

Chapter 7

The Future of Higher Education in the Context of a Shrinking Student Population: Policy Challenges for Japan and Korea

by

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This chapter looks at the future of higher education policy in Japan and Korea in light of the rapid demographic changes, characterised by ageing populations, low birth rates, and the saturation of the higher education markets following the completion of universal higher education in the two countries. This comparative analysis of Japan and Korea provides useful information for other OECD countries that will have to face similar long-term demographic challenges when developing their higher education policy agendas.

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7.1. Introduction

Korea and Japan have achieved very high participation in initial tertiary education. In Korea in 2005, 97% of 18-year-olds graduated from high school, and 78.9% of the age cohort went on to higher education institutions.¹ In Japan in that year, 97.5% of 15-year-olds entered senior secondary education, and 76.2% of 18-year-olds went on to higher or post-secondary education institutions (MEXT, 2006).

Declining fertility and an ageing population are common in most OECD countries, and Japan and Korea are no exception. Indeed, Japan's birth rate has been declining continuously since the mid-1970s and reached 1.29 in 2004, the lowest on record for the nation. Korea's total fertility rate fell from 1.19 in 2004 to 1.08 in 2005, the lowest level on record for the nation and among the world's lowest.

Japan and Korea are thus in the lead in terms of experiencing the effects of universalisation of higher education and population ageing simultaneously. Both countries face the challenge of developing appropriate higher education policies in a context of considerable demographic change. The number of the traditional age cohort enrolling in higher education started to decrease in 1992 in Japan and in 2000 in Korea, and an increasing number of universities and colleges in both countries are having difficulty recruiting enough students to meet higher education enrolment quotas. The student population is decreasing as a consequence of continuing low fertility, while the adult population participating in lifelong learning in Japan and Korea is still at a relatively low level.

In spite of the many similarities between higher education in Japan and Korea, a comparison of their experience has rarely been undertaken. This chapter considers the future of higher education policy in Japan and Korea in light of their rapid demographic change, characterised by ageing populations and low birth rates, and the saturation of their higher education markets following their successful realisation of universal higher education. It recalls the history of higher education in both countries and describes the current situation, with particular attention to the labour market for graduates of higher education, before turning to the future impact of demographic change on higher education policies and practices in Japan and Korea and comparing the future direction of their higher education policies. This comparative analysis of Japan and Korea can also provide some useful information for other OECD countries that will have to address similar long-term demographic challenges when developing their higher education policy agendas.

7.2. The path to universal access to higher education

Before World War II, Japan had already diversified its higher education institutions, which ranged from research-intensive, nationally funded "imperial" universities to private universities, colleges and polytechnics that relied almost entirely on income from tuition fees. In 1920, the participation rate was only 2.2% (CCE, 2005a). In the period 1910-45, Korea's higher education system was organised and administered to meet the Japanese

colonial government agenda, with public higher education mainly restricted to Japanese residents in Korea. The Japanese colonial higher education policies strictly limited the number of Koreans with access to higher education; less than 1% of college-aged youth received any form of higher education (Henderson, 1968; Kim, 2001).

After 1945, when Korea had recovered political independence from Japan, democratic education initiated by the US military government (between 1945-48 in Korea and 1945-52 in Japan) eventually afforded the populace greater opportunities to access higher education. In both countries, higher education soon came to be regarded as a crucial means of upward social mobility and national development, although access to higher education was still elitist. However, the introduction of four-year bachelor's and other short-term programmes provided wider access to higher education in both countries. Private colleges established by American missionaries and Korean nationalists in the late 19th and early 20th centuries also gained four-year university degree-granting status, and in both Japan and Korea, many new private universities and colleges were established.

In Japan, public universities and other higher education institutions have maintained fixed enrolment quotas since their establishment in the late 19th century as a way to maintain the quality of university education, and demand for public higher education has always exceeded supply. While the government has controlled student numbers by authorising fixed quotas in both public and private universities, control of student numbers in private universities and colleges has varied from time to time.

In Korea, the Ministry of Education has also regulated the establishment and expansion of private universities as well as national universities. Especially during the 1970s, it exerted strong control over new faculty appointments, curricula and tuition fees, as well as student enrolment quotas set for each university at the departmental level (see Box 7.1). This strong central management by the government in Japan and Korea has contributed to the notion of the East Asian model of a "developmental state".

From 1947 to 1949, Japan experienced a baby boom, after which both the birth rate and the mortality rate decreased strongly owing to the implementation of the Eugenic Protection Act of 1948 which allowed easy access to induced abortion, to public and private family planning efforts and to improvements in public health (JICA, 2003). In 2005, the first instance of a population decrease in modern history, Japan's total population was close to 128 million, of which over 62 million were male and over 65 million female. Japan's birth rate has been declining continuously since the mid-1970s.

After the armistice following the Korean War in 1953, Korea also experienced a baby boom. Then, in 1961, the Korean government devised an explicit population control policy, and in the following year, a national family planning programme was established as a component of the government's first Five-Year Economic Development Plan. Under governmental control, which continued up until the early 1980s, the Korean population increased steadily in accordance with the needs of rapid economic development. The government's programme and the compliance of the population quickly reduced the average number of children per family in Korea from nearly six in 1960 to less than two in 1990 (Tedesco, 1996)² and the fertility rate has stayed below replacement level in the most recent decade. In 2004, Korea's population was estimated at close to 48 million, evenly divided between male and female (JICA, 2003, p. 6). At 1.08 in 2005, Korea's birth rate is much lower than the average 1.6 to 1.7 for OECD member countries and significantly lower than the 2.1 needed to maintain a country's current population level. Korea's total

Box 7.1. The Korean higher education system

The Korean higher education system was reorganised and developed under American influence after political independence but still reflected many aspects of the former Japanese style of governance. The Ministry of Education's direct control over public and private higher education is a good example. During the rapid expansion and massification of higher education, the government (three consecutive military regimes from 1961 to 1992) tried to prevent university students from protesting against the right-wing autocratic government policies. The Korean government tried not only to curb the expansion of higher education but also to reduce demand. During that period, the government's higher education policy focused on the practical function of university education for economic development. Along with the Five-Year Economic Plans started from 1962, the Ministry of Education established ten junior technical colleges in 1963 to produce technicians for industry. Overall, the aim of the government's intervention was both political and economic and reflected the continuing Japanese (colonial) pattern of governance. Regardless of the differences among institutions, uniformity was imposed in both public and private higher education. For instance, today, with the exception of Seoul National University, which has its own Ordinance, all national universities are placed under the Education Act, supervised by the Ministry of Education. This means each national institution does not have its own "charter". Private institutions of higher education are under the control of the Private School Law, which emphasises restrictions and rules rather than autonomy as in the colonial period.

