

Higher Education in Cambodia: Expansion and quality improvement

James H. Williams^{*}, Yuto Kitamura^{**} and C. Sopcheak Keng^{***}

Abstract. While many countries have experienced rapid growth in higher education in recent years, few have grown as rapidly as Cambodia. Moving from less than a thousand students in a single institution in the aftermath of the Khmer Rouge regime, the Cambodian higher education system has expanded by a factor of 65 over 1980 levels. This paper draws on a unique dataset of national higher education statistics to paint a picture of the growth of the system over the past 30 years, its extent and nature, along with some of the implications for access, quality, and composition. While some of this expansion has taken place in the public sector, the vast majority of growth can be seen in the proliferation of private institutions and in dramatic increases in the numbers of fee-paying students in public institutions. Demand for higher education has far outstripped government capacity for provision. Government allows a robust private sector while working to establish an appropriate regulatory regime.

Keywords: access, Cambodia, developing countries, expansion of higher education, quality

Introduction

In a globalized world economy, higher education is increasingly recognized as a critical element of national development strategy in both economic and social domains (see, for example, McMahon, 2009). The 2009 World Conference on Higher Education, for example, declared:

As a public good and a strategic imperative for all levels of education and as the basis for research, innovation and creativity, higher education must be a matter of responsibility and economic support of all governments....

^{*} James H. Williams, Associate Professor, The George Washington University, USA, e-mail: jhw@gwu.edu

^{**} Associate Professor, The University of Tokyo, Japan, e-mail: yuto.kitamura@gmail.com

^{***} Head, Department of International Studies, Institute of Foreign Languages, Royal University of Phnom Penh, Cambodia, e-mail: sopheak_kc@yahoo.com

At no time in history has it been more important to invest in higher education as a major force in building an inclusive and diverse knowledge society and to advance research, innovation and creativity. The past decade provides evidence that higher education and research contribute to the eradication of poverty, to sustainable development and to progress towards reaching the internationally agreed upon development goals, which include the Millennium Development Goals (MDGs) and Education for All (EFA). (UNESCO, 2009a)

Countries expect higher education to play three major functions in and for society: 1) supporting intellectual innovation by generating new knowledge, accessing global storages of knowledge, and adapting knowledge to local usage; 2) contributing to the creation of human capital by training a qualified and adaptable labor force; and 3) providing the foundation for democracy, nation-building, and social cohesion (World Bank, 2002, p.24). These functions are critical in responding to rapid change in today's globalized world. Diversified models of higher education have emerged in different countries, in an attempt to meet emerging needs and demands of knowledge-based economies. For example, the private sector has come to play a much more significant role in many higher education markets which used to be dominated by the public sector, particularly through the proliferation of non-elite and "demand-absorbing" types of private institutions (UNESCO, 2009b).

Both developed and developing countries have experienced such changes. However, it is more challenging for developing countries to respond, as they are late-comers to the global higher education market and often have not established a sufficient foundation to compete with institutions in developed countries. It is thus critical to understand how higher education has developed in developing countries and what sort of challenges they face.

These phenomena have been examined from several theoretical perspectives. One of the earlier theoretical frameworks was the late development effect which explains how education systems in developing countries are often forced to develop at a much faster pace than the education systems from which they were derived (Dore, 1976). This situation tends to over-emphasize the value of diploma, which may not accurately reflect graduates' abilities. Another commonly used framework is dependency theory, which sees higher education systems in developing countries as transplanted versions of the Western system (Altbach & Selvaratnam, 1989). Such transplantation has been fostered by a "relationship between global knowledge and power as involving a hierarchy of knowledge where one form of knowledge is privileged over another" (Spring, 2009, p.13) as world system and postcolonial/critical theorists have repeatedly criticized. Luke (2010) states that "the idiosyncratic aims and good intentions of academic staff and departments aside, universities have served the extension of state and corporate power through the international dissemination of knowledge, technical expertise, lingua franca, and, indeed, particular forms of ideological disposition" (p.47).

Such dependency is widely observed in Asia. However, there has been criticism of the notion of a simple transfer of systems from Western to Asian countries in a rigid "center-periphery" relationship

(Umakoshi, 2004). Higher education systems in Asia have grown rapidly, and it is not very informative to analyze their dynamics from a conventional dependency theory perspective.

More relevant to analysis of changes in developing higher education systems, particularly in Asia, are the perspectives of globalization. In the current knowledge-based economy, it is vital to examine how the global higher education market has affected the production, consumption, and investment of knowledge through higher education systems at national and regional levels. As Marginson (2010) points out, although most of the activity in the worldwide higher education environment is nation-bound, a distinctive global dimension is growing and “there is the globalization of knowledge itself as a single world system” (p.202). In higher education systems at national and regional levels, research and scholarship have been predominantly global in orientation, and approaches to the governance of higher education, for example, have been shared across borders.

Since the 1990s, higher education has been considered one of the critical powerhouses of development in developing countries (Naidoo, 2010). A number of studies have revealed that expansion of higher education can have a positive impact on economic growth¹. McMahon (1999) points out the importance of recognizing indirect effects on economic growth through research and development, which mostly take part at higher education institutions. Although mainly looking at data from OECD countries, he explains that higher education embodies new ideas and acts as a major vehicle for transmission to industry as graduates are employed.

In this paper, we take up the case of Cambodia, which has a relatively short history of modern higher education. We examine how the country has developed its higher education system, responded to changing socioeconomic environments, and struggled to improve the system.

The Government of Cambodia has recognized the importance of higher education and has taken a number of steps to expand access. At the same time, awareness is growing of the importance of improvements in quality, particularly given the rapid expansion of the system. The importance of quality is borne out by research. Hanushek and Wößmann’s research suggests that differences in improvements in student learning outcomes explain more of the cross-national variation in economic growth than variations in access (Hanushek & Wößmann, 2007)². In practical terms, expansion of access and improvements in quality are both part of the institutional development of higher education systems. If, after a period of expansion, the policy focus broadens to include quality, an understanding of the nature of the expansion and character of the system is useful in developing quality improvement and assurance strategies.

¹ For instance, Bloom, Hartley and Rosovsky (2006) discuss the public benefit of higher education and Bloom, Canning and Chan (2006) analyze the impact of higher education development on economic growth of African countries.

² Hanushek and Wößmann (2007) also point out that economic growth of the country because economic growth can be strongly affected by the skills of workers. They argue that education can increase human capital inherent in the labor force, increase the innovative capacity of economy and facilitate the diffusion and transmission of knowledge.

This paper describes the expansion of higher education³ in Cambodia over the past 30 years. The paper relies primarily on a unique dataset of institution-level statistics assembled from data collected over the past three decades by the Ministry of Education, Youth and Sport (MoEYS). In addition, the paper draws on data from UNESCO, both published sources and the Institute for Statistics' online data. Cambodia is not alone in facing issues of expansion and quality. Nor is it alone in facing the challenges of developing its system in a context of intense globalization. Still, relatively few education systems in the world have been as debilitated as was Cambodia's 30 years ago.

