parts of the country, thereby becoming both more accessible and more connected to its indigenous roots" (Hayhoe 1996, p. 57).

After the Second World War, with the victory of the Communist Party in the Civil War, the People's Republic of China adopted the Soviet model of central planning and functional education, replacing the institutions from the Nationalist period. Most of the population lived in rural areas working on agricultural fields, having limited access to education. With the Cultural Revolution of 1966–1968, most of the newly educated elite that emerged with the new regime lost their jobs and were sent to "reeducation camps" in rural areas, and all secondary and higher education institutes were closed untill 1972 (Deng and Treiman 1997). In 1973, there were just about 200,000 students in higher education, according to UNESCO's Institute of Statistics, for a population approaching one billion people, as reported by the 1982 Census, of which 80 % were living in the countryside.

In the following years, and particularly after the liberalization reforms introduced by Deng Xiaoping in 1979, the country started to change dramatically. By 1990, 26 % of the population lived in urban areas; in 2000, 36 %; and in 2010, the number of urban dwellers surpassed those in the countryside. This movement of hundreds of millions from country to city occurred because of the new life opportunities created in the cities by the economic reforms, which created a market economy that stimulated private initiative. Chinese scholars often attribute these changes to policy decisions of the Communist Party leadership, but it is doubtful that China could remain isolated forever from the changes towards urbanization, industrialization, and education that were happening everywhere; what the political leadership would do, and did, was to try to steer this process as much as they could, while preserving its power.

Higher education expanded very rapidly with urbanization and industrialization. By 1980, there were already 1 million students; 10 years later, it had increased fourfold, to 4 million. As Yuzhuo Cai and Fengqiao Yan write in this volume (Chap. 8), the first move of the Chinese government to reform the higher education sector took place in 1985, but only started to be implemented in 1993, with the launch of the "Outline for Education Reform and Development in China," when the transformation was already well on its way. This reform consisted basically in allowing the institutions to admit more students, in transferring responsibilities for higher education to local authorities and, since 1997, in allowing them to charge tuition fees in public institutions, which created incentives for the institutions to expand enrolment still further. Since then, enrolment continued to expand exponentially, reaching 9.3 million in 2001 and about 31 million in 2010 (Fig. 2.2).

Qiang Zha and Ruth Hayhoe, in their chapter for this volume (Chap. 17), argue that, "in general, Chinese universities are much more closely articulated with national and local development plans and strategies than their Western counterparts. Chinese universities are, to a large extent, the government's educational and research arm for economic and social development," adopting the functional approach to educational policy that seems to have been abandoned in other places. This may have been the official line, but, in practice, this was not done by setting admission quotas and tying the educational institutions to the productive sector,

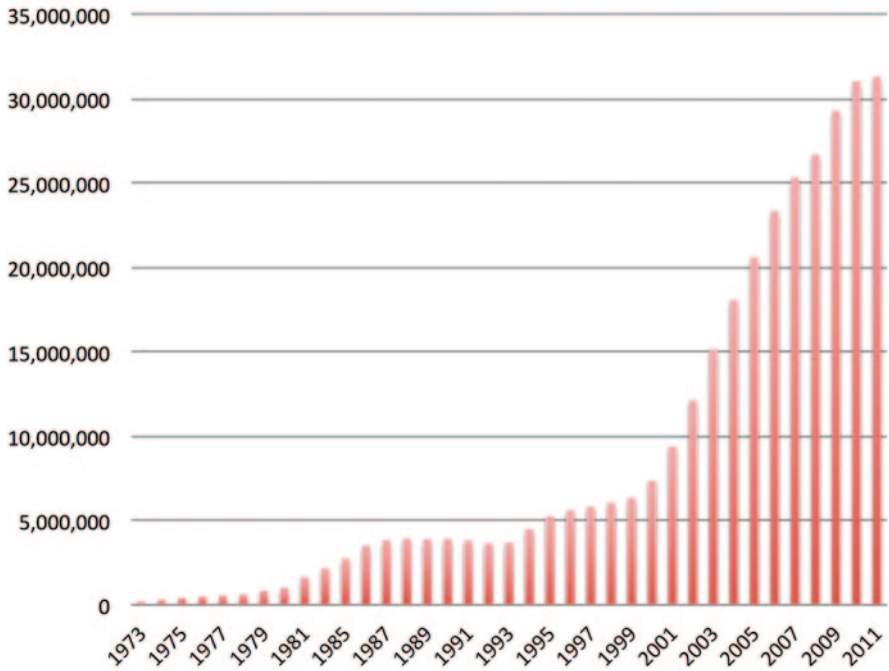## China, Total Enrolment in Higher Education, 1973-2011

Fig. 2.2 Enrolments in higher education in China (1973–2011). (Source: UNESCO Institute for Statistics)

but by "decentralization of steering and management in exchange for institutional performance and accountability, while at the same time tightening its control over normative criteria for knowledge production." The main instrument for this was the division of higher education institutions into four tiers—research institutions, research and teaching institutions, teaching institutions, and application-oriented institutions. Besides, a top tier of about one hundred were selected on a competitive basis for inclusion in the so-called "Project 211," which provides additional support along with expectations for them to reach world standards in the 21st century. Within this group, 39 top universities were selected by "Project 985," which provides financial support at levels similar to leading institutions in Europe and the USA and is largely responsible for the growth of scientific papers published by Chinese authors in recent years. Another instrument was the creation of a unified national exam for admission to the universities, which follows strict meritocratic principles and places the best students in the leading universities (this has a long pre-1949 history, was put in place in "new China" in 1956, attacked in the Cultural Revolution, and restored in 1977).

In spite of all this growth in the public sector, it is remarkable that private institutions are also expanding and that many Chinese students prefer to study abroad

if they can. In 2011, there were about 700 private universities in the country, with over 5 million students, comprising almost 22 % of the total enrolment. These institutions are also under the supervision of government authorities. Private universities largely attract students who cannot get into the upper tier of public universities—some would prefer a private university in an attractive city or with attractive programs over a low-level public university in a more remote area. China is also the country with the most students abroad. According to the Ministry of Education in China, by the end of 2011, the total number of students overseas has reached 2,244,100 and the number that returned was only 818,400, i.e., about 36 %.