Source: Kim (2001, pp. 147-149).

fertility rate (TFR) is lower than that of Japan (1.288) and far lower than that of the United States (2.04). If this trend continues, the Korean population will decrease from 48.17 million in 2005 to 39.48 million by 2050 (*The Korea Herald*, 2005; *Chosun Ilbo*, 2006).³

Overall, the success of both governments' population control policies along with strong family support for and investment in education and cost-effective management of education contributed to the early realisation of universal (higher) education and to both countries' rapid economic development.

The post-war population increase, accompanied by rapid economic development and the expansion of education led to wide-reaching social demand for higher education. Both governments continued to maintain strong control over the establishment and expansion of private universities as well as national and local public universities and to regulate student numbers in both the public and private higher education sectors. However, rapid economic development and increasing demand for highly skilled labour led them to loosen their control over higher education enrolment quotas and allow private higher education institutions to absorb market demand for higher education, from the 1960s to the mid-1970s in Japan and during the 1980s in Korea.

In Korea, the Ministry of Education adopted a so-called "graduation quotas" policy which obliged the university to drop a certain portion of students before graduation. The policy resulted in 100% growth in the number of university students between 1980 and 1983. Many two-year national teacher colleges and technical colleges were also upgraded to four-year universities in that period. However, the policy was very unpopular among university students, academics and administrators alike, and a few years later, the policy was rescinded in response to public pressure.

Increasing demand for higher education was mainly met by the private sector, with tuition paid by students and their families, although the number of teachers, facilities and equipment lagged the increase in student numbers. The quality of the learning environment, such as the student-teacher ratio, deteriorated in many universities and was one of the sources of political activism among students in the late 1960s in Japan. In 1970, the Japanese government started to give financial support to private universities and colleges for operational expenditures, and again exerted stronger control over enrolment quotas, from the mid-1970s through the mid-1980s. It also established non-university short-term post-secondary education system in the form of professional training colleges. Then, from the mid-1980s, to meet the demand by the second wave of baby boomers for access to higher education in an era of economic prosperity, the government started to loosen its control over enrolment quotas. Even after the population of 18 year olds peaked in 1992, the government continued to allow the establishment of new universities and colleges as part of a transition from a planning policy to a market-oriented policy in higher education enrolment (Amano, 1997).

During the 1990s, global trends towards neo-liberal policies, such as labour market flexibility, privatisation and a “lean” state co-ordinating market competition began to be felt in Japan and Korea, leading to a shift in their higher education policies. In Korea, up until 1995, the government maintained strict regulations for university governance, the establishment of new higher education institutions, admission criteria and the number of students for each institution. Nevertheless, by 1995 the rate of enrolment in higher education had reached 55.1%, which means, according to Martin Trow’s definition (Trow, 2000), that Korea had passed the phase of mass higher education and reached the level of universal higher education. In 1995, the Korean government implemented a deregulation policy and abolished enrolment quotas. Many new small private universities were established in regions outside of metropolitan Seoul.

Between 1945 and 2000, Korean higher education expanded from 19 establishments and almost 8 000 students to 352 establishments and well over 3 million students.⁴ In 2005, Japan had 1 194 universities and junior colleges enrolling over 3 million students, and in addition, close to 700 000 students enrolled in 2 973 professional training colleges (MEXT, 2006). In absolute numbers, there are today enough places available in universities and colleges to admit all applicants who want to receive higher education, although competition to enter elite higher education institutions continues to be severe. However, higher education is now encountering a decline in demand owing to demographic changes in both countries.

7.3. A declining and ageing population and the saturation of traditional student markets

According to the UN *World Population Prospects: The 2004 Revisions*, the countries with the most rapid drop in fertility are largely in Asia (United Nations, 2004). Japan is far in the lead with a rapidly ageing population and a stagnating low birth rate, and Korea seems to be following this model (Table 7.1).

However, the longer-term prospects for demographic change look more dramatic for Korea than for Japan (Table 7.2). Although the average annual rate of change seems insignificant over 20 years, by 2045-50 it is likely to be -0.65 for Korea and -0.49 for Japan.

Table 7.1. **Demographic trends in Korea and Japan**

	Population (thousands)				
	1950	2005	2015	2025	2050
Japan	83 625	128 085	127 993	124 819	112 198
Korea	18 859	47 817	49 092	49 457	44 629

Source: *World Population Prospects: The 2004 Revisions*, United Nations, pp. 36-37.

Table 7.2. **Average annual rate of demographic change, Korea and Japan**

	Average annual rate of change (%)				
	1995-2000	2000-2005	2010-2015	2020-2025	2045-2050
Japan	0.25	0.17	-0.07	-0.30	-0.49
Korea	0.77	0.44	0.22	0.03	-0.65

Source: *World Population Prospects: The 2004 Revisions*, United Nations, pp. 61-62.

Qualitative changes in the age structure of both populations are even more significant. Table 7.3 indicates the changing proportion of each age group over time. By 2050, more than 50% of the population is expected to be over 60 years old in both Japan and Korea.

Table 7.3. **Changes in the age structure of population, Korea and Japan**

	2005				2050			
	Age groups				Age groups			
	0-14	15-59	60+	80+	0-14	15-59	60+	80+
Japan	14.0	59.7	26.3	4.8	13.4	44.9	41.7	15.3
Korea	18.6	67.7	13.7	1.4	12.0	46.8	41.2	13.0

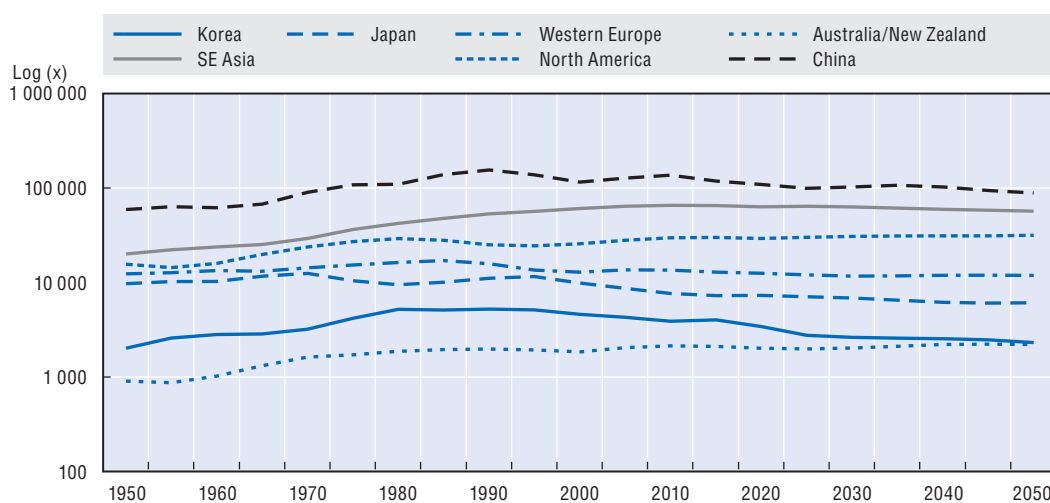
Source: *World Population Prospects: The 2004 Revisions*, United Nations, pp. 69-70.