Among the most notable trends in recent years has been the global expansion of higher education. Worldwide, tertiary enrollment rates have grown from 19 percent in 2000 to 26 percent in 2007, representing 150.6 million tertiary students. In 2007, enrollments in tertiary education were 53 percent higher than in 2000 (Altbach, Reisburg & Rumbley, 2009). In Cambodia's case, however, expansion has taken place much more rapidly, and 2007 tertiary enrollments were 453 percent higher than in 2000. Quality improvements in such a context would be challenging for any system. For a system with a weak base, the challenges are all the more daunting. Also notable is the increasing pace of globalization, which places Cambodia's higher education in a far larger market than the borders of the Kingdom. Universities in nearby Thailand, Singapore, Hong Kong, as well as China, South Korea and Japan are competing for world-class status, through international rankings and establishment of well-funded research institutions. Regional initiatives offer the opportunity for greater collaboration and support, along with the challenge of increased competition, at a formative stage of system development.

Martin Trow's classic formulation of transitions in higher education from elite to mass to universal is based on analysis of systems where the institutions of elite tertiary education had decades if not centuries to mature (Trow, 2006). Cambodia and a number of other poor countries do not feel they can afford that much time, and so face the triple challenges of developing a mature core system, while simultaneously expanding that system, while working to assure minimum levels of quality. For these countries, an understanding of one of the world's fastest expanding tertiary systems is instructive.

The paper begins with a discussion of the historical context of higher education in Cambodia and efforts to improve both the reach of the system and its quality. The main sections of the paper examine expansion of the system through analysis of institutional- and national-level statistics. The final sections characterize the Cambodian higher education system in light of its prospects for quality improvement, examining the system in comparison with neighboring country systems and in light of Trow's typology.

The statistical body of the paper is organized as follows. First, the tremendous growth in number of institutions is portrayed. Then growth in enrollment is examined in absolute terms, in terms of proportion of the age group, and in comparison with neighbors. Growth in enrollment was made

³ For purposes of this research, we define higher education in terms of institutions offering at least four-year post-secondary degrees. In addition, we use tertiary education and higher education interchangeably.

possible by permitting the opening of private institutions and by collecting fees from some students at public institutions. A somewhat unique feature of the Cambodian system is double enrollment, whereby students enroll in multiple degree programs in different higher education institutions. Heavy reliance on private institutions and fees might be expected to favor the urban professional classes. And so the composition of higher education enrollment in terms of parental occupations is examined in relation to public and private institutions. Public and private enrollment is also examined in light of students' geographic origins. The changing gender make-up of higher education is briefly noted, and Cambodia's gender parity index is compared with its neighbors. Finally available data on faculty qualifications are discussed, in terms of public and private institutions and developments over the past 10 years. For this analysis, we rely primarily on data from the MoEYS in their annual statistical reports on higher education entitled *Statistics of Higher Education Institutions*. Data, particularly at the institutional level, are limited by what institutions provide. This presents a conundrum when dealing with data such as this which is both potentially instructive and potentially misleading. Rather than limit analysis to topics for which there is complete information, we have decided to report analysis of available data, but to acknowledge significant limitations on interpretation. An additional complication is the lack of yearbooks for several years, despite an extensive search in Cambodia, in government offices, research libraries, resident offices of international agencies, and the Royal University of Phnom Penh.

I. Historical and policy context

I-1. Higher education in Cambodia

The inception of the modern system of higher education in Cambodia can be found in the establishment of the National Institute of Law, the National Institute of Politics and the National Institute of Economic Sciences in 1947, several years prior to the end of nearly a century of French colonial rule. These institutions were under the strong influence of the higher education system of the suzerain state, France. The first institution that would be recognizable as a university in the Western sense was established in Phnom Penh in 1960, the Khmer Royal University. Thereafter a rapid period of expansion followed. In 1965, six higher education institutions were created: the Royal Technical University, the Royal University of Fine Arts, the Royal University of Kompong Cham, the Royal University of Takeo-Kampot, the Royal University of Agricultural Science, and the People's University (MoEYS, 1971, cited in Chamnan & Ford, 2004). By 1966, tertiary enrollment had reached 7,360 (Ayers, 2000). However, as Chamnan and Ford (2004) point out, these universities provided education of extremely low quality.

In some sense, the current rapid expansion might be seen to mirror the initial expansion of higher education in the 1960s, a process that Ayers has characterized as the "brainchild of Prince Norodom

Sihanouk,” (Ayers, 2000, p 50) who sought to expand tertiary education so that “students could obtain almost all higher education within Cambodia.” Unfortunately, there was little planning for “how the new institutions were to be financed, staffed, and resourced (Ayers, 2000, p 50).”

The Government of Democratic Kampuchea, which was led by Pol Pot and ruled the country from 1975 to 1979, abolished the entire education system and destroyed many educational facilities. More than three quarters of all university teaching staff and a phenomenal 96 percent of students were massacred by the Khmer Rouge (Chealy, 2005). Higher education in Cambodia was thus ripped apart. Though the quality of university education was low before, the destruction of the Pol Pot era rendered the system incapable of imparting the knowledge and experience that had been accumulated up to 1975. A large part of the intelligentsia was lost. The legacy of the virtual destruction of the entire system remains to this day.

In 1979, the pro-Vietnam People’s Republic of Kampuchea was established with the help of the Soviet Union. Numerous experts from Russia and Vietnam came to Cambodia and proceeded to set up a higher education system on the Soviet model. This period saw the reopening of the Royal University of Phnom Penh and other universities that had been established before the Khmer Rouge era. From the late 1980s to the early 1990s, the Royal University of Phnom Penh fell prey to an internal power struggle, with the ultimate result that the faculties of economics, law, and education became autonomous. These faculties formed the basis, respectively, of the National University of Management, the Royal University of Law and Economics, and the National Institute of Education. The system of many government ministries individually managing relevant universities resulted from the public administration system created at this time. Strong criticism persists that the management and supervision of higher education institutions is too decentralized and inefficient.

The Paris Peace Agreement was signed in 1991. In 1993, a general election was held, monitored by the United Nations Transitional Authority in Cambodia (UNTAC). As peace was finally restored in Cambodia, higher education resumed its expansionary course. In the process, the socialist influence on the higher education system in Cambodia which had spread from Russia, Eastern Europe and Vietnam in the 1980s was gradually eroded, and the strong influence of the United States, Australia and Western Europe began to prevail. With the introduction of market forces, the idea that universities can generate potential commercial gain became widely accepted. National universities officially came to be called public administrative institutions and were transformed into semiautonomous institutions (Chamnan & Ford, 2004). Furthermore, in 1997, private capital was allowed into university management. This gave rise to the birth of many private universities and a mushrooming in the number of higher education institutions. The first private university in Cambodia was Norton University, established in 1997 in the wake of these policy changes.

Higher education institutions of Cambodia today can be classified basically into three types: the Royal Academy, universities, and colleges specializing in particular fields. Notably, the Royal Academy is expected to play the role of a think tank, transcending institutional boundary distinctions.

Sadly, lack of human resources has meant that the Academy does not serve its original purpose, but offers educational programs like other higher education institutions. It has virtually no capacity to engage in research or provide expert advice (Chealy, 2009). Many higher education institutions in Cambodia only run programs in specific areas of specialist fields. Few multi-faculty universities offer instruction over a broad range of fields.

Demand for higher education has risen dramatically in recent years. In response, many private higher education institutions have opened. Following Norton University mentioned earlier, the Institute of Management Science and the Institute of Technology and Management were founded in 1998, the International Institute of Cambodia in 1999, and then a steady stream of private universities (Chealy, 2009). Meanwhile, even before the establishment of these private higher education institutions, fee-paying courses were being offered by national universities, whose tuition is free in principle. These fee-paying programs are considered necessary for public higher education institutions to generate needed financial resources, especially to pay teaching staff.

