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RESHAPING OF HIGHER EDUCATION IN ASIA

Role of the Private Sector

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Introduction

Knowledge has become the driving force of economic performance and hence knowledge production has become a necessary condition for improving national competitiveness in a globalized world (UIS/OECD, 2003). The emergence of knowledge economies encouraged investment in higher education and research to promote industrial and technological competitiveness (Dobbins, et.al 2001). The move towards establishing research universities, world class universities and the development of university ranking systems are instances of higher education becoming dear to the public sector and also to the corporate world. These efforts have helped revitalizing higher education in the present century.

This paper shows that higher education sector globally and in Asia moved from a state of decline and slow growth to a stage of fast expansion and revitalization. The sector has become dearer to public policy and private investment and it enjoys favourable public support, increased investment especially from non-government sources, diversified provisions, and programmes and experienced unprecedented expansion. More and more countries are showing less and less reliance on public funding support to expand higher education. The financial burden of expansion of the sector is steadily shifted to the parents and households.

The plan of the paper is as follows. The next section discusses the expansion of higher education in Asia focusing on the nature of its expansion and diversification. Section 3 deals with issues related to private higher education – privatization of public institutions and private higher education. Section 4 deals with some aspects of private higher education, namely quality, equity and financing. The final section highlights some of the challenges for the future development of higher education in Asia.

2. Expansion and diversification of higher education

Expansion of the sector

This century witnessed an unprecedented expansion of higher education. The global enrolment in higher education increased from 100 million in 2000 to 195.6 million in 2012 (UIS, 2014) accounting for an average annual increase of around 8.0 million students. The expansion in the post-2010 period is even more impressive - an increase of nearly 9.0 million annually. Between 2010 and 2012. The global gross enrolment ratio (GER) increased from 29 to 32 per cent and that among women from 30.0 to 33.3 per cent. The gender parity index (GPI) crossed one during this period. Nearly 75.0 per cent of those enrolled in higher education in 2012 are in the developing countries.

Higher education is at different phases of development in many countries. At times there is a correlation between levels of development of a country and the phase of development of higher education. According to Martin Trow's classification of stages of development of higher education (Trow, 2006), a country is at an elite stage of higher education when the gross enrolment ratio (GER) is less than or equal to 15 per cent; at a stage of massification when the GER is between 16 and 50 per cent and at a stage of universalization when the GER crosses 50 per cent mark.

According to this classification and on the basis of the latest available data by the UIS (UIS, 2014), higher education in 23.8 per cent of the countries are at an elite stage, 34.5 per cent of the countries have massified their higher education systems and 41.7 countries have universalized higher education. (These figures are based on those countries for which data are provided by the UIS).

It seems all developed countries (OECD countries) have universalized higher education; most of the middle income countries have massified their higher education systems and the least developed countries have an elite stage of higher education. Higher education in an elite stage is seen as a privilege of the few, as a right among many classes of society in a stage of massification and as an obligation to attend when the system is universalized. It can be argued that not-attending higher education institutions when it is universalized can be seen as a situation of individual inability becoming a social liability.

The higher education system expanded in the decades of 1960s and 1970s thanks to the state support the sector received. This development was more in the developed world. For example, in 1975 the developed countries accounted for 52.9 per cent of the global enrolment in higher education. Their share declined to 46.9 per cent in 1985; 45.1 per cent in 1995 and 24.8 per cent in 2012. The decline in the share of students enrolled does not reflect a fall in the absolute number of students enrolled in the developed countries. The number of students in most of the developed countries increased. However, the rate of growth of higher education was higher in the developing countries resulting in a reduced share of students in enrolment in the developed countries.

Some characteristics of the expansion of higher education

Higher education has globally expanded considerably in recent decades. Higher education enrolment globally increased from 100 million in 2000 to 177.7 million in 2010 and further to 195.6 million in 2012 (UIS, 2012 and 2014). The addition to enrolment in the Asian region was higher than that in other regions. For example, in 2012 in Asia (East Asia and the Pacific and South and West Asia), 41.9 per cent of the global enrolment and their share increased to 46.6 per cent in 2010. In fact, 60 per cent of the increase in global enrolment is accounted by the Asian region.

The reasons for the fast expansion of higher education are many. The success of the EFA movement put pressure on successive levels of education to expand. In the 1990s, the pressure was more on expanding and universalizing secondary education, and in this century the pressure is more on massifying higher education. Second, the evolution of a knowledge economy warranted investment in knowledge production for the future development of the economy. The transition towards knowledge economies implies a shift in employment prospects from manufacturing to service sectors, and an increase in the qualification levels of employees. Studies show that nearly 70 per cent of all new jobs will require a post-secondary level of education.

Public institutions did not have sufficient places to accommodate students demanding a post-secondary level of education. Many a times the skills demanded in the labor market were not closely aligned to the courses offered in the universities,

nor did they require a long-term study programme leading to a degree. This promoted an expanded and diversified system of higher education.

The rate of return studies in recent decades showed higher returns to higher education (World Bank, 2002). In the 1970s, the rate of returns was higher for primary than for higher education. This was an argument used during the structural adjustment programmes to divert the allocation of public resources from higher to primary education. The returns are higher in the knowledge-based professions. These factors encourage households to invest in education.

The income levels of households increased, and in many countries the middle class became a majority. The middle class has a higher capacity and willingness to pay for education and it helped reduce the financial burden of the state to expand higher education. Development of the education sector required a large number of teachers at all levels of education. Expansion of universities thus became necessary to supply teachers to all levels of the education sector.

The gross enrolment ratio (GER) provides the share of students in higher education institutions as a share of youth belonging to the relevant age group. The global GER in higher education in 2010 was 29 per cent (UIS, 2012). Variations in GER across regions are not only high, but have also widened over a period of time. For example, in 2010 the GER varies from seven per cent in sub-Saharan Africa to 76 per cent in North America and Western Europe. Between 1991 and 2010, the GER increased from 11 to 24 per cent in the Arab region, from seven to 29 per cent in East Asia and the Pacific, and from six to 17 per cent in South and West Asia, from 17 to 41 per cent in Latin America, and from three per cent to seven per cent in Africa. It can be seen that the increase in GER in the Asian region was the highest. The GER increased by more than four times in East Asia and the Pacific and by about three times in South and West Asia, the highest increase for any region.