Clearly, China has been very successful in expanding its higher education sector, and the eventual problems of quality and access that may exist, are difficult to gauge from the existing literature. Regarding access, there are 56 officially recognized ethnic groups in the country and almost 300 languages. Most of the population belongs to the Han group and speaks Mandarin along with a local dialect such as Cantonese, but there are at least 15 other groups with more than a million members. China has a very complex system of affirmative action instruments providing certain advantages for minorities to access higher education, including specialized institutions for minorities, quotas and additional points given to minority students in the national exams (Postiglione 1999; Sautman 1998). As noted by Sautman, "preferential admissions are mainly practiced by minority institutions. While many predominantly Han institutions of higher learning engage in affirmative action as well, most preferential admissions scarcely, if at all, diminish the opportunities of Han students," since higher education as a whole continues to expand (1998, p. 106). These policies have resulted in benefits for minority students who would not otherwise have the chance to enter higher education but they are probably still underrepresented in the mainstream and higher level institutions.

Regarding quality, there is a perception, discussed by Zha and Hayhoe in this volume, that Chinese scientists and professionals are well trained but lack initiative and creativity, and this is attributed both to the Confucian tradition that gives priority to authority and discipline over independent and critical thinking and to the tendency for narrow specialization inherited by the functionalist view of higher education that still prevails in the country as a result of the early Soviet influence, but it is difficult to say to what extent this is true. The current policy toward academic excellence by the Chinese government tends to value and support quality in very broad terms and not in terms of the functional utility of the knowledge imparted by the universities. At the same time, it is true that few Chinese universities have reached the high, global standards expected of them. The best Chinese universities in the Shanghai Jiao Tong University rankings are all in the 100–150 level, below both the leading Brazilian and Russian universities. Chinese science has grown enormously in recent years in terms of papers published, being the second in the world, but its impact is not very high. According to one estimation by the Royal Society, between 1999 and 2008, "China's citation share rose from almost nothing to 4 %. However, this is dwarfed by the 30 % share held by the USA. Although China ranks second to the USA in terms of publication output, the report found that, in 2008, it ranked only joint ninth in citation numbers" (Peng 2011).
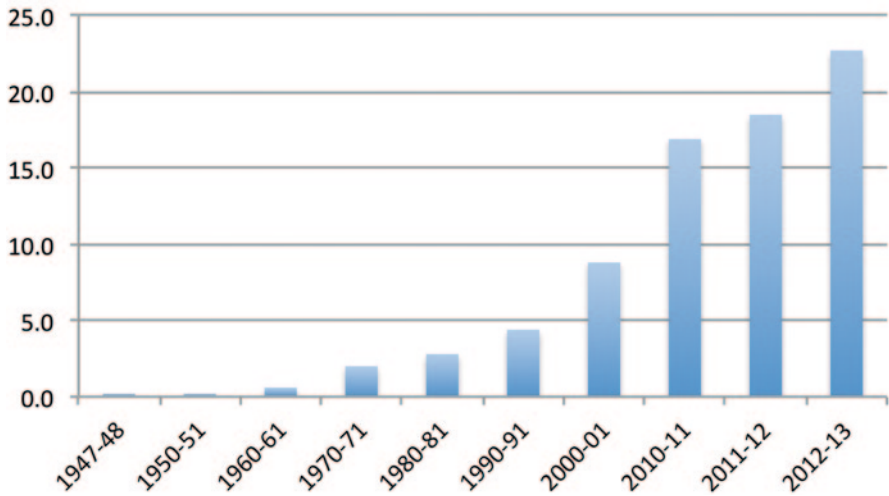
India, Enrolment in Higher Education (millions)

Fig. 2.3 Higher education enrolments in India (1947–2013). (Source: India's University Grants Committee 2013)

2.4 India

Like Russia and China, India is a vast country with hundreds of different ethnic groups and languages, and a strong caste system that, for centuries, has kept social mobility to a minimum. Most of the population lived and still live in the rural areas, about 30 % is still illiterate, and the country never experienced the intense periods of industrialization and urbanization that changed China so dramatically in the last few decades. Over this vast subcontinent, the British Empire created a large administrative bureaucracy and offered to the Indian elites opportunities to study in British universities, and these elites where later responsible for the movement for independence and the organization of India's modern state. In 1950, India had just 200,000 persons with higher education, for a population of about 400 million. By 1970, enrolment more than tripled to 2 million, reaching close to 9 million in 2000, and 22 million in 2012. The gross enrolment rate, of 18.8 %, is still small in comparative terms, but it is one of the largest higher education systems in the world, with about 35,000 institutions of all kinds. About 20 % of the undergraduate students take courses in engineering, with the remaining in arts, the social sciences, and teaching professions, among others (Fig. 2.3).

While in China most of the traditional social privileges associated with education were eliminated with the Civil War and the Cultural Revolution, in India the

social inequalities related to wealth, ethnicity, caste, and gender remained in place
after independence and became central to all different policies that were proposed
or implemented by the democratic governments since then. At the same time, as
elsewhere, the government had to deal with the proliferation of institutions, the
limitation of resources and problems of quality assurance, in an extremely compli-
cated political environment marked by vocal opposition and strong and autonomous
states.

K. M. Joshi (Chap. 7) provides the main data and figures for Indian higher educa-
tion in his contribution to this volume. The proliferation of institutions was handled
by a formal recognition that not all higher education institutions are equal. Besides
the distinction between Universities and Colleges (similar to that of the USA and
England), universities are divided into Central, State, and "deemed" institutions
(created by executive order and not by state legislation), and except for the central
national institutions, can be public or private. Of the 690 existing universities, 48
are central, 60 are considered of national importance, and the remaining are either
private or under state governments.

Public expenditure for higher education, at about 1.2 % of GNP, is not small by
international standards, but far from enough, given the size of the sector. Public
universities are allowed to charge tuition fees, but do not raise more than 10 % of
their income from this source. This means that most public universities, particularly
at the state level, are underequipped and academic salaries are among the lowest
(Rumbley et al. 2008)

At the same time, private higher education institutions are growing fast, enroll-
ing almost 60 % of the students. As described by Roopa Desai and Sheila Embleton
(Chap. 6) in this volume, citing different sources:

> There has been de facto not de jure expansion of the private higher education system in
> India. This is of particular relevance as the sector has grown the fastest and now accounts
> for 2/3 of all colleges, 4/5 of all professional schools, and 1/3 of general program colleges.
> The impact of the growth of private higher education institutions is greatest in professional
> programs where, for example, private engineering colleges, which accounted for 15 % of
> all engineering colleges in 1960, had by 2003 come to represent 86 %. Similarly, private
> medical colleges went from about 7 to 41 % of the total pool of medical colleges and private
> business colleges to close to 90 % of all business schools.