Private universities comprise a very large proportion of higher education institutions offering 4-year educational programs. While playing an important role in meeting demand for higher education, there are many problems relating to the quality of what is being taught and the variety of programs offered. Issues with quality are not limited to private universities; national universities also confront a number of challenges. In this respect, it is extremely important to understand the quality assurance mechanisms in place, chiefly through the accreditation system.

I-2. Efforts to raise the quality of higher education

As universities and other higher education institutions began to admit large numbers of students, especially from the late 1990s, the problems of low quality became widely recognized. High-caliber students were obviously needed to meet Cambodia's new labor market demands. If the quality of Cambodian higher education were not improved, Cambodian students would turn to higher education markets in surrounding countries.

The Education Strategic Plan (ESP) 2006-2010 prioritized quality assurance, quality improvement, and improved management at all levels of education and in all educational institutions. The ESP transformed the Department of Higher Education to meet rapidly changing needs in the sector. The Department used to play a primary management role within the MoEYS. It now focuses primarily on monitoring, analysis, and formulation of policy. The ESP designated the chief roles of the Department of Higher Education as: 1) creation of policies and strategies for the higher education sector; 2) approval of administration of higher education institutions; 3) support in development of necessary subject programs and management tools to assist in fulfilling accreditation criteria for higher education institutions; and 4) improvement in the quality and efficiency of higher education throughout the country. For the Department of Higher Education to achieve these functions, it must

switch from its past role of implementing designated set tasks within the MoEYS to its new role of chief planner for the future direction of Cambodian higher education. To this end, it is essential to improve the expertise and capacity of staff (Hirosato & Kitamura, Eds., 2009).

To meet the demands of the changing labor market and promote greater coherency within the system, the Foundation Year Study was introduced as an important reform. From 2005, all undergraduate students have to take the Foundation Year Study as a compulsory part of their chosen curriculum. The intention is to provide all students with broad knowledge in the humanities, mathematics and natural sciences, social sciences, and foreign languages.

Playing an extremely significant potential role in recent higher education reform is the Accreditation Committee of Cambodia (ACC), established in 2003 by Royal Decree (No. NS/RKT 03/03/129). According to the Decree, all higher education institutions in Cambodia, whether run by a Cambodian or foreign organization, have to obtain accreditation from the ACC in order to confer degrees. As a result, many higher education institutions carried out a curriculum and instructional review as part of the process for receiving accreditation, for example by instituting the Foundation Year Study or drawing attention to their quality improvement efforts. The ACC issued its accreditation criteria, which has resulted in many higher education institutions beginning self-assessment processes. Thus the official inauguration of ACC opened a new chapter in Cambodian higher education (Chealy, 2005).

The accreditation process designated quality criteria in nine areas: 1) mission; 2) management, administration and planning; 3) course program; 4) lecturing/teaching staff; 5) students and student services; 6) learning resources; 7) facilities and equipment; 8) financial management and financial planning; and 9) information dissemination. However, lack of staff within ACC with expertise in these areas (Chealy, 2009) has meant that the ACC was slow to certify institutions.

Another significant attempt to reform the system was introduction of the credit award and credit transfer system. In place of a system whereby academic achievement was certified at the end of each academic year, a new credit-based system allows flexibility in fulfilling course requirements. Credits earned through study at other universities can now be recognized. This means, for example, that part-time students can make flexible plans in their academic pursuits. However, the credit system was also slow to be fully implemented. Systems in individual universities were still inadequate and many staff and students were slow to understand the new system. In these and other ways, the higher education system can be seen as needing to improve management and administrative capacities to handle its growing size (Chealy, 2005).

As another example, the National Commission on Doctoral Studies was established in 2009 under the Council of Ministers, because there were an increasing number of Ph.D. students and this sub-sector was not well regulated. At the Education Congress in 2009, the Prime Minister criticized this phenomenon of allowing universities to grant doctoral degrees too easily. (Other than the requirement

that admission to doctoral degree programs is limited to those holding a master's degree, there has been no regulation by the State on the granting of doctoral degrees.)

Such being the reality of Cambodian higher education, a number of foreign agencies and organizations provide external finance and technical support. These agencies and organizations include the Japan International Cooperation Agency (JICA), the World Bank, the Commission on Higher Education and the Office for National Education Standards and Quality Assessment of Thailand, Ministry of Higher Education National Accreditation Board of Malaysia, the National Assessment and Accreditation Council of India, the Embassy of the United States, Phnom Penh, Cambodia and the Fulbright Senior Research Fellowship Program, and the Asia-Pacific Quality Network.

It is in this context and at this point that the expansion and development of higher education in Cambodia should be understood.

II. Statistical portrait of the development of cambodia's higher education system

The previous section outlined the history of higher education in Cambodia, noting the great expansion of the system and discussing efforts of the Cambodian government to improve quality. This section quantifies the expansion, drawing on higher education yearbooks prepared by the MoEYS as well as statistics of UNESCO Institute for Statistics.

II-1. Institutional expansion

Among the first dimension of expansion is the dramatic increase in the number of institutions, from the single Royal University of Phnom Penh in 1979 to over 70 institutions in 2009. Until 1997 all higher education institutions were public. Changes in policy allowed establishment of private institutions of higher education as explained in the previous section. The first, Norton University, opened its doors in 1997. As a result, the number of institutions increased rapidly, particularly after 2000.⁴

As noted, a somewhat unique feature of Cambodian higher education is that many higher education institutions are not under the authority of MoEYS, but other ministries⁵. Parallel with growth in the number of institutions was a proliferation of branch campuses. By 2008, there were approximately 134 main and branch campuses nation-wide, 33 of which are associated with public

⁴ The number of institutions are calculated from Statistics of Higher Education Institutions (various years) published by the Ministry of Education, Youth and Sport (MoEYS).

⁵ In 2009, these included the Ministry of Health; the Ministry of Agriculture, Forestry, and Fisheries; the Ministry of Culture and Fine Arts; the Ministry of Cults and Religions; the Ministry of Labor and Vocational Training; the Ministry of National Defense; the Ministry of the Interior; the Ministry of Public Works and Transport; and the Council of Ministers, as well as the MoEYS.

universities and 101 with private universities. The majority of these institutions were established by Cambodians since 2000. A number of these are operated as profit-making ventures, others serve particular populations such as the poor or girls/women who cannot come to Phnom Penh for their advanced studies. Under current regulations, it is difficult to distinguish the criteria for more and less legitimate profit-making and non-profit educational organizations.

II-2. Growth in Enrollments

Participation in higher education in Cambodia has fluctuated with politics, as already discussed. In 1970, UNESCO Institute for Statistics (UIS) reported tertiary enrollment of 9,228 students. By 1980, this had fallen to 702. Since then, the system has grown quite rapidly⁶. Though enrollment did not return to 1970 levels until the 1990s, the pace of expansion is remarkable. According to UIS, enrollments increased by a factor of four between 1990 and 2000. Between 2000 and 2005, enrollments grew by 260 percent according to UIS. MoEYS statistics, which utilize figures reported by universities and thus include multiple enrollments, show even higher rates of growth⁷.