Based on the stages of growth and expansion of higher education developed by Trow (Trow, 2006), the countries in the Asian region can be classified into those belonging to universalization, massification and elite (clusters 1, 2 and 3 in table 1). The variation in GER in higher education between countries in East Asia and the Pacific and those in South and West Asia is wide. Although both regions had a similar base two decades ago, today the former region is far ahead of the latter. Among the countries, Hong Kong, Japan, New Zealand and the Republic of Korea have already universalized higher education, while most countries in South and West Asia have not yet reached the stage of massification. One may also notice a concentration of low GER countries in South and West Asia.

The progress of higher education in the next cluster (Cluster 2 in Table 1) of countries, show that no country has reached a stage of universal higher education. The one closest to the target of universalization is Thailand, followed by Iran and Malaysia. The progress made by Thailand is very impressive. It increased its GER from four per cent in 1975 to 48 per cent in 2010. Among the countries in this cluster, Sri Lanka has the lowest GER, even though, given its very low base, the expansion that has taken place is impressive. This is contrary to the trend one finds in the Philippines which had the highest GER in 1975, more than double the GER of any other country in the cluster, and has shown an increase of more than two times from

18 to 38 per cent in the past 35 years. More importantly, the GER in the Philippines has been almost stagnating over the past 15 years (1995-2010). The progress made by China is very impressive. India, after a relatively slow growth over the past century, has shown signs of rapid increase in enrolment in the first decade of this millennium. Both China and India doubled their GERs between 1985 and 2010. In terms of absolute numbers, they together contribute substantially to the fast expansion of higher education in their respective regions.

Most countries under Cluster 3 (Table 1) are in an elite phase in the expansion of higher education with a GER of less than 15 per cent. As noted earlier, in all cases, the fastest growth took place in the first decade of the present century. Even the countries which are in an elite stage of higher education development have experienced a very high rate of growth. However, some of the countries such as Japan and Korea in cluster 1 are facing difficulties in getting students due to demographic decline of youth population.

Table 1: Gross enrolment Ratios in higher education

| Cluster 1 | 1975 | 1985 | 1995 | 1999 | 2010 |
|-------------------|-------------|-------------|-------------|-------------|-------------|
| Hong Kong | 10.0 | 13.0 | 26.0 | .. | 60.0 |
| Macao | .. | .. | 27.0 | 28.0 | .. |
| Japan | 25.0 | 29.0 | 41.0 | 45.0 | 60.0 |
| Republic of Korea | 10.0 | 34.0 | 52.0 | 73.0 | 103.0 |
| Singapore | 9.0 | 12.0 | 34.0 | .. | .. |
| Cluster 2 | | | | | |
| Brunei Darussalam | .. | .. | 7.0 | 12.0 | 17.0 |
| China | 8.0 | 13.0 | 17.0 | 6.0 | 26.0 |
| India | 9.0 | 9.0 | 7.0 | 10.0 | 18.0 |
| Indonesia | 2.0 | 7.0 | 11.0 | .. | 23.0 |
| Iran | 5.0 | 15.0 | 17.0 | 19.0 | 43.0 |
| Lao PDR | .. | .. | 2.0 | 2.0 | 17.0 |
| Malaysia | 3.0 | 6.0 | 11.0 | 23.0 | 40.0 |
| Philippines | 18.0 | 38.0 | 30.0 | 29.0 | 29.0 |
| Sri Lanka | 1.0 | 4.0 | 5.0 | .. | 15.0 |
| Thailand | 4.0 | 20.0 | 20.0 | 33.0 | 48.0 |
| Timor-Leste | .. | .. | .. | .. | 17.0 |
| Viet Nam | .. | .. | 4.0 | 11.0 | 22.0 |
| Cluster 3 | | | | | |
| Afghanistan | 1.0 | 2.0 | 2.0 | .. | 3.0 |
| Bangladesh | 2.0 | 5.0 | 6.0 | 5.0 | 11.0 |
| Bhutan | .. | .. | .. | 3.0 | 9.0 |
| Cambodia | .. | .. | 2.0 | 2.0 | 8.0 |
| Maldives | .. | .. | .. | .. | 13.0 |
| Myanmar | 2.0 | .. | 6.0 | 7.0 | .. |
| Nepal | 2.0 | 5.0 | 5.0 | 4.0 | .. |
| Pakistan | 2.0 | 5.0 | 3.0 | .. | 5.0 |

| | | | | | |
|------------------------|--|--|--|--|-------|
| World total (millions) | | | | | 177.7 |
|------------------------|--|--|--|--|-------|

While the overall expansion is impressive in the region, it may be interesting to analyze the study programmes followed by the students. Unfortunately, information on this count is not easily available. The available information on this aspect is presented in Tables 2 and 3. Both of these tables indicate the choice of area of study by the students, and changes if any between 2006 and 2010. One finds that most of the countries (Table 2) under Cluster 1 in 2006 give emphasis on the study programmes in science technology and health services. For example, 41 per cent of students in Hong Kong, 46 per cent in Korea, and 34 per cent in Japan choose STEM (science, technology, engineering and mathematics) subject areas. However, humanities and social sciences account for nearly four-fifths of enrolments in Macao. In Clusters 2 and 3, the STEM subject areas account for a lower share of enrolment, except in Iran where the share of students in STEM is around 49 per cent. These trends continue to be similar in 2010 too (Table 3), although there seems to be an increasing preference for STEM subject areas in many more countries in 2010 than in 2006.

Although the available data are for a limited number of countries to generalize any trend, a recent review of higher education in Asia by the Asian Development Bank (ADB, 2011) shows that despite growing enrollments in higher education, several countries have a limited number of students in science and technology subject areas. Cambodia has an unbalanced disciplinary structure, with 66 per cent of students graduating in social science, business or law. A key reason for the need for more graduates in science and technology is that they are widely expected to lead the way to innovation and economic growth and development. Even during the current crisis period, most countries in the developed world tried to protect investment in STEM as a strategy to come out of the crisis. Another reason is that employment opportunities are expanding in those sectors which demand a degree in these subject areas. Unfortunately, private universities in Asia generally offer courses in lower cost study programmes, such as business and education, at the expense of higher cost programmes in science, technology, medicine and engineering.

The male-female differences in the choice of subjects of study are evident. In general, more women students are found in social sciences, education and humanities faculties, while a higher share of men students are found in STEM subject areas. For example, in a recent report on the subject choices of women in Japanese higher education (Tanikawa, 2013), women account for only 14 per cent in the STEM subject areas although they constitute 66 per cent of the enrolment in humanities and 43 per cent of the total enrolment in all subjects (except medical and agricultural fields).