These demographic changes in age cohorts will have a significant impact on the traditional student market and thus on the future of higher education systems. Figure 7.1 indicates that Japan, Korea and China are the countries that will experience the most notable, continuous long-term decrease of the 18-23 year old population. Japan and Korea saw their population of 18-year-olds begin to decline in 1993 and 2003, respectively, and have continued to see a decline in their young population and an increase in their elderly population.

Given the changing demographic profile described above, it is now anticipated that 30% of Korea's primary schools will disappear in ten years. As a result of the decrease in the birth rate, by 2020 there will be 360 000 fewer enrolments in Korea's higher education institutions; accordingly, about 100 higher education institutions are expected to cease operations by then (*Chosun Ilbo*, 2003).⁵

The Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) has also warned that all needs for four-year and two-year higher education will be met by government student quotas in 2007. In Japan by 2005, more than ten national universities had merged, and the government has set guidelines for the closure of private universities.

Overall, the saturation of the traditional student markets and the crises in private higher education institutions are expected to intensify in both countries. In Korea, the

Figure 7.1. **Estimated trends for the population 18-23 years old**

Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects: The 2004 Revision and World Urbanization Prospects: The 2003 Revision*, <http://esa.un.org/unpp>.

supply of higher education has started to exceed demand. Korea currently has over 200 four-year universities and about 160 junior colleges; in 2003, there was a shortage of 85 000 new students, resulting in the lowest rate of admissions ever. Japanese private higher education is also now faced with a serious oversupply. In 2005, 160 out of 542 (29.5%) four-year universities and 158 out of 383 (41.3%) junior colleges did not fill their governmentally allocated enrolment quotas (Promotion and Mutual Aid Corporation for Private Schools of Japan, 2006).

7.4. Linking higher education supply and labour market demand

There are challenges for linking the supply of higher education with the demands of the labour market. There are also challenges arising from economic globalisation, the internationalisation of higher education and the changing infrastructures of society and national economies in general. In Korea, the reform of higher education has not kept up with the structural changes in the national economy which have created strong demand for highly skilled knowledge workers. Korea now faces the challenge of upgrading the quality of higher education and the development of human resources to meet the demands of a global knowledge economy and to supply the competencies required on the transnational corporate labour market.

In Japan, MEXT has tried to promote structural changes within higher education by expanding postgraduate programmes, especially in professional education. Japan still has a small number of postgraduate students (1.62 per 1 000 population in 2000, compared to 3.86 in the United States, 2.72 in the United Kingdom and 3.70 in France [CCE, 2005b]). Yet, there is already excess supply of postgraduate education, which has not made use of its potential for fulfilling industry's need for the development of human resources. Total enrolments represent 91.3% of the government quota for postgraduate programmes. Enrolments in law schools – newly established in 2004 as a new type of professional postgraduate education – only filled 92.7% of the government quota (PMACPSJ, 2006).

Given the oversupply of higher education and an increasing unemployment rate among university graduates in Japan and Korea, the value of higher education has been questioned.

In Korea in 2004, the proportion of unemployed young people – both with and without university degrees – was estimated at 7.9% (the average unemployment rate was 3.5%). The number of young people aged between 15-29 declined by 1.95 million in 2005 from the previous year, while people aged over 65 increased by slightly over 2 million in the same period. However, the number of young people employed and below the age of 30 dropped by 1.88 million in 2005 from the previous year (SERI, 2005).⁶ In spite of the rising number of unemployed among higher education graduates, however, Korea suffers from a shortage of quality manpower in production and other engineering fields. The number of students applying for science and technology subjects at universities has declined from 43% in 1997 to 27% in 2001 (Science and Technology Policy Institute, 2003). The mismatch between the subject-based employability of university graduates and labour market demand is particularly serious in science and technology. The mismatch was as high as 41.1% for university graduates with natural science degrees in 2004, and the unemployment rate of university graduates with engineering degrees was 23.2% (KEDI, 2004). Overall, the rapid expansion of higher education has led business leaders to express concern about the quality of university graduates.⁷ At the same time, the number of those employed who are over age 50 increased dramatically to account for 26.2% of total employment in 2005, the largest figure on record, a sign that Korea is becoming a rapidly ageing society, and it is feared that the young workforce alone cannot meet changing economic demands (SERI, 2005).

In Japan, the recent economic recovery has reduced the problem of employment of higher education graduates (as of March 2006 the unemployment rate of 15-24-year-olds is 10.9% among males and 8.6% among females, and that of 25-34-year-olds is 5.5% among males, and 5.6% among females (the average unemployment rate is 4.1%),⁸ although the value of higher education degrees has been questioned for a long time, especially because of the retention rate in Japanese higher education (the world's highest at 94% in 2000 [OECD, 2002]).

At the same time, there is increasing pressure to enhance the quality of postgraduate and lifelong education in both countries. As shown in Table 7.4, however, the higher education enrolment rate for the 30-39 year-old age cohort is very low in Korea compared with other OECD countries. Indeed, among the 30-39-year-olds, the OECD average for tertiary education is 5%, and the United Kingdom leads with 16%. For those over 40 years old, the OECD average is 2%, and the United Kingdom again leads with 8%.

Furthermore, at 7.8%, the participation rate of Korean adults in vocational training is much lower than in other OECD countries, *e.g.* 40% in the United Kingdom, 35% in the

Table 7.4. Higher education enrolment rate by age, Korea

	Colleges and universities			Graduate schools	
	16-19	20-29	30-39	20-29	30-39
1998	22.8	21.8	1.7	1.2	0.7
2000	27.4	24.3	2.3	1.5	0.9
2002	31.0	26.2	2.8	1.6	1.0
2004	32.9	27.0	2.6	1.7	1.1

Source: MOEHRD; Statistical Yearbook of Education (each year).

United States and 30% in Germany. In Japan, because of the long tradition of in-house training, lifelong learning is underdeveloped (Yonezawa and Kosugi, 2006).