To put these numbers in perspective, it may be useful to examine tertiary enrollment rates in Southeast and East Asia over the same time period. Table 1 shows tertiary gross enrollment rates (GER) from 1970 to 2005 for ten Southeast and East Asian countries (UIS). It should be noted that these figures include enrollment in two-year colleges and post-secondary technical colleges (ISCED level 5B) as well as four-year colleges and graduate programs (ISCED level 5A and 6, respectively). According to these figures, South Korea overall has expanded access to higher education the most, from a tertiary GER of 7.4 percent in 1970 to 91 percent in 2005⁸. Japan provides the second greatest access at 55 percent in 2005, up from less than 18 percent in 1970. Interestingly, the Philippines started slightly above Japan's level in 1970, but grew to only 28 percent by 2005. Thailand expanded tertiary access rapidly from less than 3 percent in 1970 to 46 percent in 2005. Most remarkable of all was China's growth from 0.1 percent in 1970 to nearly 20 percent in 2005. Malaysia grew as well. At the bottom in terms of actual access are Vietnam, Laos, and finally Cambodia.

Comparing the three countries of the former Indochina, Cambodia and Laos show the most growth, depending on whether one starts in 1970 or 1980. In 2005 Cambodia's tertiary system was six times larger than in 1970, and 81 times larger than in 1980. Lao's system was 112 times larger in 2005 than in 1970 and 41 times larger than in 1980. Even Vietnam's system grew ten times in the 25

⁶ Data obtained from the database of UNESCO Institute for Statistics (UIS).

⁷ Again, enrollments exceed numbers of students because of the tendency to enroll in multiple degree programs.

⁸ Statistics of tertiary enrollment rates in South Korea actually refer not only to enrollment in 4-year colleges and universities but also enrollment in 2-year junior colleges and technical colleges. Approximately 39 percent of higher education enrollment in South Korea 2000-08 was in two-year programs. UIS statistics suggest that enrollment in 4-year programs as a proportion of overall tertiary enrollments ranged from 47 to 100 percent in 2008 (UIS).

years between 1980 and 2005. In absolute numbers, of course, Vietnam is by far the largest system of the three.

Table 1. Tertiary gross enrollment rates (ISCED levels 5A, 5B, 6), selected Southeast and East Asian countries, 1970-2005

	1970	1975	1980	1985	1990	1995	2000	2005
Cambodia	1.4	0.8	0.1	0.3	0.6	1.3	2.1	3.6
Laos	0.2	0.3	0.4	0.8	1.2	2.0	2.8	7.9
Vietnam	—	—	2.6	2.7	2.8	6.1	9.5	—
Indonesia	2.6	3.2	3.8	6.1	8.4	11.4	14.4	17.0
China	0.1	0.6	1.1	2.1	3.0	5.3	7.7	19.6
Philippines	17.7	20.9	24.1	24.3	24.5	27.5	30.5	28.0
Malaysia	—	—	4.1	5.7	7.3	16.6	25.9	28.6
Thailand	2.9	6.6	10.2	13.4	16.5	25.8	35.2	46.0
Japan	17.6	24.1	30.6	29.8	29.1	38.2	47.4	55.3
South Korea	7.4	9.9	12.4	24.9	37.3	57.9	78.4	91.0

Source: *UNESCO Institute for Statistics database*

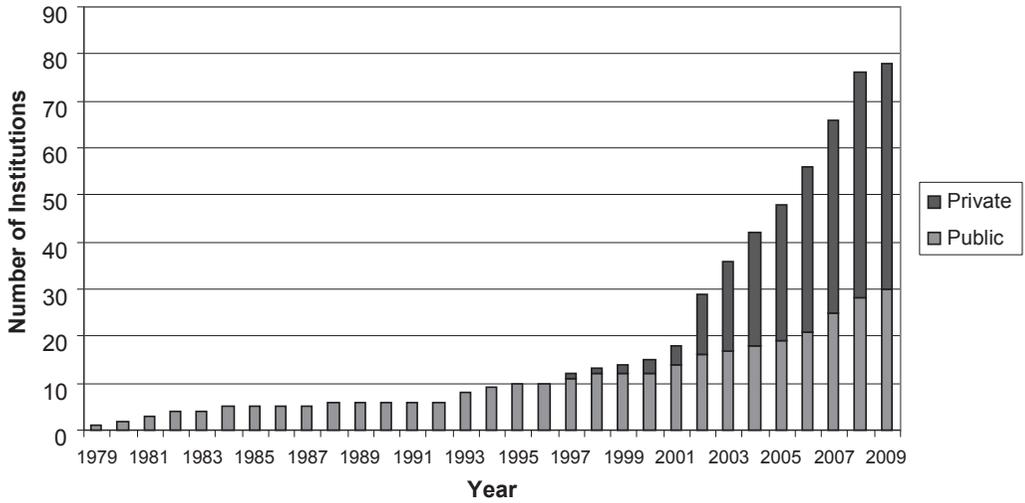
NB. 1975, 1985, 1995 figures are interpolated

II-3. Growth in private provision and fee-based enrollment

The majority of new higher education institutions in Cambodia are private (see Figure 1). From a single institution in 1997, the private system has grown dramatically. Within six years, the number of private institutions exceeded the number of public institutions. Enrollments show a similar pattern. Since private enrollment was first permitted in 1997, private tertiary enrollments have grown by a factor of 86.5 in 2008. During the same period, public tertiary enrollment grew 4.8 times. It is interesting to note that the private sector of higher education has expanded significantly in many countries since the 1990s, and Cambodia is no exception. Such trends may be interpreted as an influence of globalization which promotes market-driven competition.

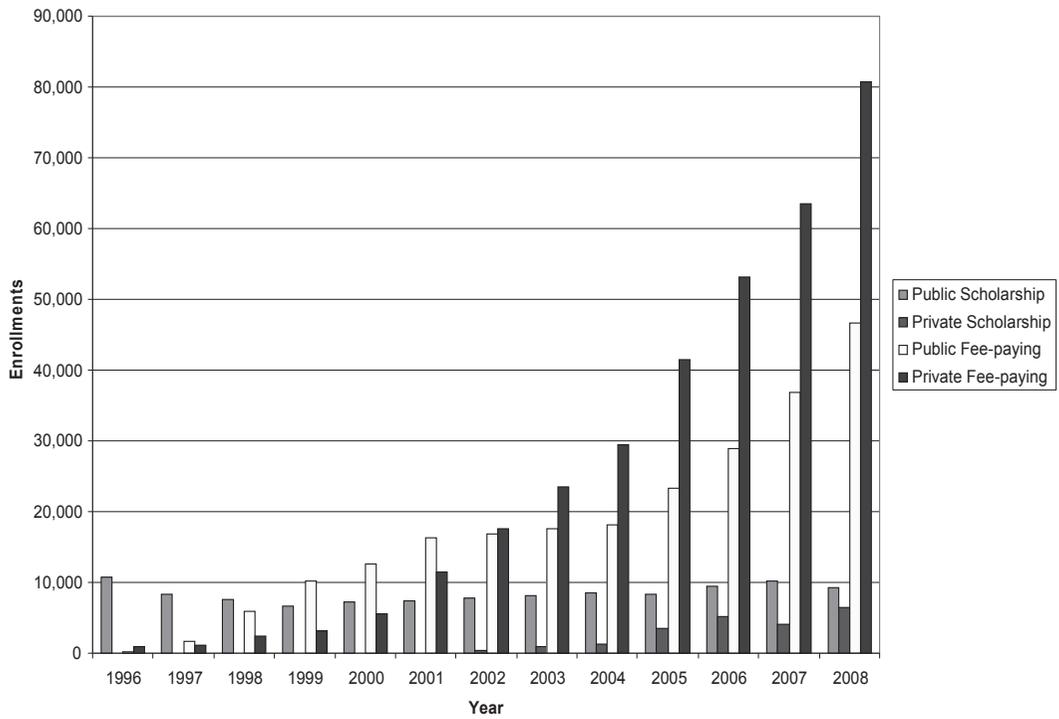
As noted, alongside policies permitting private establishment of universities, policies implemented allowing students to enroll in public universities on a fee-paying basis (in addition to those students winning scholarships). To further complicate the picture, some private universities offer scholarships as well. The cumulative effect has been to open the system dramatically, but mostly to fee-paying students. Figure 2 compares enrollments by scholarship and fee-paying status for public and private universities.