Table 2: Distribution of graduates by discipline 2006 (per cent)

| Cluster 1 | Science | Engineering, manufacturing and construction | Education | Humanities and arts | Social sciences , business and law | Health and welfare | Others |
|---------------------------|---------|--|-----------|---------------------------|---|--------------------------|--------|
| Hong Kong | 15.0 | 21.0 | 11.0 | 10.0 | 31.0 | 5.0 | 7.0 |
| Macao | 2.0 | 1.0 | 4.0 | 7.0 | 72.0 | 6.0 | 8.0 |
| Japan | 3.0 | 18.0 | 7.0 | 15.0 | 27.0 | 13.0 | 17.0 |
| Rep. of Korea | 7.0 | 28.0 | 8.0 | 19.0 | 20.0 | 11.0 | 7.0 |
| Singapore | .. | .. | .. | .. | .. | .. | .. |
| Cluster 2 | | | | | | | |
| B. Darussalam | 5.0 | 9.0 | 51.0 | 8.0 | 13.0 | 10.0 | 4.0 |
| China | .. | .. | .. | .. | .. | .. | .. |
| India | .. | .. | .. | .. | .. | .. | .. |
| Indonesia | .. | .. | .. | .. | .. | .. | .. |
| Iran | 10.0 | 31.0 | 7.0 | 14.0 | 23.0 | 8.0 | 7.0 |
| Lao PDR | 1.0 | 12.0 | 20.0 | 26.0 | 10.0 | 2.0 | 31.0 |
| Malaysia | .. | .. | .. | .. | .. | .. | .. |
| Philippines | .. | .. | .. | .. | .. | .. | .. |
| Sri Lanka | | | | | | | |
| Thailand | .. | .. | .. | .. | .. | .. | .. |
| Timor-Leste | .. | .. | .. | .. | .. | .. | .. |
| Viet Nam | .. | 21.0 | 34.0 | 4.0 | 30.0 | 3.0 | 8.0 |
| Cluster 3 | | | | | | | |
| Afghanistan | .. | .. | .. | .. | .. | .. | .. |
| Bangladesh | .. | .. | .. | .. | .. | .. | .. |
| Bhutan | .. | .. | .. | .. | .. | .. | .. |
| Cambodia | 16.0 | 6.0 | 9.0 | 2.0 | 57.0 | 1.0 | 9.0 |
| Maldives | | | | | | | |
| Myanmar | .. | .. | .. | .. | .. | .. | .. |
| Nepal | | | | | | | |
| Pakistan | | | | | | | |
| World total (millions) | | | | | | | |

Table 3: Distribution of graduates by discipline 2010 (per cent)

| Cluster 1 | Science | Engineering, manufacturing and Construction | Education | Humanities and Arts | Social sciences, Business and law | Health and welfare | Others |
|------------------------|---------|---|-----------|---------------------|-----------------------------------|--------------------|--------|
| Hong Kong | .. | .. | .. | .. | .. | .. | .. |
| Macao | 3.0 | 2.0 | 5.0 | 7.0 | 64.0 | 6.0 | 13.0 |
| Japan | 3.0 | 17.0 | 7.0 | 15.0 | 27.0 | 13.0 | 18.0 |
| Rep. of Korea | 8.0 | 24.0 | 8.0 | 18.0 | 21.0 | 14.0 | 7.0 |
| Singapore | .. | .. | .. | .. | .. | .. | .. |
| Cluster 2 | | | | | | | |
| B. Darussalam | 12.0 | 10.0 | 42.0 | 9.0 | 12.0 | 11.0 | 14.0 |
| China | .. | .. | .. | .. | .. | .. | .. |
| India | .. | .. | .. | .. | .. | .. | .. |
| Indonesia | 6.0 | 17.0 | 20.0 | .. | 39.0 | 6.0 | 12.0 |
| Iran | 6.0 | 39.0 | 4.0 | 11.0 | 26.0 | 4.0 | 10.0 |
| Lao PDR | 7.0 | 14.0 | 17.0 | 4.0 | 31.0 | 8.0 | 19.0 |
| Malaysia | 14.0 | 24.0 | 17.0 | 4.0 | 31.0 | 8.0 | 2.0 |
| Philippines | .. | .. | .. | .. | .. | .. | .. |
| Sri Lanka | .. | .. | .. | .. | .. | .. | .. |
| Thailand | .. | .. | .. | .. | .. | .. | .. |
| Timor-Leste | .. | .. | .. | .. | .. | .. | .. |
| Viet Nam | .. | 17.0 | 28.0 | 4.0 | 33.0 | 4.0 | 18.0 |
| Cluster 3 | | | | | | | |
| Afghanistan | .. | .. | .. | .. | .. | .. | .. |
| Bangladesh | .. | .. | .. | .. | .. | .. | .. |
| Bhutan | .. | .. | .. | .. | .. | .. | .. |
| Cambodia | 9.0 | 3.0 | 2.0 | 14.0 | 66.0 | 3.0 | 3.0 |
| Maldives | .. | .. | .. | .. | .. | .. | .. |
| Myanmar | .. | .. | .. | .. | .. | .. | .. |
| Nepal | 6.0 | 17.0 | 25.0 | 22.0 | 25.0 | 3.0 | 2.0 |
| Pakistan | .. | .. | .. | .. | .. | .. | .. |
| World total (millions) | | | | | | | |

What level of higher education do students pursue? In general, an overwhelming majority of students study at the undergraduate level (Table 4). The share of students pursuing undergraduate studies in Asian countries is more than 96 per cent in any country, and in some countries it is negligibly small indicating about 100 per cent enrolment in undergraduate courses in 2006 and 2010. Another equally important trend is that most countries have a very high share of students enrolled in non-technical and non-professional subject areas (ISCED 5A). The share

of enrolment in the professional technical categories (ISCED 5B) in many countries varies between nine per cent in Bangladesh to 46 per cent in Hong Kong and 53 per cent in Lao PDR.

It is very difficult to draw any conclusions from the data partly because of the non-availability of data from several countries. In fact, no clear pattern emerges from the countries for which data are available. It seems that higher education in Asia, like in other regions, concentrates mostly on undergraduate education and graduate training, whereas research training has limited enrolment in most countries. This is not a very good trend for the future development of higher education and improving the quality of higher education training. One of the major constraints in the fast expansion of higher education is the availability of qualified and trained teachers who hold a Master's level degree at the minimum and a doctoral level degree if possible. It seems countries in the region except those belonging to Cluster 1 need to put added emphasis on enrolling a larger number of students in graduate and doctoral studies.