The contribution of human resources to economic growth in Korea has decreased, owing to a changing economic structure and rapidly increasing female participation in “low-wage, low-skill” service industries, especially over the last ten years. Moreover, unlike other rapidly developing East Asian economies, the contribution of education to economic growth in Korea in the period 1984-94 actually decreased, although overall economic productivity increased (Collins and Bosworth, 1996). Economists have suggested that massive input of labour was the key contributor to Korea’s rapid economic growth. Over the period 1963-2000, labour’s contribution was recorded as 33.4%, while that of education was as low as 4.0%. In the United States the contribution of education to economic growth was 13.2% in the same period (Kim *et al.*, 2002).

In both countries, one challenge for the future will lie in how the economies manage to effectively use female graduates and, more generally, the female human capital. While female participation and graduation in higher education have significantly increased over the past decades, the Japanese and Korean economies still have difficulties reaping all the benefits from this trained human capital.

In Korea, the participation of women in higher education has continued to increase. According to the National Statistical Office record, as of 2006, 25.4% of Korean women have university degrees and 80.8% of the female age cohort enrolled in higher education institutions (NSO, 2006). Korean women also have relatively high participation rates in first university Natural Science and Engineering degrees. The ratio of women-earned degrees in these fields to the female 24-year-old population was 4.9 per 100 in 1998, which is higher than the participation rate of women in other Asian countries, Germany, or the United States (NSF, 2002).

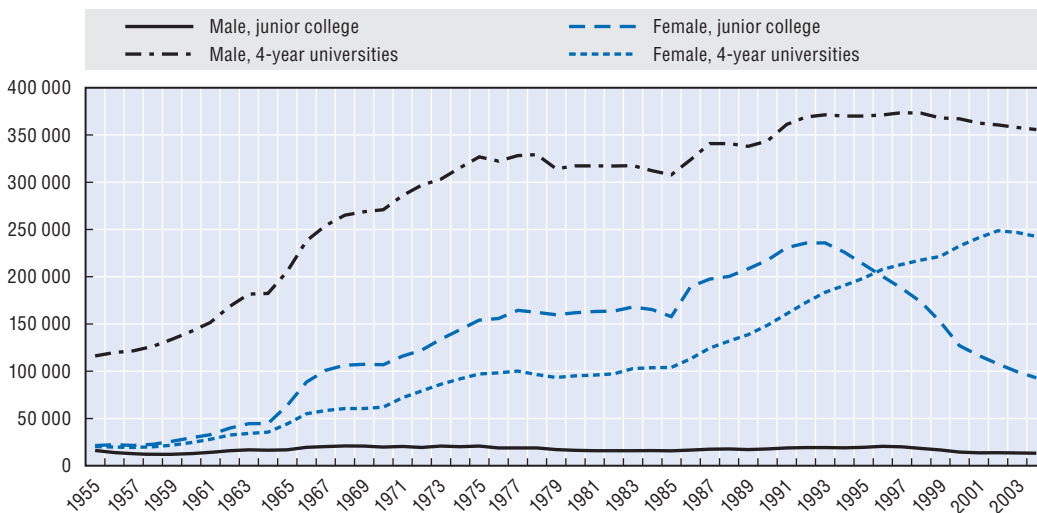
But overall, in spite of equal participation by females in higher education in Korea, there is lack of equal opportunity for women in employment. Korean women in general have structural difficulty developing long-term sustained professional careers.

The female participation rate in economic activities has gradually increased since 1965 (37.2%). In 2006, one in two women over the age of 15 participated in economic activities (50.9%). The proportion of women in employment is estimated at 42%; and the number of women working in professions and senior management positions is estimated at 183 600 in 2006, an increase of 15 700 from the previous year. Nevertheless gender inequality still persists in the overall pattern of employment in Korea – *e.g.* only 13.2% of university academics and 19.2% of medical doctors are female (National Statistical Office, 2006). Most Korean women in employment work in low-skill service industries under short-term or temporary contracts. Women are more likely to work in small or medium-sized companies, often without social security and welfare benefits. Full-time employment is interrupted more often among women than among men, owing to pregnancy, birth and child care. It is noteworthy that the duration of full-time employment of women with higher education degrees tends to be shorter than that of women with secondary education certificates (SERI, 2003a). Also a policy providing for equality of career opportunities for university-educated women who are over their mid-30s and return to labour market after an interruption is lacking. The average labour market participation rate of university-educated women was 55.8% as of 2004, much below the OECD average of 78.4%, and one of the lowest among OECD member countries (Korean Women’s

Development Institute, 2005). There is also a *de facto* income discrepancy between men and women in employment and promotion opportunities are unequal.⁹

In Japan, the junior college system has significantly influenced female participation in higher education. In 1955, male students accounted for 43% of junior college enrolments. During the period of rapid increase in higher education in the 1960s and early 1970s, however, female students gradually outnumbered males in the junior college system, and the share of male students dropped to 11.9% in 1975 (Figure 7.2).¹⁰ One of the reasons was the unequal treatment of female and male higher education graduates in the Japanese labour market. In general, companies had a policy to employ male graduates of four-year universities for careers as future executives and female high school or junior college graduates for support staff. However, the Equal Employment Opportunity Law, enacted in 1986, prohibited unequal treatment by gender. With the opening up of job opportunities for female graduates of four-year universities, female students shifted their preference from junior colleges to four-year universities. Even during the economic recession of the 1990s, they maintained this preference, and there has been a considerable drop in female enrolment in the junior colleges system, aggravated by the decline in the 18-year-old population.

Figure 7.2. **Enrolment in four-year universities and junior colleges by gender, Japan, 1955-2004**



Source: Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT).

However, these tendencies do not mean that female workers are equally treated with male workers in the Japanese labour market. Tachibanaki pointed out that Japanese female workers are still disadvantaged in almost every aspects, namely, in recruitment, job-offering, training opportunity, promotion, and earning. Especially, the life-time employment and career promotion system typically applied to university graduates in Japanese enterprises is still discouraging female university graduates to re-enter the full-time regular job market after child-raising (Tachibanaki, 2005).

A future challenge for Japan and Korea over the next decades will thus be, on one hand, to better link higher education supply to the labour market demand and, on the other hand, to make a better use of its highly skilled female human capital – a challenge for social policies and employment practices rather than for higher education.

7.5. Structural policy strategies and challenges for the future of higher education

Given the declining number of the age-cohort enrolling in higher education and the simultaneous rapid increase in the ageing of the population, the governments of Korea and Japan have adopted policy strategies to induce structural reform and downsize both the public and private sectors. They aim to combine their initiatives, deregulation and guiding functions in a similar way, and resource allocation and quality assurance are becoming more crucial policy issues (see below).