The majority of Cambodians who attend higher education pay tuition. Once policies permitting fees and private higher education were adopted, the Cambodian higher education system shifted in two years from 1996 to one in which the majority of enrollments were on a fee or private basis. By 2008 almost 90 percent of enrollments were on a fee-paying basis.



Source: MoEYS, *Statistics of Higher Education Institutions*, various years
 Note: 2002, 2003 figures interpolated.

Figure 1. Number of higher education institutions, 1979-2009, Cambodia



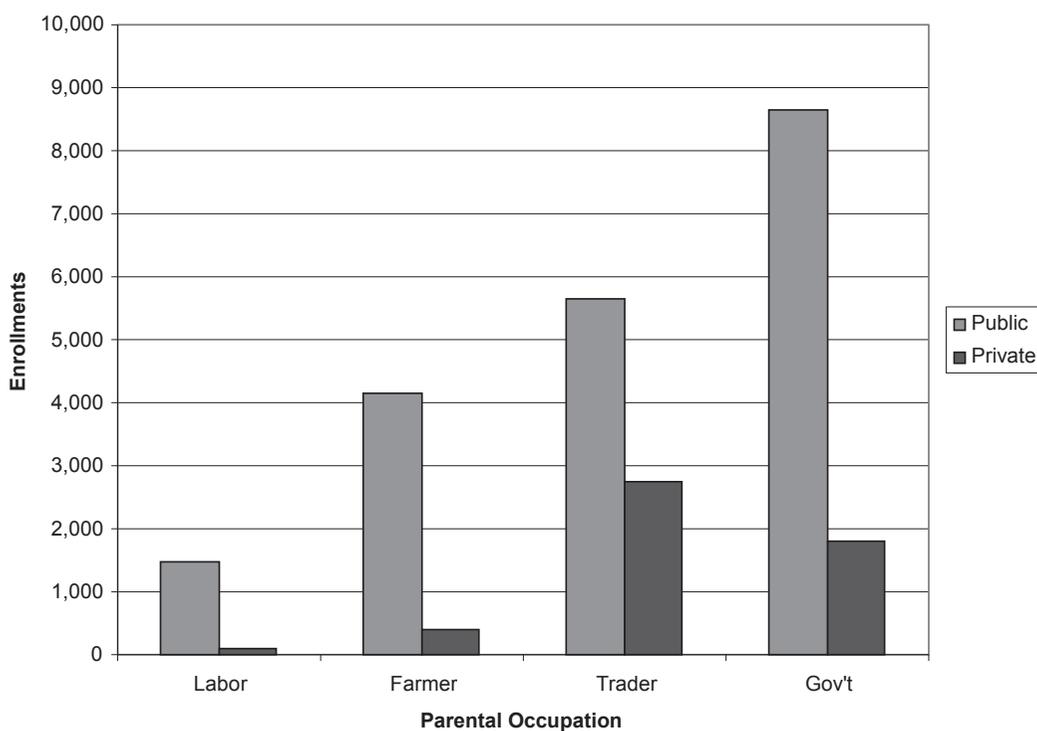
Source: MoEYS, *Statistics of Higher Education Institutions*, various years

Figure 2. Enrollments by public-private sector and scholarship and fee-paying status

II-4. Social origins of students

Given the average low incomes in Cambodia and the increasingly fee-based nature of Cambodian higher education, questions might be raised about the social origins of university students. Unfortunately, statistics are available only for 2000. In that year, data on the parental occupations of students enrolled in higher education are included in the yearbooks. Children of government workers accounted for the largest number of tertiary students, followed by young people whose parents were traders, farmers, and laborers⁹.

Questions might also be posed about which institutions served which groups of young people. In 2000, when public universities still enrolled the majority of students, children of farmers and laborers relied almost exclusively on public institutions. A relatively larger proportion of children of traders enrolled in private universities as compared with children of government workers. Figure 3 shows the public-private institutional destinations of students by parental occupation.



Source: MoEYS, *Statistics of Higher Education Institutions*, 2000

Figure 3. Social origins of students, by public- private institution, 2000

⁹ MoEYS, *Statistics of Higher Education Institutions*, 2000

Although this situation may have changed slightly since 2000, it is still likely that the majority of rural farmers and laborers have faced major obstacles to enrolling their children in higher education because of limited financial capacities and geographical location¹⁰.

II-5. Geographic origins of students

Similar questions might also be asked about the geographic origins of students. Do students from urban areas, particularly Phnom Penh, capture most of the seats, or are university enrollments well distributed across the country? Drawing on 2000 statistical yearbooks for available data, figures suggested 51 percent of the enrollments were from Phnom Penh, 47 percent from rural provinces outside Phnom Penh and 2 percent from the remote provinces¹¹.

Relatively higher proportions of students from rural and remote provinces (slightly more than one-third) are scholarship recipients as compared with students from Phnom Penh (less than one-fourth). Almost 80 percent of Phnom Penh enrollments are in public institutions (79.4%) as compared with 75.8 percent of rural provincial enrollments and 73.6 percent of remote enrollments. Demand for higher education in rural and remote provinces would appear to be sufficiently high that greater proportions of students from those areas are enrolling in private institutions, despite their greater cost.

II-6. Gender

Finally, one might ask whether the rapid rate of expansion favored both male and female enrollments. As in many countries, male enrollments are higher than female enrollments in Cambodia's higher education system. With expansion, women are enrolling in greater numbers, but so are men¹². The trend is toward greater equity, but the differences are substantial.

To ascertain how this relates to neighboring countries, Table 2 compares gender parity indices (GPI) across the ten Asian countries examined earlier. Of the ten countries, Cambodia has the lowest GPI, that is, the greatest imbalance in favor of male enrollment. In contrast, Malaysia, the Philippines, and Thailand have a gender imbalance favoring women, though the total imbalance is greatest in Cambodia (albeit in the other direction). Interestingly, Malaysia moved from essential gender parity in 2000 to 29 percent more females than males in 2005. Cambodia, while lowest in terms of gender parity showed a 50 percent reduction in disparities in GPI between 2000 and 2005.

¹⁰ For instance, the Resource Development International – Cambodia (RDIC), a non-profit organization, has reported the average annual household income of rural Cambodians is around US\$135. For the information, refer to the Website of RDIC [<http://www.rdic.org/farmingpage.htm>].