**Table 4: Distribution of students by ISCED level of education 2006 and 2010
(per cent)**

| Cluster 1 | ISCED 5A 2006 | ISCED 5B 2006 | ISCED 6 2006 | ISCED 5A 2010 | ISCED 5B 2010 | ISCED 6 2010 |
|------------------|---------------------|---------------------|-----------------|------------------|---------------------|-----------------|
| Hong Kong | 50.0 | 46.0 | 4.0 | 63.0 | 34.0 | 3.0 |
| Macao | 85.0 | 13.0 | 2.0 | 88.0 | 10.0 | 2.0 |
| Japan | 74.0 | 24.0 | 2.0 | 78.0 | 20.0 | 2.0 |
| Rep. of Korea | 62.0 | 37.0 | 1.0 | 75.0 | 23.0 | 2.0 |
| Singapore | .. | .. | .. | 54.0 | 43.0 | 3.0 |
| Cluster 2 | | | | | | |
| B. Darussalam | 65.0 | 35.0 | 0.0 | .. | .. | .. |
| China | 100.0 | 0.0 | 0.0 | .. | .. | .. |
| India | 100.0 | 0.0 | 0.0 | 93.0 | 7.0 | 0.0 |
| Indonesia | 78.0 | .. | .. | 76.0 | 22.0 | 2.0 |
| Iran | 73.0 | 26.0 | 1.0 | 72.0 | 27.0 | 1.0 |
| Lao PDR | 47.0 | 53.0 | 0.0 | 37.0 | 63.0 | 0.0 |
| Malaysia | 59.0 | 40.0 | 1.0 | 55.0 | 44.0 | 2.0 |
| Philippines | 89.0 | 10.0 | 1.0 | 90.0 | 10.0 | 0.0 |
| Sri Lanka | .. | .. | .. | 97.0 | 2.0 | 1.0 |
| Thailand | 84.0 | 15.0 | 1.0 | 84.0 | 15.0 | 1.0 |
| Timor-Leste | .. | .. | .. | 100.0 | 0.0 | 0.0 |
| Viet Nam | 67.0 | 30.0 | 3.0 | 62.0 | 35.0 | 3.0 |
| Cluster 3 | | | | | | |
| Afghanistan | .. | .. | .. | .. | .. | .. |
| Bangladesh | 90.0 | 9.0 | 1.0 | 92.0 | 8.0 | 0.0 |
| Bhutan | 100.0 | .0.0 | 0.0 | 79.0 | 21.0 | 0.0 |
| Cambodia | 100.0 | 0.0 | 0.0 | .. | .. | .. |

| | | | | | | |
|------------------------|------|------|-----|-------|------|-----|
| Maldives | .. | .. | .. | .. | .. | .. |
| Myanmar | .. | .. | .. | .. | .. | .. |
| Nepal | 99.0 | 0.0 | 1.0 | 100.0 | 0.0 | 0.0 |
| Pakistan | 94.0 | 5.0 | 1.0 | 94.0 | 5.0 | 1.0 |
| World total (millions) | 76.0 | 22.0 | 2.0 | 76.0 | 22.0 | 2.0 |

Diversification of higher education

The expansion of higher education was accompanied by the diversification of the system globally. Higher education diversifies the knowledge base in two ways: i) cognitive proliferation; and ii) operationalism (Barnett, 1994). The former puts more emphasis on understanding, insight, reflection, and knowing as contemplation while operationalism puts greater emphasis on skills, competencies, outcomes, and technical know-how. It views knowledge as a commodity, and graduates as products useful in production. The emphasis is on the production of knowledge as a market good and a saleable commodity.

The move towards setting up research universities, establishing world class universities, and focusing on research and development, especially in areas of science, technology, engineering, and mathematics (STEM), are good examples of efforts to encourage cognitive knowledge proliferation. Similarly, efforts to diversify higher education provision and programmes, the expansion of the non-university tertiary education sector, and the proliferation of non-degree programmes in tertiary education are examples of expanding the domain of operationalism or 'knowing as operation'.

It can be seen from the discussions in the earlier section that, in Asia, the diversified systems of higher education showed an expanded system – massified or universalized. Diversification can be of various types – institutional diversification, programme diversification, diversification of the clientele, sources of funding, ownership, etc. These two aspects are mutually supportive and reinforcing. The growth and expansion of the non-university sector is a good reflection of the diversification. Institutional diversification for the provision of higher education includes provision through public institutions, private institutions, distance learning institutions, and trans-border providers.

While higher education was traditionally offered through universities, now higher education includes a network of institutions that train individuals to acquire varied levels and types of skills demanded in a diversified economy. Universities, colleges, technical training institutes, community colleges, nursing schools, etc., are part of this network. At times, the term used is post-secondary education (PSE) which includes courses offered at tertiary and non-tertiary levels.

A review of institutions offering post-secondary levels of education in different countries (ADB, 2011; Varghese, 2014), reveals that the PSE institutions can be classified into four categories: i) universities which may be top-tier and research-oriented institutions; ii) teaching-oriented universities/ colleges/ non-university institutions that may give some attention to applied, locally-relevant research (second-tier universities); iii) tertiary short-cycle institutions which offer courses of short duration leading to a certificate or diploma; and iv) post-secondary non-tertiary

institutions implying a wider set of postsecondary institutions that offer a wider range of vocational, technical courses which may be of immediate relevance for lower end jobs in the labor market.

The emergence of the non-university sector is a recent phenomenon in many countries in Asia. The growth of this segment has been very fast. In Malaysia, the higher education sector includes a university and a non-university sector (Sirat, et.al, 2014). The university sector consists of public and private universities as well as campuses from overseas universities that have set up branches in Malaysia. Non-university higher education includes polytechnic courses, community college programmes, private college education, and governmental training institutions.

The institutions of higher education in the Republic of Korea are divided into seven categories (Yu, 2014): i) college and university education focusing on fundamental academic theories and their various applications; ii) industrial universities catering to industrial workers to improve their skill levels and job performances; iii) universities of education for teacher development; iv) junior colleges to produce mid-level technicians; v) broadcast and correspondence universities offering university- or junior college-level courses through broadcasts, communication, and classroom lectures targeting people who could not receive an education to these levels; vi) technical colleges – a new type of college system – sharpening the competitiveness of industrial workers and improve the possibility of lifelong employment through the improvement of their technical capabilities; vi) polytechnics providing technological education training services over a short period of time to develop 'global multi technicians'.

The diversification and expansion of the non-university sector of higher education helps absorb the social demand for higher education. Experience shows that education in the non-university segment is a way of providing higher education at a less costly mode. In most countries, the per student expenditure is higher in universities than in the non-university PSE institutions, and the differences in per student cost is widening between the university and non-university segments of higher education. In a sense, non-university institutions were established as a way of expanding tertiary education at a lower cost than would be required to expand universities.