Some of these institutions receive support from the government and work, in prac-
tice, as charter organizations. Others depend entirely on private resources they can
raise and are subject to intense criticism from many sectors. This is partly because
they are teaching-only institutions, with no research and development facilities, and
are profit-oriented. In India, as elsewhere, there is a general view that higher educa-
tion is a public good and should not be guided by market considerations. The fact
is that most public institutions do not involve in any research and development
either, and the private sector has created possibilities of access to higher institutions
while the public sector could not. Today, like in Brazil, the private sector in India
is a huge business. Triolokekar and Embleton state that "the demand for higher
education and related services being in surplus of supply, there are high returns to

be expected from investing in this sector. Thus, there has been a growth of private higher education not only in degree-granting colleges and universities, but also in parallel educational services, vocational schools, diploma and certificate programs, and extremely popular coaching and testing preparatory centres." Again, this is very similar to Brazil, where some of the largest private institutions that exist today started as coaching institutions preparing students for the competitive entrance examinations to prestigious public universities. Another important and recent development is the expansion of distance education, provided mostly by public institutions such as the Indira Gandhi National Open University and State Open Universities. The estimation is that 22 % of the enrolment in higher education institutions in India are in distance education programs.

Affirmative action is a central theme in India's higher education, with great attention being paid to the relative exclusion of women and members of what are called "Scheduled Castes" and "Scheduled Tribes." According to Joshi, "the central government has reserved 7.5 % of seats in higher education institutions for Scheduled Tribes and 15 % for Scheduled Castes. The percentage of reservation varies across the States in accordance with the population of these groups in respective States (…). Along with reservation, the government provision of scholarships, special hostels, meals, book loans, and other schemes exclusively for SC and ST students have encouraged the participation of these groups." It has been argued that, since access to higher education, and particularly to high quality and prestigious institutions, depend on previous achievements in secondary education, the government should invest more in the improvement of general and secondary education, allowing the higher education sector to be more competitive and meritocratic. This is being done to some extent, although the quality of general education still leaves much to be desired. Besides, for India, given the discriminatory nature of the caste system and the cultural isolation of minority tribes, improvement in basic education would not be enough to provide equal access for persons from these sectors to higher education and there are studies showing that these policies have indeed created opportunities for access that would not exist otherwise, although it is true that most of the beneficiaries of the affirmative policies are members of the "creamy layer" of the SC and ST communities (Weisskopf 2004). There are no gender reservations, however, and the gender gaps that exist are related to deep cultural characteristics of India that may vary from one region to another.

India has a few high quality institutions, as witnessed by the country's impressive achievements in different fields of science and high technology, but the general quality of its higher education system is considered low. To deal with this problem, in 1994 India established a National Assessment and Accreditation Council (Stella 2002) as well as an extremely complex web of policy institutions, often with overlapping responsibilities. Again, described by Triolokekar and Embleton (Chap. 16):

> India has 13 professional and vocational regulatory bodies, in addition to the All India Council of Technical Education and the University Grants Committee. The large number of bodies, each with its own reporting structures, some of which report to other Ministries (i.e., not the Ministry of Human Resource Development), makes for a complex regulatory structure, one that works against a cohesive and coherent policy approach The mandates of

these regulatory bodies are expansive and they enable control of all aspects of institutional governance—financial, administrative, and academic. The result is a lack of academic freedom and institutional autonomy, as many activities such as hiring of faculty/administrators, setting of salaries and fees, curriculum and testing, and many more aspects of higher education are centralized and standardized by these regulators (…) What has made matters worse is that this already complex regulatory system has also been plagued with political interference and unethical and illegal practices….

Internationalization, for India, is not a new issue, given its recent past as a British colony. Most institutions are organized according to the English model and English is adopted as the teaching language in higher education institutions. All academic publications are also in English, freeing the country from the dilemmas and problems of publishing in the local language, as in Russia, Brazil, or China. There are many advantages in this adoption of English, making it relatively easy for foreign higher institutions to settle in India, to export different kinds of services worldwide (including those of the hugely successful IT sector), and to send Indian scholars to study and work abroad and to bring them back.

At the same time, only a few hundred thousand Indians have English as their native language. Hindi, with its different dialects, is spoken by 40 % of the population, and the remaining speak more than 1600 languages, 12 of which have more than 10 million speakers. Although the teaching of English is widespread and most of the population knows the language to some extent, it is difficult to estimate how many are actually able to read and understand English enough to read books and follow classes at the higher education level. Proper mastery of English, strongly related to family culture and access to good quality basic education, is a huge differential in Indian society today and is a strong determinant of who gets access to the best education and the best jobs.

The colonial past and access to the English language helps to explain also the large number of educated Indians going to study and staying abroad. Another factor may be the restrictions on access to the best institutions for students coming from higher castes because of the policies of reservation. In 2012, there were 200,000 Indian higher education students abroad, of which 103,000 were in the USA[1], the largest in the world after China. This group is just a small part of the huge Indian Diaspora, which is strongly skewed toward highly skilled persons. According to a recent report:

The number of Indian migrants, especially those with qualifications, has progressively increased. In 2010, India recorded 11.4 million departures: the second highest number of emigrants after Mexico, with 11.9 million. In absolute terms, India is one of the main suppliers of qualified personnel to international markets. The country's skilled human capital abroad is highly varied and covers almost all fields of activity, though there is a prevalence in IT and the medical sector. India is also a prime supplier of one of the primary sources of skilled human capital, i.e., students. Along with China, it is the main exporter of international students. (Giordano and Terranova 2012; Hawthorne 2008; World Bank 2010)

Indians abroad send a considerable amount of money to their families in the country, and in recent years, with the liberalization of the Indian economy on one hand,

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[1] http://www.uis.unesco.org/Education/Pages/international-student-flow-viz.aspx.

and the economic downturn in the USA and Western Europe on the other, many high-skilled Indians have decided to come back, the estimation being that more than 100,000 Indians returned to their homeland in 2010 (Giordano and Terranova 2012).

To bring some coherence to its policy, the government recently put forward a proposal to establish a unified body for the whole higher education sector, a National Council for Higher Education, a project that was however abandoned in 2013, after not getting the approval of the Parliament. Scholars debate whether, with this institutional paraphernalia, India's higher education policy is adrift or headed in some specific direction. Trilokekar and Embleton argue that "a closer look at the higher education policy in India over the last five or more years would not support Tilak's claims (Tilak 2010) that there is a vacuum in the higher education policy in India, or that the hallmark of Indian policy is in fact the absence of a clear, coherent, explicit, and long term policy perspective." In their view, although the field of higher education is unavoidably controversial and subject to conflicting interests and often contradictory policies, particularly in a democratic society such as India, there is, however, a sense of direction, marked by the growing centrality of concepts such as the knowledge economy, economic competitiveness, and concerns with the needs of the labor market, which rationalizes specific policy initiatives such as the promotion of innovation, autonomy, privatization, and investment in world-class universities.

