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Emerging International Dimensions in East Asian Higher Education

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Preface

In East Asia, higher education has relied heavily on private and marketized forces in its rapid development process. At the same time, state governments have introduced strong initiatives especially in upgrading the global positioning of their flagship universities through their pursuit of international competitiveness. Currently, these well-known characteristics of East Asian higher education are challenged by the necessity to formulate international dimensions for regional and global well being, without a clear consensus as to a regional future vision.

The changing roles of East Asian higher education in a new global environment have implications for academics and policy-makers who not only wish but also need to understand the most recent developments and future prospects of higher education from an East Asian point of view. In *Emerging International Dimensions in East Asian Higher Education*, authors from a wide variety of cultural and academic backgrounds examine the changing context of East Asian higher education in the following three dimensions: (a) global, (b) regional, and (c) national, while prospective dimensions are developed without clear consensus on their governance frameworks among stakeholders. In the global dimension, the higher education systems in this region are coming to represent a new area of focus after North America and Europe, and starting to add their own perspectives to worldwide debate on higher education based on a highly market-oriented and dynamically changing structure. In the regional dimension, the authors examine the de facto formation of regional framework in East Asian higher education through multilateral interactions within and across regions. The transformation towards a global, knowledge-based economy is having a significant influence on power-balances in economics, politics and higher education. In this new context, the authors argue the crucial role of higher education in realizing public value at both the regional and global levels is through multilateral cooperation. In the national (and international) dimension, the authors re-examine the relationship between nation states, higher education institutions, academics, students and other stakeholders in this new environment. Higher education institutions as well as individual students and academics are becoming more internationally mobile and differently motivated. Accordingly, nation states are expected to provide attractive platforms

with international perspectives. The coordination among main stakeholders of higher education mentioned above thus continues to be a critical factor for defining future perspectives in the national/international dimension of East Asian higher education systems.

The analysis and case study material in this volume are strengthened by the wealth of contributors' diverse national and professional backgrounds. Most have practical experience in the formulation of higher education policy in two or more countries. The range of disciplinary perspectives that contributors brought to the book – including sociology, political science, anthropology, economics, philosophy and history – strengthen the multi-disciplinary approach, credibility, and uniqueness of the work.

Each chapter considers the impact of the emergence of international dimensions in East Asian Higher Education through detailed consideration of trends and debates over higher education reforms at the regional, sub-regional, inter-regional and national levels. Issues such as student mobility, cross-border higher education programs, quality assurance, and demands from the market economy, among others, are examined.

In Chap. 1, which serves as an introduction to the issues discussed throughout the book, *Akiyoshi Yonezawa*, *Yuto Kitamura*, *Arthur Meerman* and *Kazuo Kuroda* overview the theoretical dynamics and actual approaches towards the emergence of international dimensions in East Asian higher education.[1] In discussing higher educational reforms in a dynamically changing East Asian region, the authors describe how the steadily raising international profile of Asian universities is accompanied by a rapid expansion towards mass and universal attendance. However, as the authors discuss, intense competition among countries and regions is now under way in various aspects of politics, business, society and culture. Under these circumstances, higher education is undergoing diverse reforms in Asian countries.

In Chap. 2 *Simon Marginson* approaches the public value of East Asian higher education in its highly marketized context. He focuses on shared and collective benefits in higher education, in a policy setting in East Asia and elsewhere where higher education is formally positioned as a competition between universities and as a tool of national competition in a globalizing world. The chapter is concerned with two related matters: (1) defining and identifying the public good and the different public goods in higher education, and (2) augmenting those public goods, both national and global.

In Chap. 3 *William K. Cummings* considers the rapidly evolving role of universities in Asia. In so doing, he presents the argument that, rather than becoming "flat" as is now commonly conceptualized, the earth is in fact "tilting to Asia" for a

[1] In this book, 'East Asia' implies mainly ASEAN+3 (Japan, China and South Korea). However, this term has also been defined as an open region without clear borders. Therefore, this book does not exclude influences and exchange with Asia-Pacific, Oceanic, South-Asian and/or other countries.

variety of reasons. He notes that Asia could soon easily surpass the USA in S&T and that Asian universities will play an important role in this transformation.