Another important dimension is that the private sector is active in providing non-university higher education. Many of the courses offered in the segment are market-friendly and require low investment. Since these courses are employment-oriented, households are willing to invest in the non-university segment of higher education enhancing their popularity. It can be argued that the emergence of the non-university sector and short duration employment-oriented courses have reduced the pressure on the government to invest in higher education. This is one of the reasons for fast expansion of the sector even when public funding is not keeping pace with the expansion.

To sum up, the discussion in the previous two sections on expansion and diversification indicate certain interesting aspects of higher education development. It seems the higher education sector is expanding at a higher rate than that at other levels of education in most of the Asian countries, although part of this inflated rate is due to the low base in higher education compared to the school level education.

There is a need for a revisit of the intra-sectoral resource allocation policies followed by public authorities.

The surge in enrolment is not through relying on public institutions or public investment alone. The private students in public universities and the students in private institutions of higher education are increasing rapidly and account for a good share of increase in enrolment. Further, a good share of the additional enrolments is accommodated in the non-university sector. In fact, very often the expansion of enrolment is faster in the non-university sector and in non-degree programmes. The expansion is not dependent upon public resources only. Very often the expansion is funded by non-state resources. The households are investing considerably in the sector; expansion of the non-state sector is an indicator of this trend.

Another interesting feature is that more girls than boys are found in higher education, especially those systems which are massified. In 2010, females accounted for 51 per cent of the global enrolment (UIS, 2012). Further, it is the only sub-sector of education where the global gender parity index is more than unity even when most of the countries are far away from universal higher education. The efforts to expand the system are accompanied by strategies to assure quality. The establishment of accreditation agencies/bodies in several countries is a reliable indicator of this trend. How far these efforts helped to improve and maintain quality needs to be examined more closely.

One of the important features of the expansion is that, contrary to the general belief, it did not necessarily lead to increased unemployment of higher education graduates. This may be partly due to the fact that expansion has taken place when economic growth has been positive and high (except during the crisis period) and partly due to the reforms which made serious efforts to align skill formation with skill requirements in the labor market especially through the promotion of non-university sectors.

3. Privatization and the private sector in higher education in Asia

There is a view gaining increasing acceptance among policy makers that higher education has more private gains and thus should be financed primarily by the direct beneficiaries rather than by the public exchequer. This move towards promoting market operations in the economic sector had its repercussions in the higher education sector too. A major share of expansion in higher education taking place in Asia today is through non-state funding, whether the students are enrolled in public or private institutions of higher education. There are several reasons for this trend.

The public universities produced a large number of university graduates in liberal arts though what the market demanded was not graduates of liberal arts but graduates of an education programme related to practical, applicable knowledge and knowledge-based technologies. The demand was for skills that could be developed through short-duration courses which may not necessarily lead to a degree. Public institutions could not provide such avenues and private institutions were willing to open up non-university institutions focusing on skills development.

The success of the EFA programme to universalize primary education and generalize secondary education has led to even greater pressure on higher education to expand – the ‘pipe-line effect’. This pressure is more relevant in

developing countries where primary and secondary levels of education are fast expanding and a growing proportion of school graduates decide to join tertiary education institutions. Public institutions could not accommodate the increasing number of students who seek higher education. Nor could the public exchequer fund the expansion of higher education to accommodate the increasing social demand.

The income levels of households improved in Asian countries over the past decades, and households are more willing now to invest in the education of their children than in the past. However, they are willing to invest only in those subjects where employment probabilities are good. This has become a fertile ground for private institutions to expand.

The student support system in general and the student loan schemes were initiated in many countries, and the provisions have been expanded in others. Many countries in the Asian region extend loans to students in the private institutions and the amount of a loan is high enough to cover tuition fees and living expenses. This has helped improve the paying capacity of students, and private higher education institutions are the beneficiaries since those who pay for education (students/households) demand those courses which are labor market-friendly, and very often these courses are offered by the private institutions.

From the 1990s, the market operations in higher education increased and the effects are manifested in two forms: a) privatization of public institutions; and b) promotion of the private sector (Varghese, 2004).

Privatization of public institutions: Privatization implies applying market principles in the functioning of public institutions of higher education. The ownership and management of the institutions remain with the public authorities (Varghese, 2004). Privatization was very often facilitated through transferring the governance to public institutions (autonomy) and many of them becoming public enterprises venturing into cost-recovery, income-generating, and for-profit activities in public universities (Sanyal, 1995; Kezar, Chambers, and Burkhardt, 2005).

Most of the Asian countries have privatized higher education in one form or another. In Cambodia, the government introduced fees in 1996; in Indonesia, public universities became legal entities in 1999, empowering them to introduce cost-recovery measures (Susanto and Nizam, 2009); universities became legal entities in Singapore; all public universities in Japan are corporatized (Mok, 2007); Lao PDR introduced fees in national universities in 2011; the Universities Act in Malaysia was revised in 1995 to corporatize universities and to adopt corporate practices in public universities (Lee, 1998;1999; 2004); the Autonomous University Act of Thailand in the 1990s permit universities to mobilize their own resources (Suwantragul, 2009); and in Vietnam, the government allowed institutions full control of their own budgets from 2005 onwards. In Vietnam, fast expansion takes place in this segment of the higher education sector and a good share of funds come from cost recovery through student fees, although public funding continues to be the major source.

Private higher education institutions (PHEIs): The private sector, on the other hand, implies the non-state sector in higher education. The institutions are owned and operated by private individuals or agencies. In most cases, this sector does not receive funding from the government and in any case, it does not rely on state funding for its growth and expansion, although at times it receives partial public

funding support in some countries (Varghese, 2004). Private higher education institutions can be universities or non-university institutions offering professional training courses. Private universities offer courses leading to a degree, while courses offered in other types of private higher education institutions very often lead to a certificate or a diploma.

All PHEIs are not free from receiving financial support from the government. PHEIs in some countries such as India receive public funding. More than 75 per cent of private higher education institutions in India receive government funding to cover more than 90 per cent of the operational costs. These private institutions, in fact, operate like public institutions managed by private individuals and agents. In Japan, the government gives subsidies to private institutions based on the quota of admissions. The PHEIs need to admit the agreed number of students to get the government subsidy. Indonesia gives subsidies to appoint teachers with higher qualifications (such as a doctorate, etc.) and this helps PHEIs to hire more qualified academic staff. Hong Kong has a matching fund scheme where the government invests an equal amount for each dollar invested by the private donor. The government funding is for not-for-profit PHEIs.