While Japan's and Korea's structural policy strategies are not explicitly or directly meant to address the downsizing of the higher education sector, they are in some ways a response in that they try to encourage more diversified demand and supply. While the demographic situation can facilitate the implementation of structural reform and lead institutions to differentiate themselves more clearly by their mission, policy strategies encourage institutions to look for new audiences (international students, local communities, e-learners, lifelong learners) and help set up the infrastructure that will allow this new demand to emerge. Should the goals of these policies effectively be achieved, this "non-traditional" demand would help alleviate the decline of student enrolments in both countries. The following discussion compares the Japanese and Korean policy directions.

Diversification

The Japanese government officially welcomes the realisation of universal access in higher education. MEXT stresses the importance of providing various levels of educational programmes in various fields to meet individual needs for higher education at any time and on demand. The report of the Central Council for Education (2005a) advocates the transformation of higher education policy from "planned provision and regulation" to "provision of future images and policy guidance". Although the functions of higher education are diversifying, students tend to find it difficult to perceive differences in the characteristics of universities and other higher education institutions mainly because many universities try to fill all possible functions (MEXT, 2006). The report also recommends increasing the distinctiveness of higher education institutions to respond to diverse and focused demands for higher education, such as world excellence in research or lifelong learning.

In Korea, there is still strong conformity and a lack of strategic diversification among higher education institutions. About 75% of the four-year general universities produce postgraduate degrees, far more than in the United States (61%) or Japan (48.5%). In this context, the Korean government's higher education reform strategies focus on how to achieve the necessary diversification. In December 2004, the Ministry of Education and Human Resources Development (MOEHRD) announced a University Restructuring Plan in a bid to raise the competitive edge of Korean universities. In May 2005, it put forth a detailed strategy for reforming both public and private universities which involves, among other things, reducing annual undergraduate intake by about 15% by 2009. This is expected to enhance quality but it will increase pressure on institutions to merge.

World-class excellence in research

There is greater concentration of the allocation of government research funding to selected research universities. In Korea, the BK21 (Brain Korea 21) project ran for seven

years (1999-2005) with a research budget of USD 1.2 billion. The second phase of BK21 (2006-13), will see more “selection and concentration” of research on a few key areas with a greater number of university-industry partnerships. In Japan, MEXT started its 21st Century COE [Center of Excellence] Programme in 2002. This programme supports the formation of global research and education centres by introducing competition with third-party peer evaluation. In 2002-04, 274 projects were selected, mostly from top universities (Yonezawa, 2003). Based on the positive social acceptance of the COE21 scheme, MEXT revealed a proposal to set up a Post 21st Century COE scheme from 2007, aimed at further concentration of research investment into around 150 research units (Central Council for Education, 2006).

Internationalisation

Given the demographic and economic challenges, the Korean government promotes internationalisation to increase the competitiveness and diversity of Korean higher education. The government provides scholarships (and this incentive) for foreign students to come to Korea for degree programmes.¹¹ Similarly, it has introduced a Brain Pool Scheme to recruit more distinguished foreign academics in the fields of information technology, biotechnology and basic sciences. English is increasingly used as a medium of instruction in Korea’s higher education institutions. For example, Yonsei University’s new Underwood College runs undergraduate education programmes entirely in English for first-class international students recruited from the Asian region and elsewhere.

Owing to increasing demand for international education at all levels, pressure and increased awareness owing to the WTO/GATS negotiations, and lobbying from national governments such as the United States, Japan, Australia and China, the Korean government in 2003 removed restrictions on direct provision of educational services by foreign institutions. The government seeks to attract more foreign direct investment and economic activities in Special Economic Zones, with tax incentives, fast-track permit processing, etc., made available in 2002. The details of new regulations for foreign educational institutions have yet to be finalised. The Korean government is also considering new free trade agreement negotiations in educational services with the United States. It is expected that such an agreement will not only liberalise the education market, but may also help to curb the increasing trend for Koreans to go abroad for education.¹²

The Japanese government is also trying to internationalise its higher education, basically through institutional initiatives. The government started the Strategic Fund for Establishing International Headquarters in Universities among 20 public and private universities in 2005 (www.u-kokusen.jp/index_e.html). In 2004 it also set up an official system for designating foreign universities’ Japanese campuses for programmes officially authorised by their home countries. The government also supports the idea of Japanese universities delivering their educational programmes outside Japan, but such initiatives basically emerge from the higher education institutions.¹³ Overall, both Japan and Korea are undertaking strong international networking and long-term strategic development to recruit international students and academic staff; international graduate and professional schools newly established in these countries are becoming competitive in the region.

Nevertheless, there is no clear strategic policy link in Japan and Korea between internationalisation of higher education and internationalisation of labour market. This is partly due to the absence of a tradition of immigration in these countries: in 2003, foreign nationals accounted for 1.5% of the population in Japan, and 0.9% in Korea (OECD Factbook,

2006). In contrast, many OECD member countries have developed immigration and employment policies. For instance, the UK government now more actively promotes the employment of international students after their graduation from UK universities. The existing Science and Engineering Graduates Scheme is being extended to international postgraduate students who successfully complete and obtain a UK recognised Master's degree or PhD in any subject.¹⁴

Setting up a new learning space in local communities

The Korean government is trying to induce balanced national development through the NURI (New University for Regional Innovation) project. NURI is the Korean version of the “triple helix” model of university-industry-regional-government partnerships aimed at nurturing the development of excellent local manpower and boosting the employment rate of regional university graduates through specialised education programmes. On a per capita basis, Korea has a large number of higher education institutions, many of which are small and private and run similar programmes. Overall, the government's aim is to restructure the higher education system for concentration, specialisation and diversification in each region through the NURI project.¹⁵

The Japanese government also supports the idea of regional consortia and linkage among various higher education institutions, triple helix activities, and so on. These networks may support to some extent the small private universities and colleges that will face difficulties in a shrinking student market. However, in most cases, initiatives come mainly from higher education institutions and local municipal governments. A representative example is the Consortium of Universities in Kyoto (www.consortium.or.jp/english/index.html), which allows the students of 35 universities and colleges to access classes, internships and other activities across universities and colleges within Kyoto City. In 2006, the Consortium published a proposal for attracting students to Kyoto City, where the capacity of higher education institutions far exceeds the number of 18-year-olds in the local population.