A more negative view, expressed by Kapur and Mehta (2004), is that India's higher education is drifting toward privatization, not as a deliberate policy but as a consequence of policy and institutional breakdown. For them:

> Instead of being part of a comprehensive program of education reform, much of the private initiative remains hostage to the discretionary actions of the state. Consequently, the education system remains suspended between over-regulation by the state on the one hand, and a discretionary privatization that is unable to mobilize private capital in productive ways. The result is a sub-optimal structuring of higher education. The most potent consequence of this is a secession of the middle class—ironically the very class whose interests these institutions were supposed to serve—from a stake in public institutions. (Kapur and Mehta 2004, p. 2)

2.5   South Africa

More than in India, higher education policies in South Africa are centered on the issues of race and affirmative action, for very good reasons. The history of South Africa is marked by centuries of white colonization and wars in a vast territory populated by different African societies that culminated in the Apartheid project that, between 1970 and 1993, took to the extreme the intent of building a modern nation-state based on race dominance and race discrimination. As described by Posel:

> Apartheid (…) was never an exterminationist project—unlike other systematically racialised regimes such as the Nazi state. On the contrary, one of the abiding imperatives of apartheid was to keep (most) black people alive, albeit under conditions of perpetual servitude and submission, so as to keep the structures of white supremacy intact. This did not

exclude—indeed, it was inextricable from—tactics of violence and brutalisation. Racialised terms of access to health services—worst for black people in rural areas—also created conditions of neglect and disinterest for the most vulnerable and marginal, whose lives counted for little. But in the main, black life remained the condition of white prosperity, and the apartheid project proliferated myriad laws, regulations and proscriptions designed to sustain and regulate the conditions of black life accordingly. (Posel 2011, p. 322)

South Africa under apartheid was not composed of "two nations" living separately, but one society with complex links and strong hierarchies among different sectors of the population. While large sections of the African population were left marginalized and contained in their "homelands," others were brought to work in the modern economy created by the white settlers and had limited access to social services, including education.

The first South African university, the University of the Cape of Good Hope, was established in 1873, and in 1918 was incorporated into the University of South Africa, created as an "examining university," along with two other teaching universities, Cape Town and Stellenbosch. They were followed by Rhodes, the University of the Witwatersrand (1922) and later the Universities of Natal, Pretoria, Potchefstroom, and Free State. Most students in these universities where white and the main alternative for blacks and coloreds willing to continue their education was the University of Fort Hare, established by Christian missionaries in 1916. Starting with the Bantu Education Act of 1953, the South African government created a Black Education Department housed in the Department of Native Affairs that led, in 1959, to the creation of segregated black educational institutions (including the University of the North, University of Zululand, Medical University of South Africa, Vista University, Mangosuthu Technikon, and Technikon Northern Transvaal) while limiting the access of nonwhites to the traditional universities. By the end of Apartheid in 1994 South Africa had 21 public universities and 15 Technical Colleges (Technikons), some for white English speakers, others for Afrikaners, one for coloureds, and others for the black population.

The expectation from the white rulers was that the segregated institutions would educate a black elite who would be properly trained and be submissive to the political regime. The "bush colleges," however, had the opposite effect—as more Africans entered higher education, these colleges became the breeding ground for student mobilization and activism against the apartheid regime. As described by Reddy in his 2004 report to the Council of Higher Education:

> The development of black universities, increased student numbers, and the repressive and conservative cultures within these institutions failed to successfully establish social control in keeping with the visions of the architects of higher education planning. Ironically, the growth of black university student numbers between 1960 and 1976 studying courses in the humanities and education, the repressive conditions on the black campuses, and the conservative stance of the teaching staff created the conditions that contributed to student unrest. After an initial period of passivity, increasing student frustration and alienation produced student organisations and campaigns for university reforms. (Reddy 2004, p. 19)

In dealing with higher education, the African National Congress (ANC), that became the first government of the democratic South Africa, had to reconcile different and sometimes contradictory goals. Coming from the left, in partnership with

the Communist Party, the new ANC government was imbued by the importance of planning and had a functional view of higher education, as an important contributor to the country's economic development. At the same time, it had to give priority not only to ending the apartheid legislation, but also to developing policies to reduce the racial imbalance in accessing higher education, particularly in the better-endowed and more prestigious institutions, and to invest more resources into the formerly neglected black universities. Finally, although the government was firmly convinced of the importance of government planning and centralization, there were also strong claims in South African society for more decentralization and the interplay of market forces, not only in the business sector, but also in higher education.

One of the first measures of the new government was to establish a unified national Department of Education, placing the universities under the same jurisdiction and eliminating the racial barriers. This did not mean, however, that actual segregation disappeared. Predominantly white institutions such as Stellenbosch, Cape Town, and Rhodes remained so, while few whites enrolled in traditionally black institutions. There were cultural and geographical reasons for that, but most important was that the end of apartheid did not mean the end of the large economic and educational differences that existed between the whites and most of the black population and there were just not enough black applicants that could compete with whites in the selection procedures for the most prestigious universities. Affirmative action, with all its pros and cons, became a central policy in all aspects of the Republic of South Africa, reducing to some extent the racial imbalances, but also being open to criticisms for favoring just the "creamy top" of the black population, and risking making race credentials and identity more important than proven merit and competence (Alexander 2006).

A series of documents, white papers, and government bills shaped the new South Africa's attempts to deal with these issues. They include the 1994 African National Congress' comprehensive "Policy Framework for Education and Training", before the elections; the 1997 "White Paper 3: A Programme for the Transformation of Higher Education" and the Higher Education Act of the same year; the 2000 report of the Council for Higher Education Report, "Towards a New Higher Education Landscape"; and the 2001 National Plan for Higher Education, which led to the "Size and Shape" decision to merge the formerly segregated institutions into a small number of more integrated universities.