Across Asia, more than 35 per cent of higher education students enroll in the private sector, and almost 60 per cent of the region's HEIs are private. Government promotion of private providers in higher education and the growth of private higher education are much more significant in Asia than in other regions of the world (Levy, 2010). From the 1990s, many countries in Asia, which hitherto had only public institutions, started establishing private institutions of higher education. Some countries such as Indonesia, Japan, the Philippines and the Republic of Korea had a strong tradition of private higher education where a majority of students are admitted to private institutions. In 2010, nearly four-fifths of the students in the Republic of Korea and Japan, nearly three-fifths of the students in Indonesia, and two-thirds of the students in the Philippines were enrolled in private institutions of higher education (Table 5) in PHEIs.

Many countries introduced new laws to establish private institutions. Private universities were not permitted in Cambodia until the law was amended in 1997 and the first private university (Norton University) was established in 1997 (Chealy, 2006). The Chinese Government introduced laws in 2002 to permit private higher education institutions to operate (Li, 2013). The private sector is increasing its share in enrolment in many Asian countries. The Prime Ministerial decree legalized private universities in Lao PDR in 1995; in Malaysia, the Act of 1996 legalized private universities; in Thailand, the Private Higher Education Act was amended in 2003, legalizing private providers and PHEIs; and Vietnam legalized private universities in 2005.

Table 5: Share of female enrolment and private enrolment (per cent)

| Cluster 1 | Female per cent | Private per cent | Female per cent | Private per cent |
|-----------|--------------------|---------------------|--------------------|---------------------|
| | 2006 | 2006 | 2010 | 2010 |
| Hong Kong | 50.0 | 6.0 | 51.0 | 16.0 |

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| | | | | |
|------------------------|------|------|------|------|
| Macao | 49.0 | 61.0 | 51.0 | 64.0 |
| Japan | 46.0 | 80.0 | 46.0 | 79.0 |
| Rep. of Korea | 37.0 | 80.0 | 39.0 | 81.0 |
| Singapore | .. | .. | 50.0 | 62.0 |
| Cluster 2 | | | | |
| B. Darussalam | 65.0 | .. | 63.0 | 1.0 |
| China | 47.0 | .. | 50.0 | .. |
| India | 40.0 | .. | 40.0 | .. |
| Indonesia | .. | .. | 47.0 | 58.0 |
| Iran | 52.0 | 52.0 | 49.0 | .. |
| Lao PDR | 40.0 | 27.0 | 43.0 | 12.0 |
| Malaysia | 56.0 | 35.0 | 56.0 | 41.0 |
| Philippines | 54.0 | 66.0 | 54.0 | 66.0 |
| Sri Lanka | | | 65.0 | .. |
| Thailand | 54.0 | 17.0 | 56.0 | 18.0 |
| Timor-Leste | .. | .. | 40.0 | 43.0 |
| Viet Nam | 41.0 | 10.0 | 49.0 | .. |
| Cluster 3 | | | | |
| Afghanistan | 20.0 | .. | 18.0 | 20.0 |
| Bangladesh | 35.0 | 49.0 | 37.0 | 43.0 |
| Bhutan | 33.0 | .. | 40.0 | .. |
| Cambodia | 35.0 | 58.0 | 34.0 | .. |
| Maldives | .. | .. | 51.0 | .. |
| Myanmar | .. | .. | .. | .. |
| Nepal | 28.0 | .. | 41.0 | 59.0 |
| Pakistan | 45.0 | 33.0 | 45.0 | 33.0 |
| World total (millions) | 50.0 | .. | 51.0 | .. |

It can be seen from Table 6 that the only country where the private sector has not entered is Myanmar. In all other countries listed above, the share of PHEIs varies between 17 per cent in Vietnam to 97 per cent in Indonesia. The corresponding share in enrolment in the PHEIs varies from 10.4 per cent in Vietnam to 80 per cent in the Republic of Korea. In all instances, except in Hong Kong, the share of PHEIs is higher than their share in enrolment which indicates that the private institutions are small in many countries. The differences between these shares (in institutions and enrolment) are high in some of the countries. For example, Bangladesh has a share of 48.6 per cent in PHEIs while their enrolment share is only 14.4 per cent. The same situation can be seen for Thailand, Pakistan, and Lao PDR, etc., in Table 6.

Table 6: Share private institutions and enrolment in Asia

| Countries | Share of PHEIs | Share of enrolment in PHEIs |
|------------------|-----------------------|------------------------------------|
| Bangladesh | 48.6 | 14.4 |

| | | |
|-------------------|------|------|
| Cambodia | 86.5 | 50.9 |
| China | 28.3 | 19.9 |
| Indonesia | 97.3 | 70.9 |
| Hong Kong China | 54.5 | 59.0 |
| Lao, PDR | 79.5 | 32.4 |
| Malaysia | 86.5 | 50.9 |
| Myanmar | 0.0 | 0.0 |
| Pakistan | 46.0 | 23.8 |
| Philippines | 72.2 | 60.9 |
| Republic of Korea | 87.0 | 80.1 |
| Thailand | 47.0 | 9.9 |
| Vietnam | 17.3 | 10.4 |

Source: ADB (2012)

4. Characteristics of private higher education in Asia

Types of private institutions

Although private higher education is discussed as a homogenous category, the variations among them are wide. There are different types of PHEIs. One of the earliest and most commonly used classifications of private higher education institutions is categorizing them into: elite, religious, and demand absorbing (Levy, 1986). A more recent and modified categorization by Levy is in terms of: elite and semi-elite, religious/cultural, and non-elite and demand absorbing (Bjarnason et al., 2009).

Most of the top ranking universities in the USA are, in a sense, elite private institutions. As per the QS world ranking of universities 2012/2013, six US universities were listed in the top ten category. All of them (MIT, Harvard, Yale, Pennsylvania, Chicago, Princeton, Caltech) are private institutions. On the other hand, the four UK universities that appear in the top ten category (Cambridge, Oxford, UCL and Imperial) are public universities. Many of the top ranking universities in other countries are very often elite public institutions. Most semi-elite institutions, on the other hand, look for linkages with foreign institutions to acquire legitimacy and international recognition (Slantcheva and Levy, 2007).

The non-elite and demand-absorbing private institutions are the largest and the fastest growing segment of private higher education in Asia in recent times. Many of them are in the non-university sector and help expand access to higher education. The study programmes are vocational in nature and the duration of courses in these non-university sector institutions is short. These institutions levy relatively lower level of fees and attract students from lower middle class families. They are the largest and the fastest growing segment of PHEIs in Southeast Asia.