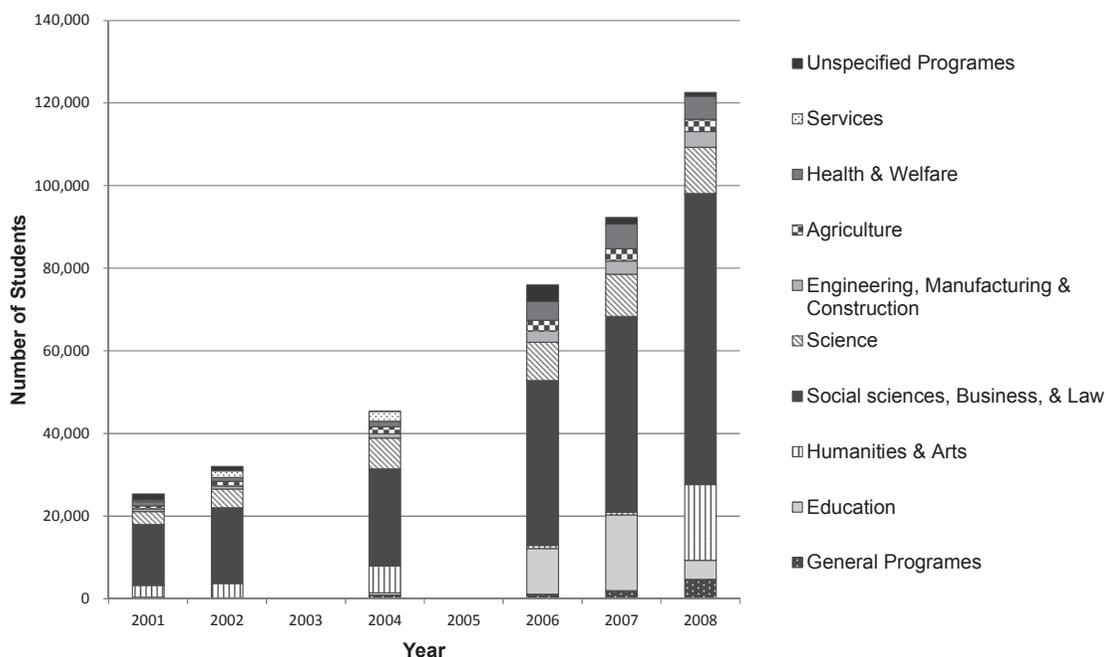
¹¹ Data obtained from MoEYS (2000). *Statistics of Higher Education Institutions*. The remote provinces are Preah Vihear, Kratie, Steung Treng, Mondulakiri, Ratanakiri, Bantey Mean Chey, and Oddor Mean Chey.

¹² Data obtained from the database of UIS.

Table 2. Gender parity index, 1970-2005, select Asian countries

	1970	1980	1990	2000	2005
Malaysia	—	0.60	0.89	1.06	1.29
Philippines	1.30	1.16	—	—	1.23
Thailand	0.64	—	—	1.20	1.13
China	—	0.34	0.52	—	0.93
Japan	0.39	0.50	0.65	0.85	0.89
Indonesia	0.33	—	—	0.76	0.79
Vietnam	—	0.32	—	0.72	—
Laos	0.23	0.35	0.49	0.53	0.71
South Korea	0.34	0.36	0.47	0.59	0.64
Cambodia	—	—	—	0.33	0.47

Source: *UNESCO Institute for Statistics database*



Source: *UNESCO Institute for Statistics database*

Figure 4. Tertiary enrollment in Cambodia by field of study, 2001-2008

II-7. Curriculum

One of the potential problems of private provision of higher education is that such institutions may respond in ways that reflect the needs of the economy or the human resource needs of an ambitious development agenda. Private institutions tend to concentrate on cheaper academic programs requiring

little scientific equipment and more generally available expertise rather than highly specialized advanced technical knowledge. Such problems are likely to be especially severe in a rapidly expanding system such as Cambodia's, where much of the expansion has come from the private sector. To investigate this, we examined enrollments by field for the 2001 to 2008 period. As can be seen in Figure 4, higher education enrollments in Cambodia are concentrated in the Social Sciences, Business & Law.

Though growth figures are dependent on the starting point, analyzing changes in enrollment by field suggests that the greatest growth was in Education, Humanities & Arts, Engineering, Manufacturing & Construction. Enrolments in Education were 13.8 times higher in 2008 than in 2001, while growth of enrolments in other fields was less than half this rate (for instance, 6.3 times more in Humanities & Arts, 5.2 times more in Engineering, Manufacturing & Construction). This situation can be understood as a result of government policies favoring the training and upgrading of in-service teachers.

II-8. Quality: Faculty qualifications

Relatively little information is available about quality. However, for some years there are data on the educational backgrounds of faculty. In 2008, the average higher education instructor had 5.4 years of post-secondary education in public higher education institutions and 5.5 years of post-secondary training in private institutions. The gap between education of faculty in public and private institutions appears to have narrowed between 2005 and 2008, from half a year of post-secondary education to one-tenth of a year. More importantly, in both cases, average education levels have increased over the four years. This is especially so in public institutions. However, the data show that most faculty have had very limited academic training at the graduate level, possibly one to two years of graduate studies after finishing their undergraduate degrees¹³. It seems obvious that such limited training is insufficient to enable faculty to teach effectively at the tertiary level much less carry out research, which is necessary to improve the quality of higher education institutions.

III. Reflections on the growth and development of higher education in Cambodia

The dramatic growth of Cambodia's education system in terms of institutions, branch campuses, and student enrollments suggests an extremely high demand for higher education. Such high rates of growth would be remarkable in any context, but especially so in a country where less 35 years ago the education system was effectively destroyed. The public system has grown almost five times since 1997. Even so, most of the growth has come in the private sector and among fee-paying students.

¹³ Data obtained from MoEYS, *Statistics of Higher Education Institutions*, various years.

Demand is such that students often enroll in multiple degree programs simultaneously; perhaps as many as half of students do so.

Though urban areas are favored, students appear to be enrolling from all parts of the country. Students whose parents work in government or trade are most likely to enroll in higher education. Men are more likely to enroll in higher education than women, 2005 data suggest that the odds are 2:1 in favor of men. The gap narrowed by 50 percent between 2000 and 2005, and so the gap may have narrowed since then. However, the higher education statistics yearbooks suggest even greater disparities may exist in terms of overall enrollments, as opposed to students enrolled. This may be an artifact of under-reporting of female enrollment, or of a possible greater propensity on the part of male students to enroll in multiple degree programs.

Enrollments are concentrated in the Social Sciences, Business & Law, and Humanities & Arts, which comprise 72 percent of 2008 enrollments, as opposed to the Sciences, and Engineering, Manufacturing & Construction, Education, Health & Well-being, or Agriculture. The average Cambodian higher education instructor has the equivalent of five and a half years of post-secondary education, up approximately one-quarter of a year from 2005.

Despite this extraordinary growth, Cambodia's enrollments are still low as a proportion of the population, lowest in fact among ten ASEAN and East Asian countries examined. Given these low levels of tertiary participation, increases in enrollment are a necessary step. However, as the government has understood, enrollment is not sufficient condition for full development of a higher education system. Under conditions of high unmet demand, expansion of enrollment is among the easier dimensions to manage – all that is required is for regulations to permit private sector provision and for there to be sufficient means and entrepreneurial activity for the private sector to do so. This was certainly the case in Cambodia. Even so, rapid increases in enrollment require corresponding inputs – at a minimum, classrooms, instructors, administrators, and so forth. And providing these inputs can present a considerable challenge. However, more difficult to recover or construct in the first place are the deeper aspects of higher education – wise policy; well-organized quality assurance structures; a culture of research and a cadre of trained researchers; an organized and effective professoriate; effective government and peer professional oversight; finance mechanisms; and perhaps a core of elite institutions to provide leadership for the sector.