Supporting innovation in teaching and learning

ICT-based teaching-learning and research networks have developed rapidly in Korea since the first comprehensive education information service, EDUNET, was launched in 1996. In 2002, the National Digital Library Support System was launched, and by 2003 all universities and research institutes in Korea had joined the Research Information Service System (RISS) (www.keris.or.kr). With this ICT-based education and research infrastructure, the Korean government's plan is to create the world's largest “ubiquitous city” in New Songdo, which is considered the largest private real-estate development in the world. The ubiquitous city will be a free enterprise zone with English as the lingua franca. In the ubiquitous city, computers will link home life and life outside the home, will provide space for branches of world-class international education institutions and will attract international business investments. When completed in 2014, it is estimated that the ubiquitous city will be home to 65 000 people and that 300 000 will work there and benefit from the new U-environment.¹⁶ In addition to the New Songdo ubiquitous city project, the Korean government has also announced its new Nationwide Ubiquitous City project, a plan to cover whole regions with wireless Internet access, connecting each and every household to the network. So far, six regions have announced plans to invest in their own U-City projects while also participating in the central government's plan.¹⁷ Private higher

education institutions have also joined; for instance, Yonsei University has announced that it will open a new campus in the ubiquitous city.

In Japan, MEXT promotes trials of innovative teaching and learning through various project-based incentive funds, such as the Support Programme for Distinctive University Education¹⁸ and the Support Programme for Contemporary Education Needs.¹⁹ Higher education institutions apply for those incentive fund programmes, and the Japan University Accreditation Association (JUAA) and other third-party organisations carry out the selection process on behalf of the government.

Lifelong learning

The Korean government started the lifelong learning city project in 2001. In the following year, the government announced a Comprehensive Plan for Lifelong Education Promotion to support lifelong education programmes operated on a local basis, to incorporate lifelong education as a part of daily routines and to offer adults more opportunities and diverse routes to higher education at various stages in their lives. Since then, it has contributed considerably to helping local governments initiate lifelong learning programmes. With increasing funds allocated to the project to build the new infrastructure and networks for regional city-based lifelong education, the government has announced that it will select 25 lifelong learning cities in addition to the 33 currently involved. The lifelong learning city project will expand to 100 lifelong learning cities across the nation by 2008. Although lifelong learning city programmes have so far focused mainly on culture and leisure content, local governments are now expected to develop programmes that reflect the unique characteristics of their cities and produce more labour opportunities so as to generate sustainable links between learning and employment for the local adult population (MOEHRD, 2006).

In Japanese higher education policy, learning opportunities related to career development, including lifelong learning, postgraduate professional education, and vocationally-oriented university education, are promoted, but the government's role is basically to set frameworks. In 2004, the government established a legal framework for professional postgraduate education, such as law schools and business schools, separate from the existing, more "academic" postgraduate programmes. In addition, the Cabinet set up a framework for Special Districts for Administrative Reform, allowing for a new pilot project for deregulation. Should this project prove successful, deregulation will be applied nationwide. Osaka City and Chiyoda District of Tokyo have embarked on special districts for career development, where vocational, profit-oriented universities are allowed to establish. Deregulation of online programmes is also ongoing, with some full-scale universities now beginning operations in addition to the publicly supported University of the Air, which broadcasts programmes and lessons.

Overall, both governments have recognised the need to develop lifelong learning and have started various policy trials to encourage it. However, whether these efforts in both countries lead to the increase in adult participation in higher education will depend on the demands of the labour market.

7.6. Co-ordinating the shrinking higher education market

In spite of the higher education reform strategies outlined above, it seems almost inevitable that the higher education market will shrink in both Japan and Korea. Ironically,

the sustained low birth rate in both nations is often attributed to the high cost of education which parents are expected to bear. In these circumstances, financial issues in higher education require special attention not only to maintain universal access but also to prevent further demographic decline. This section describes some key higher education reform programmes that illustrate the overall direction of higher education policy in Japan and Korea and how these countries try to address the downsizing of their higher education system.

Incorporation of public universities

The management capacity of higher education institutions is becoming a crucial factor for providing higher education flexibly enough to meet the various needs of stakeholders and face the decline in student enrolments. In 2004, all Japanese national universities, junior colleges and colleges of technology were incorporated. Some local public higher education institutions are doing the same. These incorporated institutions have to publish six-year, medium-term goals and plans, and have to accept and report third-party evaluation of the achievement of these goals and plans. In Korea, the government's plan is to complete the incorporation of public universities by 2010 in the course of structural reforms of higher education management.

Quality assurance, mergers and closures

The saturation of higher education is increasing the need for appropriate co-ordination of quality higher education provision. The Japanese government is approaching this issue by strengthening quality assurance policies. From 2004, all four-year universities, junior colleges and colleges of technology are required to submit institutional level certified evaluations, a third-party, accreditation-type process implemented by certified evaluation organisations authorised by the government within every seven years. In addition, certified evaluation for professional postgraduate programmes was introduced, and follow-up monitoring after governmental authorisation of newly established programmes was strengthened. In May 2005, the government published guidelines for the monitoring and advisory process for universities and colleges facing financial and management difficulties, which focuses on establishing a safety net to ensure that students will be able to transfer to nearby universities (MEXT, 2005). In June 2006, the Private School Law was amended to ensure greater transparency in their activities, including financial conditions. In July 2006, the Promotion and Mutual Aid Corporation for Private Schools of Japan (PMACPSJ), the public grant council for private education institutions, released an interim report on the management difficulties and bankruptcy of private education institutions, suggesting that PMACPSJ should strengthen its monitoring and merger-arrangement function with respect to school corporations²⁰ that operate universities and colleges facing financial and management difficulties (Table 7.5) (PMACPSJ, 2006).

In Korea, the government has developed merger and acquisition standards and plans for both national and private universities to be implemented by 2009. The number of universities will be reduced primarily through mergers and restructuring, and they will be provided with financial incentives. The government gives subsidies to both private and public universities and both have to follow the same rules. As of 2007, 27 national universities had merged. The government has also announced its plan to reduce the total number of private universities by a quarter to 271 by 2009 (MOEHRD, 2005).

Table 7.5. **Number and share of Japanese private school corporations unable to cover operating costs with annual income**

	School corporations operating four-year universities		School corporations operating junior colleges	
	Number/total	%	Number/total	%
1998	31/409	7.6	66/227	29.1
1999	37/418	8.9	72/219	32.9
2000	69/435	15.9	81/204	39.7
2001	109/456	23.9	85/189	45.0
2002	122/469	26.0	79/178	44.4
2003	120/482	24.9	57/164	34.8

Source: Promotion and Mutual Aid Corporation for Private School of Japan (PMACPSJ), 2006.

These policies are very important for responding to a shrinking higher education market, not least to protect students and make sure they can transfer to another institution if theirs has to close.