Between 1995 and 2012, higher education in South Africa increased from 500,000 to 900,000, a relatively low growth if compared with that of Brazil, India, or China. The participation rate is currently estimated to be 17.7% of the relevant age group, far from the official expectation in 1995 that it would reach 30% in 10 years. Summarizing the main trends, Kirti Menon, in her contribution to this volume (Chap. 9), notes that, "between 1994 and 2010 there has been a 200% growth for African students. Despite the growth, the participation rate of African students was 12% in 2011" and concludes that "the pace of higher education growth in relation to growth in population for the age group 18–24 is not synchronized at all. It is clear that massive investment in higher education would be required to sustain

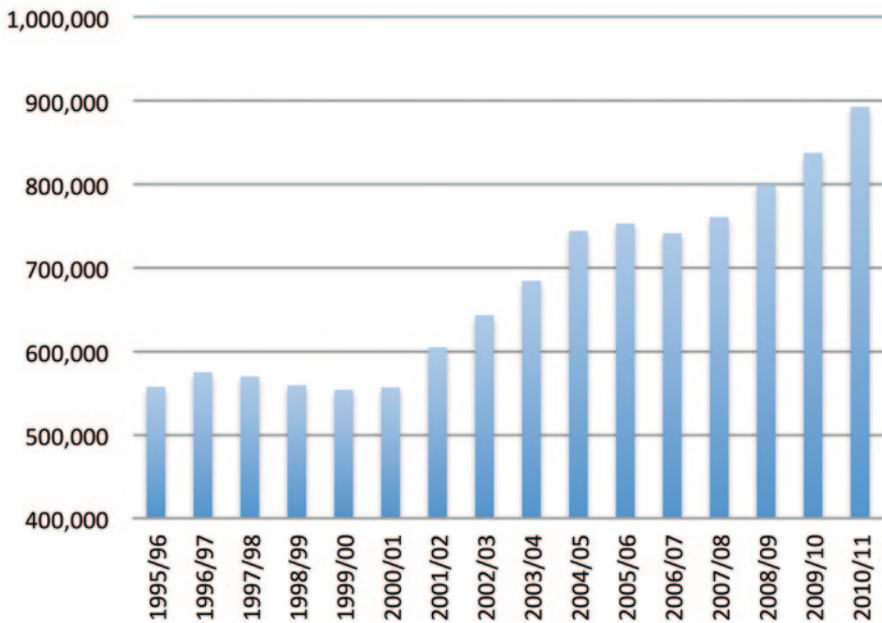# South Africa, Enrolments in Higher Education

Fig. 2.4 Higher education enrolments in South Africa (1995–2011). (Source: South Africa Higher Education Management System (HEMIS))

growth though it is not evident that the inflows from the school system would provide the required outputs" (Fig. 2.4).

These gross figures, moreover, do not reveal that almost half of the higher education students are in distance education programs, provided mostly by the University of South Africa, which boasts a student body of 350,000. Graduating rates have been very low and most students enroll in the social sciences because they are cheaper to provide and easier to attend, particularly for those coming from poor and less educated backgrounds. Public investment in higher education has not changed significantly during the period. There is a growing debate in the country about the funding formula used by the government to support the higher education institutions, as well as about the tuitions charged by the universities to the students, with a growing demand for free higher education, in spite of the existence of financial aid for poor talented students (Wangenge-Ouma 2012).

As in other developing countries, private higher education also grew in South Africa in recent years, although not to the same extent as in Brazil or in India. Citing different sources, Michael Cross, in this volume (Chap. 18), states that "the number of private schools increased from 518 in 1994 to around 1500 in 2001, while more than 100,000 students were registered in 145 private higher education institutions

by 2004. The market of private providers is mostly concentrated on further educa-
tion and training and restricted to commercial and business curriculum and do not
pose any significant competition to the public sector." Another important trend was
the migration of highly qualified South Africans, particularly white, to study or
work abroad. There are no reliable figures on this, but data gathered in 1999 showed
that "a significant brain drain is underway. A total of 24,196 professionals emi-
grated from South Africa in the period 1994–1997" (Kaplan et al. 1999). This was
not a new phenomenon, since many persons left South Africa for political and eco-
nomic reasons in the years of apartheid, but according to this report, emigration has
increased since 1994. It was further estimated that between one-eighth and one-fifth
of South Africans with tertiary education now reside abroad. A more recent figure
is that there were at least 590,000 individuals born in South Africa living in the 19
OECD countries, particularly in the UK, Australia, the USA, and Canada. Accord-
ing to Politicsweb, the Internet site that compiled these figures, "the major push
factors, particularly for white South African emigrants, have traditionally been put
down to high levels of violent crime (often personally experienced) and the racial
employment policies of the African National Congress government. To these one
could perhaps add the growing evidence of state decay and a resurgence of demands
by ANC politicians for something to be done about continued white wealth."[2]

For many who did not leave the country, one alternative was to study in a private
institution. Most private higher education in South Africa is for profit. Summarizing
an extensive analysis of the country's private sector, Daniel C. Levy points out that
"the successful commercial private institutions place students at the core. Students
are consumers with power of choice and purse. Managers and owners run the in-
stitutions to attract the students and of course to make money through efficiency.
This leaves faculty, overwhelmingly part-time but ideally with valuable practical
expertise, without the power they have in classical universities. Their role is largely
to fit in to the curriculum and other institutional dynamics of practicality. South Af-
rica is not a private higher education world leader in the sense that other countries
have looked to emulate its example. But it stands near the forefront of global trends
in commercial private higher education that emphasizes profits and practicality."

2.6   Brazil

With a population of 200 million, Brazil is also a large country, with high levels of
social inequality, but without the multiplicity of nationalities and languages that are
a common feature of China, India, Russia, and South Africa. Brazil was a Portuguese
colony from 1500 to 1822. When the Portuguese arrived they found a large native
population speaking different languages and dispersed in an extended tropical ter-
ritory, without having ever developed the complex agricultural economy, political

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[2] http://www.politicsweb.co.za/politicsweb/view/politicsweb/en/page71619?oid=318618&sn=De
tail.

institutions, and demographic density that existed among the Maya, Aztec, Inca, and other pre-Colombian cultures in Mexico, Central America, and the Andean region. While in Spanish America the conquistadores forced the local population into submission to work on their plantations and mines, in Brazil the Portuguese either annihilated, assimilated or forced the native population to withdraw to remote areas and remain in isolation (except for a small group that came under "missions" organized by Jesuit priests located in the South of Brazil and in what is today Paraguay, where most of the population speaks Guarani, one of the pre-Colombian languages from Brazil) (Livi-Bacci and Maeder 2004). To work in their sugar plantations in the Northeast and gold mines in the highlands, the Portuguese brought millions of African slaves, making Brazil the largest destination of the slave trade in the Americas (Klein 1999). While, in the Northern countries, the European settlers came with their families and kept the slave population segregated, in Brazil the Portuguese men usually came alone and intermingled with the local women, generating a large, free, mixed-blood population that often outnumbered both the European settlers and their slaves (Klein 1969). The slave trade ended in 1850, and in 1899 slavery was formally abolished, when it was not economically productive any longer. By then Brazil started to receive waves of immigrants from Italy, Germany, and later, Japan, among other countries, who came to work mostly in the coffee plantations in the Southwest and South of the country, moving later to the cities.