Table 3 applies Martin Trow's classification to higher education systems in East Asia and major ASEAN countries¹⁴. By this classification, most countries in the region were in the "elite" (or at least "small") stage in 1970. Only Australia, Japan, New Zealand, and the Philippines had transitioned to mass education. By 1980, Hong Kong, South Korea, and Thailand had grown to the mass higher education stage. By 1990 Malaysia and Indonesia had also become mass systems, leaving only China and the nations of Indochina with elite systems. By 2000, Australia, South Korea, and New Zealand

¹⁴ Note that these figures rely on tertiary education as defined by ISCED levels 5A, 5B, and 6, including both 2- and 4-year institutions and as well as graduate programs.

had moved to universal higher education; China and Vietnam had grown mass systems; and only Laos and Cambodia had small elite systems. By 2005, Cambodia and Laos remained with “elite” systems.

Table 3. Trow’s classification of higher education systems, applied to East Asian and ASEAN countries, 1970-2005

	ELITE 0-15%	MASS 16-50%	UNIVERSAL > 50%	
IN 1970	Cambodia	Australia		
	China	Japan		
	Hong Kong	New Zealand		
	Indonesia	Philippines		
	South Korea			
	Laos			
	Malaysia			
	Thailand			
	Vietnam			
IN 1980	Cambodia	Australia		
	China	Hong Kong		
	Indonesia	Japan		
	Laos	South Korea		
	Malaysia	New Zealand		
	Vietnam	Philippines		
		Thailand		
IN 1990	Cambodia	Australia		
	China	Hong Kong		
	Laos	Indonesia		
	Vietnam	Japan		
		South Korea		
		Malaysia		
		New Zealand		
		Philippines		
		Thailand		
IN 2000	Cambodia	China	Australia	
	Laos	Hong Kong	South Korea	
		Indonesia	New Zealand	
		Japan		
		Malaysia		
		Philippines		
		Thailand		
		Vietnam		
	IN 2005	Cambodia	China	Australia
		Laos	Hong Kong	Japan
		Indonesia	South Korea	
		Malaysia	New Zealand	
		Philippines		
		Thailand		
		Vietnam		

Source: UNESCO Institute for Statistics database

Table 4. Comparison of growth in higher education during periods of rapid expansion

	1800	1860	1900	1930	1947	1970	1980	1990	2000	2005	Factor of Change
Germany		12,188	33,739	97,692							2.8
Britain		3,385	17,839	37,255							5.3
Russia		5,000	16,357	43,600							3.3
USA	1,237	32,364	256,000	1,174,400							7.9
India					200,000		3,600,000				18.0
Vietnam							133,558	185,788	732,187	1,354,543	10.1
Laos						424	1,157	4,730	14,149	47,424	41.0
Cambodia						9,228	702	5,479	22,108	56,810	81.1

Source: Perkin (2006)

N.B. Higher education figures for Germany, Russia, and Britain exclude enrollments in technical and teacher training colleges.

The pace of expansion of higher education in Cambodia, and in several Asian countries can be seen by comparing enrollments in different countries over roughly similar time frames within periods of rapid growth (see Table 4). Germany, Great Britain, and Russia, for example, expanded higher education substantially during the late 1800s (In the table, the bold figures show the comparison years). In 1900, Germany enrolled 2.8 times as many students in higher education as in 1860. Russia grew slightly faster, increasing its enrollment 3.3 times. Great Britain grew almost twice as fast as Germany, with a system in 1900 5.3 times larger than in 1860. Over the same period, the United States system grew 7.9 times. In contrast, India, between Independence in 1947 and 1987 expanded 18 times. Over a 25 year period from 1980, Vietnam expanded its system 10 times. Cambodia's system was six times larger in 2005 than in 1970, but 81 times larger than in 1980 after the destruction of the Khmer Rouge period. Laos has shown a steady increase, also starting from a low base in 1970, with a system 119 times larger in 2005, a 25 year period.

Still, the experience of other countries may be only partially instructive. In much of Asia, higher education institutions did not develop organically from the local cultural and economic environment but were transplanted and adapted from Western institutions. Universities are not native to many non-Western countries and do not have the extended history that they do in Europe and the Americas. As importantly perhaps, higher education systems were mostly established by government, and so the governance and traditions of quality adherence have a different history than in parts of the West, where government came later to the picture.

The challenge of improving quality may be even more difficult in Cambodia's system given the near complete destruction of the system in the 1970s and the lack of a long tradition of elite institutions. Structurally, higher education in Southeast Asia has been able to expand relatively easily, once the market was allowed to meet popular demand. Improving quality, however, meeting the needs of the economy, and developing advanced research capabilities, are more difficult, requiring a

government role and different institutional arrangements. This may be especially so in substantially pre-industrial contexts, where industry may not play an active role in promoting research and development. We hypothesize that the features and modes of organization effective in facilitating rapid expansion are unlikely to make for system-wide improvements in quality.

Finally, Trow's discussion of elite systems of higher education is grounded in analysis of education systems with long-standing elite institutions. But in Cambodia, and maybe some other systems, higher education was elite primarily in the sense that only a tiny fraction of the population could gain access. Cambodian higher education is not a traditional institution with the "shaping of the mind and character of the ruling class" as its primary function. It has not had the time or the resources to develop naturally, nor has there been the "institutional capital" to guide rapid development of the system much yet beyond the quantitative expansion.

Cambodia's expansion and quality improvement efforts are being undertaken in a context of intense globalization. Globalization means both Cambodia's access to global markets and resources (including higher education markets outside the country) but also global players' access to Cambodia. Globalization may mean the Cambodian higher education system is integrated into the global system before its institutions have time to develop internally. Globalization provides both a shifting set of challenges and opportunities, requiring nimble institutions, and a competitive market able to respond quickly. For all these reasons, the importance of a wise, informed and facilitative public role is clear.

IV. Further questions

This research has attempted to document both the impressive achievements and some of the challenges facing Cambodia's higher education system at the second decade of the 21st century. Cambodia has grown its system dramatically, and has taken steps to develop a policy framework with the potential to enhance quality in the system. Still, there is much to do. The quality improvement policies that have been developed have only been partially implemented.

Basic system statistics, even for this paper, are difficult, sometimes impossible to find. It is impossible to know at this point, for example, how many students there are in the system, as opposed to how many enrollments. Other systems have grown quickly during periods of rapid expansion. However, it is doubtful that any faced the level of destruction that Cambodia faced in 1979. Moreover, many systems grew from a foundation of historically elite institutions and during a time when institutions could develop with less global challenge.

A number of questions remain, questions we hope can be addressed in future research. Specifically, it would be useful to understand the current social make-up of higher education. Are students being drawn from all sectors of society and from all regions? Are scholarships reaching those in greatest need, or are some groups gaining greater access to financial assistance? Are students enrolling in higher quality institutions and degree programs according to merit, or by accident of birth

and upbringing? To what extent do faculty qualifications vary according to institution? To what extent is a full university curriculum available to students in the provinces? To what extent do the fields of study being offered correspond to labor market needs, or national development requirements?

In policy terms, how can the current policies best be implemented? How can capacity of the Department of Higher Education be developed? What indicators of quality should be utilized in a country such as Cambodia? What are acceptable and unacceptable levels of quality? How can quality improvement be fostered beyond measurement and certification? How can the development of higher institutions best be fostered, internally, and externally through international cooperation, academic exchange, and development assistance? What lessons can be learned from other countries which have undergone rapid expansion?