Demand-absorbing institutions emerged over the recent past in several Asian countries. Bangladesh, Cambodia, Indonesia, Japan, Lao PDR, Malaysia, Pakistan, the Philippines, Thailand and Vietnam are examples of this trend. Many of the PHEIs of this category are in the non-university sector. Their study programmes are vocational in nature and the duration of the courses in these non-university

institutions is shorter than that for degree programmes. Many demand absorbing PHEIs in Asia are of questionable academic quality and may be for-profit institutions. They are usually family-owned, invest very little, and offer market-friendly courses (ADB, 2012).

Religious affiliated PHEIs are common in many Asian countries especially in Indonesia, the Philippines and Thailand, while most of the PHEIs in Japan, Korea, Cambodia, Vietnam, and India, etc., are not religious-oriented or owned by religious groups. A major share of private higher education institutions in India are for-profit and commonly called capitation fee colleges (Tilak, 1994). Many private institutions in Indonesia are affiliated to the Islamic faith in Indonesia, while in the Philippines most of the PHEIs are related to the church, and in Thailand some of the PHEIs are associated with Buddhism.

Some of the PHEIs in Asia are established by ethnic groups since public universities do not extend sufficient access to them. Ethnic communities in Indonesia, Malaysia, etc., establish their own PHEIs and also extend financial support for their community members to pursue their education (ADB, 2012).

Most of the private institutions are self-financing, relying on student fees as the major source of income. However, some are for-profit while others are not-for-profit institutions. In the case of for-profit institutions, the main motivation for starting such institutions may be for profits rather than for educational objectives. The for-profit institutions are at times labeled as 'pseudo universities' since they do education business (Altbach, 2005, p.23). It is also true that many private higher education institutions maintain a formal non-profit legal status while functioning like for-profit entities.

In India, some of the state governments established self-financing courses in public institutions and self-financing public institutions (Gnanam, 2008). For example, to meet the growing demand for technical education, the Government of Kerala opened the Institute of Human Resources Development in Electronics (IHRDE) as a self-financing institute. This was followed by the private sector (Varughese, 2006). The self-financing colleges established by the private sector, commonly known as capitation fee colleges (Tilak, 1994), are mostly for-profit institutions. Most of these self-financing institutions were colleges established in the subject areas of engineering, medicine, and management (Agarwal, 2007) and are concentrated in the states of Andhra Pradesh, Karnataka, Tamil Nadu and Maharashtra. A major part of India's private higher education surge came from the proliferation of private self-financing colleges mostly in the technical and professional subject areas. This is in contrast to the developments in many other countries where private institutions were established in areas which required less investment unlike engineering and medical colleges.

A bill to permit the operation of private universities was introduced in the parliament but was not passed at that time. However, from 2002 onwards, several state governments in India have passed Private University Acts and many of them established private universities in India (Gupta, 2008).

At times, the private institutions are also an easy route for the entry of cross-border institutions. In some cases the domestic private institutions are affiliated to a foreign institution. In some instances foreign universities establish their branch

campuses in these countries. In the Asian region, countries such as Hong Kong, Malaysia, Singapore, Qatar, UAE, etc., have branch campuses of many foreign universities mostly from Australia, the UK and the US. Malaysia has branch campuses of universities including Nottingham University in the UK, Monash University, Curtin University in Australia, etc. Singapore has branch campuses of John Hopkins, the University of Chicago, INSEAD, etc. Bond University and Monash University in Australia have branch campuses in many Asian and African countries.

Quality and relevance of education provided in PHEIs

A fast expansion of the education system, at any level, is associated with a declining quality of the service provided. The experience in the primary education sector is a clear indication of this trend. The higher education sector made serious efforts to maintain quality while expanding its outreach. The accreditation agencies became a common feature in many countries (Martin and Antony, 2007).

One of the perceived advantages of PHEIs is that they offer quality programmes and relevant courses to prepare their graduates for jobs. However, empirical evidence shows that this is not always the case. No doubt, some of the PHEIs are elite and prestigious institutions offering very high quality education, as seen in the case of top ranking universities of the USA. However, a majority of PHEIs in Asia are non-elite in nature, demand-absorbing in character and some are in the for-profit categories which offer study programmes which are highly valued in the labor market.

The quality of the PHEIs is always a question mark in many countries in Asia. Many PHEIs try to minimize costs to increase profit or survive in the market. The strategies followed by many PHEIs include increasing student enrolment without adequate investment in infrastructure and teachers. In some instances, PHEIs are operating in very bad physical conditions (including some operating from garages, school compounds, etc.). They very often employ part-time teachers, at times borrowing teachers from public universities (Welch, 2011).

Quality assurance and accreditation policies in most countries in Asia cover private institutions. In Cambodia, the Accreditation Committee assesses and accredits all higher education institutions, while in Indonesia the Accreditation Board accredits each programme; whereas in Malaysia, quality assurance has three levels – programme accreditation, institutional audit, and self-accreditation. In the Philippines, accreditation is optional for PHEIs. Unfortunately, the fast expanding sector and the demand-absorbing non-university higher education segment is not always covered by the accreditation processes.

The incidence of unemployment among PHEI graduates is high in Asia, in countries such as Indonesia and the Philippines. Surveys among the employers indicate that the unemployment of PHEI graduates is primarily due to their poor skill levels. Surveys have shown that, for example, 80 per cent of Thai firms find difficulty in filling up posts due to the lack of skills among university graduates. Only 25 per cent of Indian and 10 per cent of Chinese engineering graduates possess the expected skills to be employed in the firms (ADB, 2012).

A World Bank study noted that of the 250,000 students that graduate in Thailand every year many of them remain unemployed, while nearly 80 per cent of

Thai firms experienced difficulty in filling job vacancies due to the mismatch between skills needed by the firms and the skills produced by the institutions (Postiglione, 2011). Similarly, by some accounts only 25 per cent of Indian and 10 per cent of Chinese engineering graduates have the skills required to work at their nominal skill level in an international company (Farrell et al., 2005). In China, graduate unemployment in 2008 rose to 13 per cent overall, 10 per cent for graduates of top-tier universities, and 16 per cent for graduates of vocational-technical colleges—high compared with the official national unemployment rate of four per cent. Moreover, the 2009 national employment report noted a general deficiency in applied analytical ability and managerial skills among college and university graduates.