This history explains why Brazil developed into a very unequal society, but without clear barriers dividing the population into ethnic, racial, or linguistic subgroups. By the end of the 19th century, Portuguese became the dominant language. The native languages had either disappeared or were limited to small and isolated indigenous groups; the African slaves did not keep their languages except for some religious and other expressions that were incorporated into Brazilian Portuguese and most of the European and Japanese immigrants that arrived in the late 19th and early 20th century also assimilated and did not transmit their languages to their descendants. To get a sense of the ethnic composition of the Brazilian population, the Brazilian Census Office asks how the respondents define their "colour"—white, black, brown, or yellow, the latter divided into native Brazilians and Orientals. In the 2013 national household survey, 46.3% defined themselves as white, 45.0% as brown ("pardo"), 8.0% as black, 0.3% as native Brazilians, and 0.5% as Orientals. Those who call themselves white or Orientals are on average wealthier and more educated than those calling themselves black, brown, or native Brazilians—differences that are strongly related to their social origins and regions of residence, rather than to their biological ancestry (Parra et.al. 2003).

Under the Portuguese, Brazil remained mostly an illiterate country, except for a tiny group of bureaucrats, merchants, and priests. By 1950, 57% of the population of 5 years or more was illiterate. The first higher education institutions were established after independence in the 19th century (a couple of schools of Law, Medicine, and Engineering) and the first universities in São Paulo and Rio de Janeiro are from the 1930s. Basic public education started in some state capitals in the late 19th and early 20th centuries and universal coverage for primary education was only achieved in the 1990s.
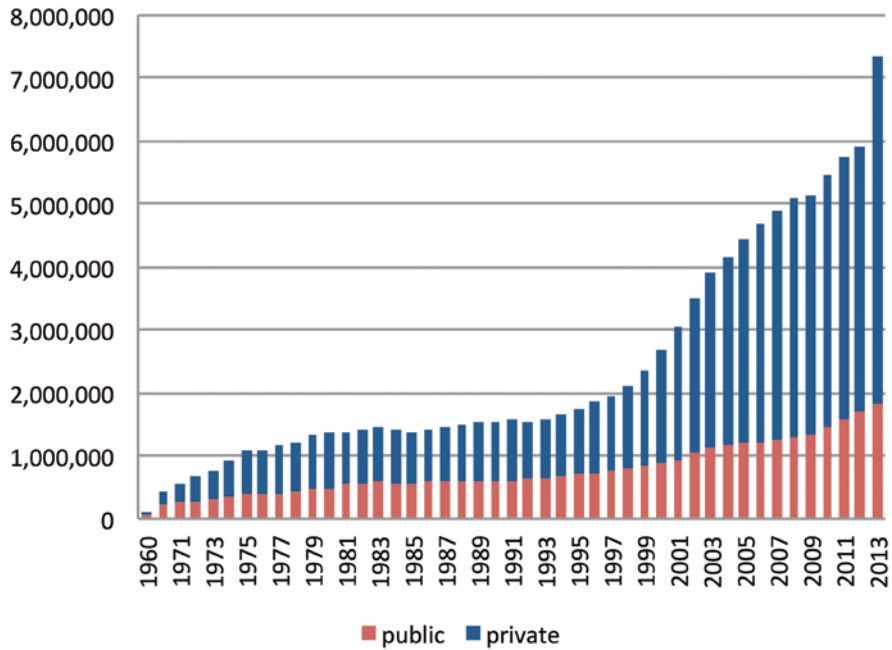
Fig. 2.5 Enrolments in Brazilian higher education (1960–2013). (Source: Brazil, Ministry of Education/INEP)

As the federal government moved slowly to create its own public universities, some states and private groups took the initiative. The state of São Paulo, wherein was concentrated most of the wealth generated by the coffee plantations and early industries, created its own schools of engineering, medicine, agriculture, and others in the late 19th century, and organized the country's first university in 1936, bringing professors from Europe to teach and research in the natural and social sciences. The Catholic Church, already involved in basic and secondary education, created its first university in the 1940s and in many states the local communities organized to establish their own schools of law, medicine, and engineering. As Clarissa Baeta Neves states in her contribution to this book (Chap. 5), Brazil has undergone two waves of enrolment expansion. The first period of significant growth occurred from the mid-1960s to the beginning of the 1980s. Enrolments in 1960 consisted of just 93,000 students, 55.9% of which were in public institutions. In 1970, enrollments jumped to 425,478 students. Out of this total, 49% were in the public sector. Already in 1975, the number of enrolments was 1,072,548 students, about 62% of them in the private sector. As of 2013, Brazil had 7.3 million students in higher education, 75% in the private sector (Fig. 2.5).

The first attempt by the national government to establish a policy for higher education took place in the 1940s, with the ambitious project to create a National University in the Federal Capital in Rio de Janeiro that could become the model to be replicated in other states (Schwartzman et al. 2000). After the Second World War, with the new wave of economic growth and urbanization, the federal government took charge of several small universities created by state and local governments in previous years (except São Paulo) and created a network of Federal Universities that, together with the expanding private sector, was responsible for the first wave of expansion. These universities had to follow the organizational model created at first by the National University in Rio de Janeiro, which soon became just one among other Federal Universities. This model consisted mostly of a collection of professional schools in the traditional fields of law, engineering, medicine, architecture, dentistry, and others, and a Faculty of Philosophy, Sciences, and Letters that was supposed to prepare teachers for secondary education and also to do research (which, in practice, existed only at the University of São Paulo, in some medical schools in Rio de Janeiro and São Paulo, and in some federal research institutions). Teacher-preparation for basic education was done at the secondary level, in "normal schools" that later were upgraded to schools of education. There were no undergraduate colleges in the British or American sense, and no graduate education. University professors were usually professionals who took classes for a few hours a week and derived most of their income from their professional careers. In the public institutions, however, they became civil servants and gradually organized themselves to demand equal payment and other employment benefits.

The second reform took place in 1964, in a very different climate. Brazil was then under a military regime and the capital had moved to Brasilia. In the previous years, university students had participated in left-oriented organizations and the government decided that the Brazilian universities should be modernized. With the help of US advisors (Atcon 1966), the government decided to transform the Brazilian universities according to the American model, replacing the old chairs with academic departments, allowing the students to work for credit instead of following rigid course sequences, creating graduate schools, and requiring the professors to hold a doctoral degree and to combine research with teaching.

A glaring error of the reform was to take the American research university as the model, instead of the community colleges, or a combination of both. Under the new system, students continued to enter the professional schools for course programs lasting 4–6 years and only then could eventually get into graduate education, where it existed. The reformers did not consider that Brazil did not have enough qualified professors to teach full-time and do research and the creation of graduate programs in a haste led to the proliferation of low quality degree holders and the hiring of "provisional" professors who could not be fired from their posts. The civil servant status granted to all academic staff made the Brazilian public universities by far the most expensive in Latin America. But the most serious error was not to have realized that the demand for higher education in Brazil was about to explode and could not possibly be handled by the few expensive public institutions that existed. The solution was to limit access to public universities through very competitive entrance examinations and allow the private sector to expand without much control.