In Chap. 4, *Kazuo Kuroda*, *Takako Yuki* and *Kyuwon Kang* deal with the institutional prospects of cross-border higher education for East Asian regional integration, using an analysis of the JICA survey of leading universities in East Asia as the basis for their observations. The authors note that governments, higher educational institutions, international organizations, and international university associations are all discussing the construction of a new East Asian collaborative higher education framework as well as fostering the cross-border activities within East Asia. They examine universities' responses to the activeness of their cross-border activities, the significance of their expected outcomes, and the preferences of their region of partners, and then attempt to project the directions of a future East Asian regional higher education framework.

In Chap. 5 *Supachai Yavaprabhas* argues the case for the harmonization of higher education in Southeast Asia. In his chapter, he explores the background of the region in relation to its higher education, and defines the meaning of harmonization in higher education. He further explains why harmonization is a necessity and explores key actors who have potential to motivate the harmonization process in the region. He concludes that higher education systems in Southeast Asian higher education need to be harmonized, outlining the efforts to do so and exploring further possibilities for the future of the harmonization process.

In Chap. 6 *Anthony Welch* updates us on China-ASEAN relations in terms of higher education, suggesting an analytical framework through which this might best be understood. Moving beyond the common tendency to perceive their relationship in purely economic terms, he considers the longstanding history of relations between the two, the diverse and complex array of bi-lateral relations, and a developing China-ASEAN regional architecture. He furthermore examines the changing regional security situation occasioned by China's rise, the wider significance of the substantial Chinese diaspora in South East Asia, and the much richer array of contemporary connections that includes higher education.

In Chap. 7 *Kiyong Byun* and *Sangheon Um* focus on the regionalization of higher education in Northeast Asia. After overviewing recent developments in the regionalization of higher education in Northeast Asia and investigate related issues, particularly focusing on China, Japan, and South Korea, the authors present features of the three Northeast Asian economies – with special reference to the recently launched CAMPUS ASIA Program – which clearly illustrate how they currently depend on each other in terms of intra-regional trade and cross-border higher education activities. They also discuss the implications of the regionalization of Northeast Asian higher education for establishing a wider East Asian higher education community, and examine some of the important issues and challenges associated with the regionalization process.

In Chap. 8 *Yasushi Hirosato* looks at collaboration in higher education at the subregional level, focusing on harmonization and networking initiatives in the Greater Mekong Subregion (GMS) and highlighting the Asian Development Bank's (ADB) unique role in supporting higher education harmonization and

networking. He outlines challenges faced by ASEAN and discusses the potential contribution by the GMS program towards an integrated ASEAN community in the coming decade. The importance and need of higher education harmonization to pave the way for greater student and academic mobility in the GMS being linked with ASEAN is stressed. In addition, he introduces an ADB-supported regional technical assistance on GMS higher education harmonization and networking, and considers a proposal for establishing a Greater Mekong Regional University as a knowledge platform.

In Chap. 9 *Naoki Umemiya*, *Akiyoshi Yonezawa*, *Toyohiko Yogo* and *Kazuo Tsutsumi* look at the impact of inter-university exchange and cooperation in Southeast Asia, focusing on the example of doctoral programs in engineering. The authors also consider the impact of exchange and cooperation among Japan, the USA, and EU universities through interviews with administrators and academics from a selection of universities comprising Universitas Gadjah Mada (UGM, Indonesia), Institut Teknologi Bandung (ITB, Indonesia), University of the Philippines Diliman (UPD, Philippines), De La Salle University (DLSU, Philippines), Universiti Malaya (UM, Malaysia), and the Universiti Teknologi Malaysia (USM, Malaysia).