Equity concerns and private higher education

An expansion of the system, in general, is accompanied by an overall decline in the inequality of access to higher education. However, empirical studies (Arum, et al., 2007) have shown that expansion does not reduce class inequalities until the advantaged groups reach a point of saturation. According to the maximally maintained inequality (MMI) hypothesis, saturation is defined as ‘the point at which nearly all sons and daughters of advantaged origins attain the educational level under consideration’ (Arum, et al., 2007: 3). Therefore, in the absence of intervention policies, an expansion of the system in an unequal society need not lead to a reduction in inequalities.

When inequality in access in an expanding system is increasing, the expansion benefits the rich; when it is stable, the expansion benefits the poor as well as the rich (Shavit, et al., 2007); and when it is declining, it is inclusive and allows access to higher education to a larger proportion of students from lower social strata. In the Asian countries which have universalized higher education, inequalities in access are reducing for all sections of society.

The private sector has a dual role in its relation to inequalities. Since the financial capacity determines admissions, an expansion of the system through the private institutions may increase inequality. However, many private institutions relax admission criteria which permit many students whose grades are poor to get into higher education. However, given the fee levels, the poor are deprived of access even when they have obtained higher grades for their scholastic performance. The inequalities in access and success in higher education also have implications for the labor market.

Another issue related to inequalities in access to higher education is that when higher education had limited access and when the privileged took advantage of the system, public funding and public subsidies were forthcoming. When the system expanded and the less privileged started getting access to higher education, subsidies were reduced and cost-recovery measures were introduced. Further, while massification of higher education in the developed world is publicly funded, that in the developing world is increasingly funded through cost-recovery measures and limited state financing.

Empirical evidence shows that one group that benefits – often more than other groups – from higher education expansion, with or without any affirmative action, is women. For example, the gender parity index (GPI) in higher education in 2010

exceeded 1.0 globally and in most regions, except for the Arab States, South and South West Asia and sub-Saharan Africa (UIS, 2012).

Financing and private higher education

The cost recovery accounted for a low share of expenditure on higher education in most of the Asian countries until student fees were enhanced in the 1990s (World Bank, 1994). In India, the government appointed separate committees for technical and general higher education to explore possibilities and suggest measures for mobilizing non-governmental funds for the sector. The committee recommended that the fees should form at least 20 per cent of the cost. In China, there were no student fees prior to 1978. In the 1980s, the student stipend system was changed and in the 1990s, the student fees were introduced. China introduced a differential fee structure whereby general students paid a lower level of fees, and self-financed students and those financed by enterprises paid a higher amount of fees (World Bank, 1996).

Some of the countries in the region had student loan schemes. Student loans were introduced on a large scale in many countries in Asia as a mechanism to recover cost. The student loan scheme helped the students to pay high fees in the public institutions (privatization) and ensured the expansion of PHEIs. China introduced student loans as part of its transition from a centralized system to a socialist market economy (World Bank, 1996). Student stipends were converted into merit scholarships and loans from 1988 onwards. Thailand introduced student loan schemes on a large scale in the late 1990s (Ziderman, 1999). The Philippines also has a student loan scheme (Kitaev et.al, 2003). A majority of loan scholarships in Thailand are distributed to secondary school students. This is one of the few examples where young students (minors) are given loans and it raises ethical issues on the desirability of children being made debtors. Malaysia has a student loan scheme for students in both public and private institutions. In Indonesia, too, the loan scheme supports students from both private and public institutions of higher education.

The cost-recovery measures and the expansion of private higher education reduced pressure on the government to invest in higher education. As mentioned above, nowadays banks and governments are supporting private institutions through student loans. In some countries during the East Asian crisis, the government extended student support programmes to ensure the continuation of students in private institutions, to pay fees, and to ensure the financial survival of these institutions (Varghese, 2001).

5. The challenges ahead

Higher education has been expanding globally at a fast pace. The share of the Asian region to this expansion is higher than other regions. In 2010, the Asian region accounted for nearly 47 per cent of the total global enrolment and 60 per cent of the increase in global enrolment between 2004 and 2010. This expansion is impressive but also brings many challenges along with it.

One of the major challenges is maintaining quality of higher education while the system is expanding. Although Asian countries, like their counterparts elsewhere, have set up external quality assurance mechanisms, the major challenge for them is

to find qualified teachers to teach in the universities and other institutions of higher education. The analysis in this chapter shows that enrolment to graduate and doctoral study programmes are low and are not sufficient to provide good quality education. Therefore, there is a need to promote graduate studies. Therefore, there is a need for public investments to be increased and targeted to promote graduate studies in Asian countries. Governments of China and India, accounting for the largest share in higher education enrolment in Asia, are moving in this direction.

Many private universities may not be able to extend support on this count since most of them offer courses in market-friendly subject areas and mostly at the undergraduate, diploma or certificate levels. In many instances, the private universities operate in poor conditions – poor state of infrastructure, less qualified teachers, etc. While there is a need to encourage the private sector, there is a need to regulate them to provide quality education at relatively affordable prices.

The expansion taking place in Asian countries does not rely entirely on public funding. The privatization measures in the public universities and private universities reduce the pressure on the governments to fund higher education. While this may be a welcome change, in the absence of targeted interventions to subsidize those from the lower socio-economic background, it may lead to increased inequalities in present and future generations. There is a need for governments to increase investments in higher education, and more importantly to target public subsidies to favor those who need them the most.

There is a need for added emphasis on increasing enrolments in the STEM subject areas. In many countries, enrolment to these study programmes are very low and will have implications for economic development especially in the technologically-oriented and globalized economic situation. A shift in focus to these subject areas requires heavy investment. Unfortunately, many PHEIs are not investing in these areas. In this respect, too, there is a need for targeting public investment more closely in these areas which may not be areas of priority investment for those who look for profits.

India and China account for a major share of the enrolments in Asia. Given the fact that the GERs in these countries are far from universal access, the potential of these two countries to contribute to student numbers is very high. Between the two countries, India has a higher potential to expand higher education since the bulge in youth population in the country. It is expected that India will have world's largest youth population in the 2020s. The steps to be taken by India will have implications for the whole region.

Needless to add, the major challenge for most countries will be to manage massification of higher education. Those countries where higher education is still in an elite stage are moving towards a stage of massification. New providers and institutions are coming up in all these countries. The need for developing a regulatory system is essential to manage massification. The public authorities in these countries need to invest more of their time on regulating the market for higher education. A lack of regulation, no doubt, may lead to a crisis in higher education while an attempt to over regulate will force the private providers to leave the field. Therefore, any implementable regulatory measures need to consider a trade off between what is desirable and what is feasible in a given situation.

Note

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