Financial support for educational expenditure

Last but not least, an increase in public financial support for educational expenditure has become crucial in both countries. There is a link between family expenditure on education and low birth rates in the two countries. In 2005, the Japanese Cabinet Office implemented an international survey of people's attitudes on the birth rate in Japan, Korea, the United States, France and Sweden (<http://www8.cao.go.jp/shoushi/cyousa/cyousa17/kokusai/ishiki.pdf>). These results show that Japanese and Korean respondents tend to limit the number of children more than other countries, the primary reason being the high costs of raising a child and education (Japan, 56.3%; Korea, 68.2%; United States, 30.8%; France, 13.3%; Sweden: not included in the five primary reasons). Korean and Japanese respondents regard support for educational expenditure as the basic aspect of raising children (Korea, 58%; Japan, 42.8%; France, 39.4%, United States and Sweden, not included in the five primary answers). In June 2006, the Japanese Cabinet Office issued a policy plan, A New Deal for Low Fertility (Cabinet Office, 2006), arguing that national and local governments, industry, local communities and society in general should support families that raise children. Financial support for raising children was proposed as was an increase in the student loan scheme for higher education. In July 2006, the Council on Economic and Fiscal Policy, a core advisory board for the Japanese Prime Minister, issued the Basic Policy 2006, which clarified the Cabinet's plan to promote a comprehensive policy relating to low fertility (Council on Economic and Fiscal Policy, 2006).

As Table 7.6 shows, the share of household expenditure that goes towards higher education is extremely high in Japan and Korea.²¹ This is mainly due to heavy reliance on tuition fees, notably in the private sector.

Both Japan and Korea fall well behind the OECD average for public expenditure on tertiary education as a percentage of GDP (at 0.5% compared to the OECD mean of 1%) (OECD, 2007). Even including private contributions, higher education expenditure per student as a share of GDP is below the OECD average. The incorporation of national and local public universities may accelerate this trend in Japan, because the government is planning to cut the financial budget of the national universities by 1% a year from 2005. Most national universities have tried to compensate for this by increasing tuition fees.

Table 7.6. Expenditure on tertiary education institutions as percentage of GDP and share of household expenditure on tertiary education in OECD countries (2004)

	Share of household expenditure %	Percentage of GDP %
Australia	35.6	1.6
Austria	4.8	1.2
Belgium	5.1	1.4
Canada ¹	22.9	2.5
Czech Republic	9.2	1.1
Denmark	3.3	1.8
France	9.8	1.3
Greece	0.4	1.1
Hungary	6.6	1.1
Iceland	9.1	1.2
Ireland	15.6	1.2
Italy	18.4	0.9
Japan¹	56.9	1.1
Korea	55.6	2.3
Mexico	30.6	1.3
Netherlands	12.0	1.3
New Zealand	39.2	1.4
Poland	27.1	1.5
Portugal	14.0	1.0
Slovak Republic	9.7	1.1
Spain	20.8	1.2
Turkey	10.0	1.0
United Kingdom	19.4	1.1
United States	35.1	2.9

1. 2001 instead of 2004

Source: OECD (2004 and 2007), *Education at a Glance: OECD Indicators*.

In Korea, however, government financial support for the higher education sector has continued to increase over the last 15 years. The higher education endowment market has also continued to grow, although it is concentrated in a few private elite institutions.²² However, the financial resources of Korean higher education institutions still very much depend on tuition fees (over 60%); and the overall size of the higher education market is likely to shrink along with the decreasing numbers of 18-year-olds.²³

High tuition fees for higher education put significant pressure on households in both Japan and Korea. Moreover, in these countries it is very common for parents, despite the heavy financial burden, to send their children to private lessons to prepare them for university entrance examinations. According to a survey of Korean parents by KEDI in 2003, 73% of primary and secondary students received private tutoring after school hours, for a total expenditure estimated at KRW 13.6 trillion (USD 13.6 billion, EUR 10.6 billion), which represents 2.3% of GDP (Choi *et al.*, 2003). Meanwhile, according to a 2004 survey by the Korean government on household expenditure, spending on private tutoring exceeded private expenditure on educational institutions by 30%, a larger amount than that found in the KEDI survey (NSO, 2004). Overall, private tutoring expenditure in Korea appear to have risen significantly over the past few decades (Baek and Jones, 2005). Japan also has a long tradition of *juku* (cramming schools) and private tutoring, and family expenditure on this is recognised as an accelerator of socioeconomic diversification as well as a financial

hardship. According to a MEXT survey, the average annual expenditure on education and training activities outside of formal schooling for public junior high school students was estimated at JPY 299 469 in 2004 (EUR 2 018, USD 2 600) (MEXT, 2004).

7.7. Conclusion and implications for other OECD countries

Japan's and Korea's higher education policies and practices show a tendency towards neo-liberal, market-framed higher education reform while simultaneously promoting the principle of social cohesion. Both countries face a policy dilemma between the global trend towards a neo-liberal policy agenda and the increasing national popularity (in the case of Korea) of social democratic policy ideas. In both countries, there is strong support for the idea of small government, efficiency, market-framed reforms of the public sector and internationalisation. At the same time, recent Korean public policy tends to put more emphasis on social cohesion based on egalitarianism, given public criticism of the widening gap between rich and poor and the increasing pressure from demographic changes that combine low fertility and an ageing population. Japan, whose population is already declining, is now experiencing a fierce policy debate on income inequality and social cohesion.

This comparative review suggests that higher education policies and practices in Japan and Korea are the result of achieving universal access to higher education with limited public resources and high levels of private expenditure on education. The heavy financial burden on families raising children in the absence of significant public support for completing post-secondary education has contributed to sustained low fertility rates in both countries, and in turn has accelerated the process of population ageing and decline. Social cohesion is becoming a key issue in both countries, and policy debate over how to break this vicious circle – high cost of education, low birth rates to limit the number of children to be raised, and further private expenditure on education leading to higher cost per child as part of the family investment strategy – is ongoing.

On the other hand, a shrinking student population seems unlikely to have a major impact immediately on the stratification and organisation of higher education in Japan and Korea. Given their very hierarchical systems of higher education, elite institutions are likely to strive to become more competitive and selective, whereas non-elite, local private institutions of higher education are likely to merge or close down as a result of demographic change and pressures from strong competition in a more open market.

The Japanese and Korean governments have adopted strategies to respond to the coming impact of demographic change on higher education, by downsizing the higher education system, establishing new lifelong learning infrastructure, promoting balanced regional economic development and the internationalisation of higher education. However, the governments have just started to address publicly long-term strategies to deal with the shrinking labour market due to ongoing demographic change in the very foreseeable future.