The outcome of the 1964 reform was that Brazilian higher education became, on paper, unified under the single model of the American research university, but, in practice, highly stratified. Some universities came closer to the ideal model, maintaining the quality of their professional schools, particularly after the late 1970s, creating good quality graduate programs in the natural and social sciences. This group included some federal universities and also the state universities of São Paulo, which were better endowed and remained independent but adopted the same model. It also included at least one private institution, the Pontifical Catholic University in Rio de Janeiro, which, for a period, enjoyed federal support for its graduate and research programs. The second tier included most of the federal universities and also state universities that were never able to develop graduate education and worked mostly as teaching institutions. The third group was formed by a large number of private institutions, most of them providing evening courses in one or two social professions (typically law, administration, or education) for low fees, and paying their teachers by the hour. Large organizations could be recognized by the government as "universities," while the small ones remained with the title of "faculties" or "schools." Regardless of their ownership and formal status, all the degrees provided by these institutions are equally valid according to Brazilian legislation. Students with better secondary education, usually from richer families who could afford to place them in good private schools and pay for coaching and training, could get access to the most prestigious careers in the best public universities, which were and remain free from tuition. Poorer students, coming mostly from low quality public schools and often having to work during the day, could only enter the evening courses in the private sector, or at the most, the least competitive courses in public universities, in fields like education and social work.

As Maria Helena Magalhães Castro shows in her contribution to this book (Chap. 14), this disconnect between the legislation and reality created a problem of regulation and quality assurance that could never be solved. Since the 1990s, the Ministry of Education has tried to make the private sector comply with the formal requirements of the research university model, requiring them to have full-time faculty with graduate degrees and to do research, which most of them could not possibly meet. The Ministry also developed an ingenious assessment process for graduating students in different fields (Schwartzman 2010) and used these results, combined with other indicators, to establish a ranking of course programs and universities, threatening to close those that underperformed repeatedly. Both public and private universities were subject to the same assessments, but, while a few private institutions were actually punished with suspension or even closure, the Ministry was powerless to deal with their own universities, which were autonomous, created by law, and staffed by well-organized teaching unions.

As in most other countries, the Brazilian legislation assumed that all private universities were nonprofit or philanthropic, which may have been true for the Catholic universities and some community-based institutions, but was not the reality for most institutions that emerged since the 1980s (Levy 1986). The government decided to recognize this fact and allowed higher education institutions to declare themselves for-profit, becoming therefore subject to taxation, while demanding that

those that remained nonprofit should demonstrate their philanthropic nature. The consequence of this legislation was that the private sector started to consolidate into large business conglomerates, either by buying out smaller institutions or by creating new ones. Some of these conglomerates became public companies with shares in the stock exchange, attracted large national and international investors and adopted modern management and teaching technologies to reduce their costs and standardize their products. Today, five of these corporations are responsible for 20 % of the higher education enrolment in Brazil. They are powerful enough to lobby the Congress and negotiate with the Ministry of Education to make their regulations more flexible and. if needed, can take the Ministry to Court.

In the 1990s, the attempts of the Ministry of Education to reign in the federal universities to make them more accountable and the private sector to make them similar to the public institutions, ended in failure. After 2002, under the populist presidency of Luiz Inácio Lula da Silva, the government chose to put more resources and expand the public institutions and to create a program to exempt the private sector from taxes in exchange for fellowships for low-income students. There was also a decision to create quotas for low-income and nonwhite students in public universities, in an effort to redress the social inequities in access to higher education. In 2012 the Brazilian Supreme Court declared that racial quotas were constitutional; in the same year Congress passed legislation requiring that 33 % of the openings in public universities should be reserved for students coming from public schools, with preference given to nonwhites. Also, between 2008 and 2013, the number of admissions to the Federal Universities increased by 33 %, without, however, reducing the dominance of the private sector, which grew by 43% in the same period much less, however, than (Fig. 2.6).

The impacts of these recent policies are still being debated. There are complaints from the Federal Universities that they were forced to expand without enough resources and preparation and cannot cope with the new inflow of students and professors hired with working conditions that do not match with the previous standards. Supporters of affirmative action maintain that the achievement of these students, once admitted, are similar or even better than those admitted by conventional routes. Critics, on the other hand, argue that courses are being forced to lower their academic standards and that the official use of race in public policy goes against the constitutional principles against discrimination, notwithstanding the Supreme Court's opinion; and also argue that the best policy to increase access to higher education for students coming from low-income families who could not get good quality secondary education would be to provide them with financial support to allow them to study full-time and to open more alternatives for vocational and professional education that are very limited in Brazil and almost nonexistent in federal universities.

Another criticism is that, with all the emphasis placed on the popular issue of access, the government has neglected the issues of academic quality and does not follow the line of other countries that are investing heavily on its top universities, to reach international academic excellence. In fact, the only two Brazilian universities that appear in the international rankings, although not very highly placed, are the University of São Paulo and the University of Campinas, both state institutions

New admissions to Brazilian higher education, by institution ownership, 2009-2013

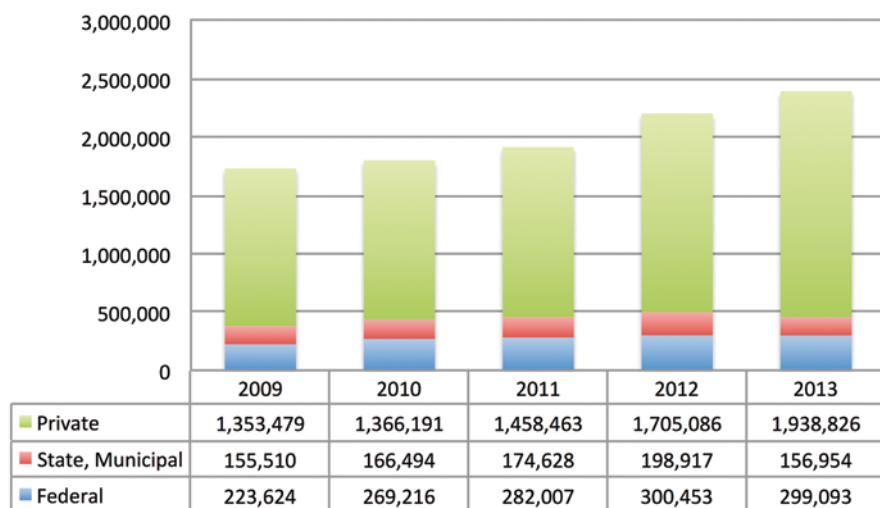|	2009	2010	2011	2012	2013
Private	1,353,479	1,366,191	1,458,463	1,705,086	1,938,826
State, Municipal	155,510	166,494	174,628	198,917	156,954
Federal	223,624	269,216	282,007	300,453	299,093

Fig. 2.6 New admissions in Brazilian higher education, by type of institution (2009–2013). (Source: Ministry of Education)

that were not affected by the policies of the federal government and benefit from generous support from the state government. However, graduate education and research programs in Brazil, even when placed within universities, have their own systems of assessment and support and have shown remarkable achievements in the last few years, producing more than 12,000 PhDs a year and increasing Brazil's share of scientific international publications. This sector is not immune from criticism—the production of patents is very limited, citation levels are low, links between research and the productive system are poor,—but still, Brazilian graduate education and research is by far the largest and most developed in Latin America.