In Chap. 10 *Gracia Liu-Farrer* uses the case of Chinese students currently studying in Tokyo to shed light on the mechanisms that have created diverse outcomes of international education. Her chapter examines student mobility from a sociological perspective, interpreting student mobility as a migration process that develops in an interaction between individual migrant characteristics and socio-institutional contexts. Based on students' narratives, she finds that for the new generation of Chinese students in Japan, labor market conditions and the support from as well as the duty towards the family are particularly important factors that shape students' mobility.

In Chap. 11 *Yuto Kitamura* and *Naoko Hoshii* contemplate education for sustainable development at universities in Japan. The principal concern of this chapter is to highlight the activities Japanese universities have conducted in the process of promoting Education for Sustainable Development (ESD) in higher education. To answer this question, a number of universities with active educational programs in areas related to ESD were selected to participate in a questionnaire survey.

In Chap. 12 *Hiroshi Ota* outlines and investigates Japanese universities' strategic approach to internationalization, focusing on accomplishments and challenges that remain. With a steady focus on the question "How has the meaning of university internationalization historically changed?" he argues that the need for universities' internationalization is a long-standing one. He notes that in an age of intensive competition for knowledge, worldwide global conditions are changing constantly, and "internationalization" now seems to be assuming a meaning distinct from its traditional roots. The author also shows us that this becomes particularly apparent when considering how to enhance university's performance and functions as a core contributor within the global, knowledge-based society.

In the conclusion, *Akiyoshi Yonezawa*, *Yuto Kitamura*, *Arthur Meerman* and *Kazuo Kuroda* offer remarks on East Asian on higher education and the prospects

for public value both at the regional and global levels, which incorporate common themes emergent in contributors' chapters.

In East Asia, the de facto regionalization of Higher Education is ongoing, while a clear governance framework for the "region" is still missing. When considering its history of strong dependence on Western higher education systems, direct links between the internationalization of East Asian higher education and the "global" arena are not always conducive to the autonomous development of higher education in this region. There is no single nexus of research into how the de facto regional arena of higher education is emerging in East Asia; rather, there exists a diversity of approaches. The chapters which follow present some of these.

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Contents

Chapter 1
The Emergence of International Dimensions in East Asian Higher Education: Pursuing Regional and Global Development

Akiyoshi Yonezawa, Yuto Kitamura, Arthur Meerman, and Kazuo Kuroda

Introduction

East Asian[1] higher education is attracting international attention because of its rapid development both in quantity and in quality. The Asian higher education market sends the largest number of students to Western countries, while it also attracts a high number of transnational higher education applicants, again mainly from Western countries. In East Asia, however, Japan, China, South Korea, Singapore, Hong Kong, and Malaysia are now attracting a significant number of international students within the Asian region as well as across the regions (see Kuroda et al., Chap. 4). Taiwan, Thailand, and others are also beginning to receive high appraisals as destinations for international students.

Almost all higher education systems in Asia can trace their origins to elite-oriented systems that were established during colonial times or to transformational periods wherein existing Eastern higher learning institutions were adapted to

[1] In this chapter, and in the book, "East Asia" refers to the region including China, South Korea, Japan, Taiwan, and other South East Asian countries. We refer to "Asia" in cases where there are common characteristics among nations within the broader continental area as a whole.

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resemble Western modern higher education universities and other institutions. These institutions, including private ones, have addressed their public role for national, regional, and global development goals through fostering national and international leaders.

East Asian universities are steadily augmenting their international profiles in both the global and regional dimensions. At the same time, higher education systems in this region are experiencing a rapid expansion toward mass and universal attendance (Altbach and Umakoshi 2004). Leading Asian universities are now in fierce competition for world rankings, and universities from outside Asia are eagerly launching branch campuses and partnerships throughout Asia. On the other hand, the mushrooming growth of new, mainly private higher education institutions is an important policy concern for many Asian countries. Such dynamic change in Asian higher education is having a great impact on quality assurance in education (Altbach and Umakoshi 2004; Bigalke and Neubauer 2009; Findlay and Tierney 2010).