In view of the pattern of demographic change across OECD member countries, national governments urgently need to adopt new definitions of ageing and fresh approaches to policies on ageing (e.g. the OECD's Active Ageing strategy) and lifelong learning programmes. State pension and welfare systems have already started to be challenged by demographic projections: by 2050, the dependency ratios of people over 60 to those between 15 and 59 are likely to double (United Nations, 2004). Given these prospects,

it has become more urgent for Japan and Korea to enable the ageing population to remain engaged in economically and socially productive activities and to combine this with lifelong learning. It is especially important to increase adult participation in lifelong learning to resolve the problems of the shortage of highly skilled knowledge workers. It would also be desirable to internationalise the national education system to recruit more foreign students and staff. At the same time, it would be well worth considering opening the labour market more widely to foreign workers. In addition to financial support for educational expenditure, the working environment should be fundamentally reconsidered, so that both male and female workers as well as education institutions and local communities can be actively engaged in lifelong learning and more committed to the well-being of the next generation. At the same time, the question of how to ensure that current and future young generations have stable and productive career prospects through higher education needs careful consideration.

Notes

1. According to the *Yearbook of Educational Statistics in Korea 2005* (KEDI, 2005), 569 272 completed upper secondary education and 467 508 of them enrolled in higher education institutions in Korea as of 2005.
2. Women were especially co-operative in the national family planning movement in Korea, as was seen in the increasing participation of women in higher education and greater participation of young females in the labour market (Tedesco, 1996).
3. *The Korea Herald*, 25 August 2005; *Chosun Ilbo*, 8 May 2006.
4. Korean National Statistical Office (www.nso.go.kr). The total number of higher education institutions in Korea is 352, among which are 156 four-year universities (26 national/public, 130 private), 158 junior colleges [*jeonmun daehack*] (of which 6 are national, 9 public, and 143 private), 11 universities of education (11 national/public), 18 universities of industry/technology (8 national/public, 10 private), and an open university (1 public) as of 2004 (www.moe.gov.kr).
5. *Chosun Ilbo*, April 18, 2003, <http://english.chosun.com/w21data/html/news/200304/200304180031.html>.
6. According to the National Statistical Office, May 2005. For details, see Samsung Economic Research Institute (SERI) Annual Report 2005, pp. 15-16.
7. About 77.7% of corporate personnel managers in Korea think the quality of Korean university education is a serious problem. Corporate CEOs also expressed strong dissatisfaction with the quality of Korean university graduates. The estimated average time spent on in-house education/on-the-job training after recruitment is 20.3 months and the costs of retraining at business firms have increased – e.g. Hyundai Motor Co. (USD 6 million), Samsung Electronics (USD 6.4 million) (Federation of Korean Industries Report, 2005).
8. See *Labour Force Survey* by Statistic Bureau, Ministry of Internal Affairs and Communication (www.stat.go.jp/english/index.htm). The Recruit Works Institute conducts an annual survey on job supply and demand for four-year university graduates (undergraduate and master's programmes) and reports continuing recovery in demand since 2001 (www.works-i.com/pdf/bairitsu_2007.pdf).
9. Women are paid 35% less than men in Korea even if they have the same level of educational qualification. At 28.8%, the level of female participation in management in Korea is low compared with other OECD countries – e.g. Japan (36.9%), Germany (33.7%), the United States (49.7%). For details, see SERI (2003a).
10. The share of male student enrolment was 12.4% in 2004.
11. The flow of students to Korea is small with approximately 12 000 international students reported by the end of 2003, just under 8% of the number of Koreans going abroad. However, the number of foreign students coming to Korea has increased annually by around 20% since 2001 (The Observatory on Borderless Higher Education: www.obhe.ac.uk/cgi-bin/news/article.pl?id=310&mode=month).
12. According to the OECD, Korea has the third largest absolute number of students (after China and India) studying abroad in the world, followed by Japan. The increasing number of Korean students going abroad for education at all levels indicates strong demand for quality international

education in Korea. Some 7 000 primary and secondary school students in Seoul went abroad to study between March 2005 and February 2006, an increase of 15% (Seoul Metropolitan Office of Education; *Donga Ilbo*, 11 May 2006). The financial implications are significant. According to the Korean International Trade Association, Koreans studying abroad spent USD 4.6 billion in 2002 on tuition fees and living expenses, while foreigners studying in South Korea spent only USD 20 million (The Observatory on Borderless Higher Education: www.obhe.ac.uk/cgi-bin/news/article.pl?id=310&mode=month).

13. For example, a new MOT programme of Waseda University (a top private university in Japan) operated in Singapore, and a joint master's programme between the Tokyo Institute of Technology and Tsinghua University.
14. See the UK Home Office Immigration and Nationality Directorate: www.ind.homeoffice.gov.uk/lawandpolicy/immigrationrules/change6339.
15. Currently 109 out of 241 regional universities are participating in the project (for a total of 123 project teams comprising 170 000 students). An estimated KRW 1.4 trillion (USD 1.4 billion) is to be invested over the period 2004-09.
16. *The New York Times*, October 5, 2005 (www.nytimes.com/2005/10/05/technology/techspecial/05oconnell.html?ei=5088&en=4a368c49e8f30bd2&ex=1286164800&adxnnl=1&pagewanted=1&adxnnlx=1145786647-esM5EP2r7n9xFQQ6LSUikg).
17. *The Korea Times*, November 21, 2005 (www.asiamedia.ucla.edu/article.asp?parentid=33986).
18. In operation from 2003, it supports the efforts of universities to achieve distinctive and outstanding education and provides information to society by holding forums, publishing collections of case studies, etc. Projects: FY2003: 80; FY2004: 58.
19. In operation from 2004, it supports outstanding efforts of universities to respond to recommendations of the various councils and policy issues with strong social demands. Projects: FY2004: 86.
20. In Japan, private universities and colleges (except for newly admitted, for-profit ones) are operated by non-profit legal entities called school corporations.
21. Korea is one of the countries that spend the most on tertiary education as a percentage of GDP (2.3%) among OECD countries (an average of 1.4% in 2004). However, around 79% of funding for tertiary education comes from private sources.
22. For instance, Yonsei, Korea, POSTECH, Sung Kyun Kwan Universities have more than 30% of the total higher education endowment market created mainly by corporations and alumni (MOEHRD, 2005; Ryu et al., 2006, pp. 45-46).
23. In 2003 the supply of higher education already started to exceed the demand (MOEHRD, 2005; Ryu et al., 2006, p. 43).

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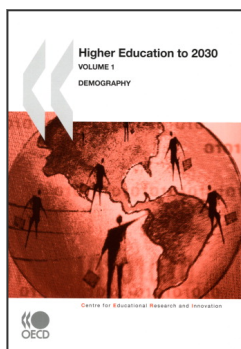
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