Most of the top-level scientists in Brazilian universities received their degrees from universities in the USA and Europe, thanks to a steady flow of fellowships provided by the Brazilian government as well as by international foundations and foreign governments. In contrast to the other BRICS, Brazil does not have a significant problem of brain drain, there are not many students opting to go abroad for their undergraduate studies, and most of those who go out with fellowships eventually return. Still, Brazilian higher education as a whole is very isolated from the international flow of students, knowledge, and institutions. All the teaching is done in Por-

tuguese, there are few foreign students, it is difficult for a non-Brazilian to become a permanent professor in the country, and Brazilian universities, except for a few elite economics and business schools, do not participate in the international market for talent. Recently, the government announced an ambitious program called "science without borders" which was supposed to send 100,000 Brazilians to study abroad for 4 years that created lots of excitement. A closer look, however, shows that this program was mostly for short stays for undergraduates, with a large number going to Portugal or Spain because of their inability to speak English or French (Castro et al., 2012).

2.7   Conclusions

This summary of the experiences of the BRICS countries, combined with the detailed analyses presented in this volume, shows that most countries, except Brazil, dealt with growth by diversifying their institutions, selecting a few to receive additional support to reach world-class standards, allowing the others to survive with less public resources or to go out to the market to seek resources, and also by allowing the expansion of private higher education institutions. Besides, higher education is usually divided into two main tiers: one, more academic—the universities—and the other, more introductory or vocational—the colleges and technical institutes. In Brazil, in spite of the legislation that assumes that all higher education institutions should adhere to the Humboldtian model of the research university, in reality, they are highly differentiated into a few leading universities and many teaching-only institutions and most of the students are in private teaching institutions, whereas vocational education has not developed. Another trend is the expansion of distance education, particularly large in South Africa, where UNISA is the largest institution in terms of enrolment, but also growing steadily in other nations. It is still too early to assess the impact of the new technologies of the new customized distance learning and the Massive Online Open Courses—MOOCS—in the BRICS, but they are likely to grow substantially in the next few years.

Except Brazil, in the other BRICS, students pay tuition in public universities, with a peculiar situation in Russia where public institutions combine students selected through public exams who study for free with others who are admitted for a fee. One assumption common to all countries is that higher education is a public good that should help the country to develop the quality of its human capital and it is also a right that should be provided by the government to its citizens. It is not easy to fit the private higher education sector in this picture. For most countries, private education can only exist as nonprofit, philanthropic institutions, an understanding that makes sense for religious or community-based institutions, but not when the provision of higher education becomes a business enterprise. In all countries, governments try to regulate and impose quality standards on private institutions, but not very successfully, and both Brazil and South Africa accept that higher education

can be provided for profit. This has led to the creation of education providers, some of them very large, that operate as service companies delivering standardized products to millions of students whom the public institutions cannot accommodate. The private sector in Brazil is responsible for more than 70 % of the total enrolment, combining a smaller segment of nonprofit institutions and also including some elite institutions that compete with the public sector for excellence, particularly in business and economics education. It is also very large in India, but much smaller in Russia, China, and South Africa.

To deal with the social diversity of the students, China, India, South Africa, and Brazil have developed affirmative action policies to facilitate access to higher education for persons coming from poorer segments or ethnic minorities. Russia inherited from the Soviet Union a complex and sometimes contradictory history of policies regarding its national, linguistic, and religious minorities, but currently there is no national policy for affirmative action in higher education (Martin 2001; Roeder 1991). In all countries, these policies are surrounded by controversy, with the recognition that, while these policies allow an increase in access to higher education by members of some groups, creating opportunities that would not exist otherwise, the beneficiaries are mostly persons at the top of their communities, leaving social inequality mostly unchanged.

The assumption that higher education is expanding to provide more qualified human capital to economic and technological development is challenged by the fact that most of the growth in enrolment takes place in the social sciences, the humanities, and the social professions, as well as in education rather than in science, technology, and engineering. To some extent, this trend corresponds to the fact that, except in China, the industrial sector is diminishing in size while the services sector, including education and health, are growing steadily. But it also reflects the fact that many students who reach and have access to higher education are handicapped by very poor schooling and cannot follow the academic requirements of science-based professions.

It is possible to summarize the policy dilemmas in five broad issues: how to deal with expansion, equity of access, and diversification of enrolments, participation rates, number, and types of institutions; how to deal with the fiscal limitations, particularly in periods of economic stagnation or decline; how to regulate the growing market for private higher education; how to make the higher education institutions more accountable to their students, employees, and to society as a whole; and how to improve and maintain the quality and social relevance of learning and research in higher education institutions.

Finally, the issue of internationalization has been very high on the agenda of higher education in the BRICS, but the results are not very impressive. In spite of their efforts, none of the countries were able to elevate their leading institutions to the top positions in the international rankings, although China might be moving more strongly in that direction. China and India have the largest number of students and university-level persons studying and living abroad and are, to some extent, benefiting from the knowledge brought by those that return and also by establishing business and academic networks between residents in the country and those abroad.

South Africa also has a sizeable number of students and professionals overseas, particularly in England, but does not seem to be able to attract them back to link them more strongly with the local institutions and the economy. Brazil has a tradition of sending students for graduate studies abroad and getting them to return, without a significant diaspora. Russia has also experienced some emigration with the end of the Soviet Union, particularly among Jews, but otherwise its higher education system is mostly self-contained (Altbach and Knight 2007).

If one compares China with the other BRICS, one gains the impression that the growth of change in higher education in China was the consequence of careful planning and foresight, while in the other countries the governments are at most trying to steer and manage a global trend that is happening regardless of what they do. It is true that some countries, China in particular, may be more able to influence this trend than others, but even there, it is a flow that mostly follows its own path and cannot be manipulated at will.

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