Intense competition among countries and regions has been under way in various aspects of politics, business, society, and culture. Under the knowledge-based economy, the role of higher education in fostering professionals with advanced knowledge and skills and for creating knowledge for science and technology has been widely recognized, even among developing and middle-income countries (Meek and Suwanwela 2006). Globalization enables people, products, money, and information to move freely across borders. On the other hand, increased socioeconomic capacity among East Asian higher education systems enhances the autonomous exchange of students and academics within the region and also provides incentives for developing networks and alliances at the regional level.

This shift indicates a compelling situation where these countries have no other choice but to become more actively committed to the global and regional dimensions. Many East Asian countries are also addressing similar issues, i.e., the application of market principles and new public management policies in university governance, the expansion of private aspects in higher education, the application of internationally viable quality assurance measures, the establishment and furtherance of university-industry linkages, and an increasing emphasis on internationalization. Each country, however, approaches these issues based on its own historical, political, economic, and social context (Findlay and Tierney 2010; Knight 2008; Marginson et al. 2011).

Within these circumstances, higher education is undergoing diverse reform in East Asian countries. This chapter discusses the latest trends of higher education reforms in this dynamically changing region. Firstly, the authors describe the changing landscape of higher education in East Asia, focusing on the growing competitiveness in research and education. Secondly, the growing impact of the regional dimension among East Asian higher education institutions, despite the formation of a clear consensus of regional framework, is discussed. Thirdly, the authors analyze endeavors to assure the quality of higher education through system expansion and increasing student mobility. Fourthly, the evolving public nature of higher education in the East Asian context is examined. Lastly, the authors discuss

future perspectives for the autonomous and distinctive development of East Asian higher education.

Changing Landscape of Higher Education in East Asia

The landscape of East Asian universities, especially those with a certain level of history and prestige, is changing rapidly. The development of the research capacities of top universities is particularly impressive (see Cummings, Chap. 3). Changes from the past include more advanced equipment in classrooms and laboratories, greater emphasis on interdisciplinary and practical approaches in the educational programs, and the rapid growth of "international programs" provided mainly in the English language. These programs are aimed to support students' international career pursuits as well as to create more attractive programs for professors and students with diverse nationalities (Ninnes and Hellstén 2005).

Great diversity remains among Asian countries, especially in terms of enrolment rates in higher education. As seen in Table 1.1, South Korea realizes nearly universal attendance in tertiary education, and the gross enrolment rates of Japan, Thailand, and Malaysia exceed 40 %. On the other hand, there are countries where tertiary education enrolment remains less than 20 %, while almost all countries have experienced a significant increase in enrolment rates in the last decade. The most prominent common challenge of higher education systems in this region is the facilitation of two-way mobility across borders among academics and students. Universities and governments are aware that the acquisition of skilled workers who are actively engaged in international activities is crucial for the survival of each society in the twenty-first century.[2]

To date, Asian countries have tended to send their talent to Europe, North America, and Australasia. However, through the continuous upgrading of teaching and research profiles under their remarkable socioeconomic development, these countries have started to retain and regain talented researchers from both within and outside of the region. This phenomenon is driven not only by the need to secure students and researchers of greater excellence but also by the need for income generation through tuition fees (De Wit et al. 2008). Less prestigious, mainly private universities and higher education institutions tend to recruit international students actively through market-oriented behavior. This tendency is widely seen among institutions in those countries facing the saturation of the domestic higher education market, such as Japan and South Korea. The international recruitment of teaching staff and researchers has become common today, partly through the

[2] Various articles in Eddy (2010) discuss how international collaboration among higher education institutions can provide options beyond what could be accomplished individually. At the same time, the articles also point out difficulties and challenges to facilitate effective and efficient collaboration across borders.