Higher education in Cambodia still faces great challenges in terms of access, equality, quality, relevance, funding, and management and administration. The attendance of higher education in Cambodia is undeniably low by international standards. Where academic disciplines offered by higher education institutions are concerned, enrolment is heavy in certain areas, mainly management science. In terms of equality, analysis of those attending higher education institutions reveals a considerable gap between urban and rural areas and between the genders.

Above all, among all these numerous issues, that of the quality of education is the gravest. As this paper has outlined, the creation of a system for quality assurance is not properly underway. Accreditation has only just started. The credit system is not in full use because of limited capacity of universities' management and administration even where the system has been introduced. In the context of these challenges, the fact is that graduates of the higher education institutions of today are completing higher education without necessarily acquiring the knowledge and skills required by the labor market.

It is probably impossible to change this situation overnight. Improvement must be made by gradual means, policy by policy. To this end, the government which is responsible for the higher education system first of all must increase its effort in designing a quality assurance system. The higher education institutions on their part must strengthen their management and administration capacity. It is important as well for them to make strong efforts to build the capacity of their teaching staff. In tackling these challenges, the accreditation system and credit system are areas where the results of efforts can be checked in concrete form. Therefore, we hope to see the Cambodian government and higher education institutions invest further effort into these areas as its next first steps.

References

- Altbach, P.G., Reisberg, L., & Rumbley, L.E. (2009). *2009 Trends in Global Higher Education: Tracking an Academic Revolution* (A report prepared for the UNESCO 2009 World Conference on Higher Education). Paris: UNESCO, <http://www.unesco.org/tools/fileretrieve/2844977e.pdf>.
- Altbach, P.G., & Selvaratnam, V. (1989). *From Dependence to Autonomy: The Development of Asian Universities*. Dordrecht, NL: Kluwer Academic Publishers.
- Ayers, D.M. (2000). *Anatomy of A Crisis: Education, Development, and the State in Cambodia, 1953-1998*. Honolulu: University of Hawai'i Press.
- Bloom, D., Canning, D., & Chan, K. (2006). *Higher Education and Economic Development in Africa* (A paper prepared for the World Bank (AFTHD)). Washington, D.C.: The World Bank.
- Bloom, D.E., Hartley, M., & Rosovsky, H. (2006). Beyond Private Gain: The Public Benefits of Higher Education. In J.J.F. Forest, & P.G. Altbach (Eds.), *International Handbook of Higher Education* (Part One). Dordrecht, NL: Springer.
- Chamnan, P., & Ford, D. (2004). Cambodian Higher Education: Mixed Visions. In P.G. Altbach, & T. Umakoshi (Eds.), *Asian Universities: Historical Perspectives and Contemporary Challenges*. Baltimore, MD: The Johns Hopkins University Press.
- Chapman, D.W., Cummings, W.K., & Postiglione, G.A. (2010). *Crossing Borders in East Asian Higher Education*. Hong Kong: Springer & Comparative Education Research Center.
- Chealy, C. (2005). Cambodia. In *Higher Education in South East Asia*(pp.13-31). Bangkok: UNESCO Asia and Pacific Regional Bureau for Education.
- Chealy, C. (2009). Higher Education in Cambodia. In Y. Hirosato, & Y. Kitamura (Eds.), *The Political Economy of Educational Reforms and Capacity Development in Southeast Asia: Cases of Cambodia, Laos and Vietnam*. Dordrecht, NL: Springer.
- Dore, D. (1976). *The Diploma Disease: Education, Qualification and Development*. Berkeley: University of California Press.
- Forest, J.F., & Altbach, P.G. (Eds.) (2006). *International Handbook of Higher Education*. Dordrecht, NL: Springer.
- Global University Network for Innovation (GUNI). (2006). *Higher Education in the World 2006: The Financing of Universities*. Hampshire, England: Palgrave Macmillan.
- Hayden, H. (Ed). (1967). *Higher Education and Development in Southeast Asia, Volume 2: Country Profiles*. Paris: UNESCO.
- Hanushek, E.A., & Wößmann, L. (2007). *The Role of Education Quality in Economic Growth* (World Bank Policy Research Working Paper 4122). Washington, D.C.: World Bank.
- Hirosato, Y., & Kitamura, Y. (Eds.) (2009). *The Political Economy of Educational Reforms and Capacity Development in Southeast Asia: Cases of Cambodia, Laos and Vietnam*. Dordrecht, NL: Springer.

- Luke, A. (2010). Educating the Other: Standpoints and Theory in the 'Internationalization' of Higher Education. In E. Unterhalter, & V. Carpentier (Eds.), *Global Inequalities and Higher Education: Whose interests are we serving?* London: Palgrave Macmillan.
- Marginson, S. (2010). Higher Education as a Global Field. In S., Marginson, P. Murphy, & M.A. Peters (Eds.), *Global Creation: Space, Mobility and Synchrony in the Age of the Knowledge Economy*. New York: Peter Lang.
- McMahon, W.W. (1999). *Education and Development: Measuring the Social Benefits*. Oxford: Oxford University Press.
- McMahon, W.W. (2009). *Higher Learning, Greater Good: The Private and Social Benefits of Higher Education*. Baltimore, MD: Johns Hopkins University Press.
- Ministry of Education, Youth, and Sport (MoEYS). (1984). *Education in the People's Republic of Kampuchea*. Phnom Penh, Cambodia: Author.
- MoEYS. (1971). *L'Enseignement Supérieur et le Développement Rapport Final du Colloque National*. (December 27-31). Phnom Penh, Cambodia.
- MoEYS. (various years). *Statistics of Higher Education Institutions*. Phnom Penh.
- Naidoo, R. (2010). Global Learning in a NeoLiberal Age: Implications for Development. In E. Unterhalter, & V. Carpentier (Eds.), *Global Inequalities and Higher Education: Whose interests are we serving?* London: Palgrave Macmillan.
- Perkin, H. (2006). History of Universities, in Forest, J.F. & Altbach, P.G. (Eds.), *International Handbook of Higher Education*. Dordrecht, NL: Springer.
- Spring, J. (2009). *Globalization of Education: An Introduction*. New York: Routledge.
- Stiglitz, J., & Shahid, Y. (2001). *Rethinking the East Asian Miracle*. Oxford: Oxford University Press and Washington, D.C.: World Bank.
- Trow, M. (2006). Reflections on the Transition from Elite to Mass to Universal Access: Forms and Phases of Higher Education in Modern Societies since WWII. In J.F. Forest, & P.G. Altbach (Eds.), *International Handbook of Higher Education*. Dordrecht, NL: Springer.
- Umakoshi, T. (2004). Private higher education in Asia : transitions and development. In P.G. Altbach, & T. Umakoshi (Eds.), *Asian Universities: Historical Perspectives and Contemporary Challenges*. Baltimore, MD: The Johns Hopkins University Press.
- UNESCO. (2009a). *Communique from the 2009 World Conference on Higher Education: The new dynamics of higher education and research for societal change and development*. (ED.2009/CONF.402/2), UNESCO, Paris, 5 -8 July 2009).
- UNESCO. (2009b). *A New Dynamic: Private Higher Education*. Paris: UNESCO.
- UNESCO Institute for Statistics. *Data center*.
http://stats.uis.unesco.org/unesco/TableViewer/document.aspx?ReportId=143&IF_Language=eng
- World Bank. (2002). *Constructing Knowledge Societies: New Challenges for Tertiary Education*. Washington, D.C.: The World Bank.