Table 1.1 Gross enrolment rate of tertiary education (%)[a]

	2000	2005	2010
Republic of Korea	78.8	93.5	103.1
Macao (China)	26.2	60.2	64.9
Japan	48.7	55.4	59.7
Hong Kong (China)	n/a	32.5	59.7
Thailand	34.9	43.9	46.2
Malaysia	25.7	29.3	42.3
China	8.0	19.4	25.9
Indonesia	14.7	16.5	23.1
Vietnam	9.7	15.7	22.3
India	9.4	10.8	17.9
Brunei Darussalam	12.9	16.9	17.2
Lao People's Democratic Rep.	2.7	7.9	16.6
Sri Lanka	n/a	n/a	15.5
Cambodia	2.7	3.4	12.9
Bhutan	n/a	4.7	7.0
World	19.1	24.1	29.2
East Asia and the Pacific	15.8	23.3	29.0

Source: UNESCO Institute for Statistics, Data Centre (November 10, 2013)

[a]The UNESCO Institute for Statistics defines the definition of gross enrolment rate as the number of pupils or students enrolled in a given level of education, regardless of age, expressed as a percentage of the population of the 5-year age group starting from the official secondary school graduation age

introduction of flexible employment systems following incorporation and governance reform among public universities (Ahmad et al. 2007; Newby et al. 2009; Pimpa 2011; Welch 2011), as well as through the widely expanding diaspora network.

Many universities in North America, Europe, and Australia have embarked upon opening branch campuses and programs in most Asian countries. Some are globally competitive, while the vast majority mingles with the mushrooming number of private and nongovernmental higher education institutions serving a demand-absorbing function.

With such external pressure bearing upon them, universities in Asia are rapidly pursuing internationalization in an effort not to lose their own students and those of neighboring countries to Western universities. The higher education policies of East Asian countries have endorsed university internationalization initiatives. For example, the Japanese government inaugurated the "Global 30" Project in 2010, to support its top comprehensive universities in providing an international learning environment through such measures as the provision of competitive education programs in English and global student recruitment. To enhance international competitiveness in research and technology, China, South Korea, and others have initiated the concentration of public research funds into a limited number of world-class universities and research units. In this way, Asian governments are

endeavoring to attract high-caliber researchers and students to their top universities (Shin and Kehm 2012). At the same time, universities in this region are also strategically responding to the rapidly changing environment (as discussed by Ota in Chap. 12).

Changes in the higher education market can likewise be witnessed in the growth of the private aspect of higher education. In Asian countries excluding Japan, South Korea, and the Philippines, the public (or state-maintained) university sector traditionally formed the core of the higher education system, and the private sector played only a limited role. Many growing Asian economies have experienced a rapid expansion of their private and nongovernmental sectors to absorb an increased demand for higher learning. Countries which have experienced a rapid expansion in public higher education, such as China and Indonesia, face significant tuition fee increases, with some introducing the full charge of educational expenditures to students for the purpose of cost sharing (Johnstone and Marcucci 2010).

Governmental budgets for higher education cannot keep pace with the quantitative and qualitative increase of required expenditure in most Asian countries. Private universities therefore seek positive recognition among policymakers as a new option in meeting the social demand for higher learning. However, most newly founded private universities do not provide an adequate standard of service in terms of the quality of education or the provision of facilities and equipment (Mok 2009; Umakoshi 2004).

In this context, universities are contributing to international development aid projects and collaborating with industry. This trend is spurring the development regional networks and groups, further speeding up the drive toward regional coordination among universities. For example, the Association of Southeast Asian Nations (ASEAN) encourages the activities of the ASEAN University Network (AUN), the consortium of leading ASEAN universities that facilitates academic and student exchange through the arrangement of various scholarships and credit transfer systems. Among the open universities of Southeast Asia, a project for creating shared curricula, an increasing number of common subjects such as "ASEAN studies" are offered.[3] The governments and universities of China and South Korea are now also actively utilizing their advanced resources to engage in international cooperation in higher education and research.

[3] This idea of developing a common subject "ASEAN studies" was introduced by Vice Rector (International Affairs) of Thammasat University at the International Conference on Sustainable Internationalization of Higher Education Institutions, which was organized by Sukhothai Thammathirat Open University in Cha-am/Hua Hin, Thailand, on August 6, 2009.

The Regional Dimension in Asian Higher Education

The 1998 World Conference on Higher Education was a watershed moment in the sense that participants were able to identify the diverse roles and aspects of higher education that had developed and expanded in the twentieth century as well as discuss the missions and roles of higher education expected for the twenty-first century. The declaration adopted at the conference advocates "Sharing knowledge and know-how across borders and continents" (Article 15) and underlines the essentiality of the development of international cooperation schemes based on partnerships between the South and the North and also between South and South in order to go "From 'brain drain' to 'brain gain'" (Article 16). In particular, their clear focus was on the necessity of a framework for education based on interregional cooperation. In July 2009, UNESCO again hosted the World Conference on Higher Education to reconfirm the importance of international cooperation in promoting regional collaboration (UNESCO 2009).

These discussions clearly reflected an increasing awareness of the importance of regional and international dimensions in higher education. These have since been emphasized in order to make the best use of intellectual and human resources within prospective regions in response to current global trends in higher education, such as internationalization, mass and universal attendance, and marketization (see Marginson, Chap. 2). One of the most remarkable projects in Europe is the construction of a European Higher Education Arena. The ERASMUS (European Community Action Scheme for the Mobility of University Students) Program, the EU's most prominent student exchange program, started in 1987. After this, Europe has expanded exchanges among academics and students across the region through the development of common credit transfer system (European Credit Transfer System: ECTS) and educational system framework under the Bologna Process (Adelmen 2009).

There are also many international university consortiums, most of which are led mainly by North American and European universities. These consortiums aim to maintain and improve the international competitiveness of member universities through academic and student exchange and collaboration. In this international setting, leading universities in Asia, such as Tsinghua University and the National University of Singapore, have built cooperative relationships with these consortiums and partnerships in both research and education by utilizing the advantages of their own local and international reputations.

Only limited number of Asian universities, however, has succeeded in joining global consortiums and networks among "world-class" or "global research" universities. Considering the increasing diversity of higher education in this region and in light of the positive examples of "regionalization" in other areas, especially Europe, it is imperative to strengthen cooperative relationships. It is necessary not only to promote exchange among universities that are engaged in advanced research and to provide high-quality education but also to focus more effort on increasing academic support from advanced universities to institutions in

developing countries and to enhance cooperation among developing countries within the Asian region (i.e., "South-South cooperation") (Unterhalter and Carpentier 2010).

As discussed by Umemiya et al. in Chap. 9, the Southeast Asia Engineering Education Development Network (SEED-Net) is an ongoing project supported by the Japan International Cooperation Agency (JICA) in cooperation with AUN, which specifically focuses on promoting a cooperative network among ASEAN universities. The objectives of SEED-Net, which comprises leading engineering-focused universities from the ten ASEAN countries, include fostering a network of cooperation in education and research throughout the ASEAN region and improving research abilities in the engineering field of member universities in collaboration with Japanese universities (with particular emphasis on supporting faculty members and faculty candidates to receive master's and/or doctoral degrees from other member universities or to receive a doctoral degree from a university in Japan). A prominent example is seen in Thailand, where Chulalongkorn University and other leading universities have not only strengthened their collaboration with universities in other ASEAN countries and Japan but also use the SEED-Net framework to support local universities in Thailand as well as universities in Laos. It is expected that these extensive efforts will further enhance intra-regional exchange and collaboration in enhancing higher education in Asia. At the same time, these types of collaboration now encompass various types of projects in wider academic fields with China, South Korea, and the EU and within the ASEAN region (see Welch in Chap. 6).

Quality Assurance in the Regional Context

Meanwhile, within the Asian region, there is a wide gap in quality assurance in higher education. In most countries, mechanisms for quality assurance have already been developed or established. By contrast, however, in countries such as Cambodia, Myanmar (Burma), and Laos, no adequate progress has been made in designing systems for quality assurance. This intra-regional gap has become a large obstacle in developing a common framework for quality assurance in Asia.

In universities throughout Asia today, international education programs are being delivered in a wide variety of forms including transnational educational settings. In whatever form of program, important questions include who certifies the award of credits, confers the degree or diploma, and guarantees the quality of the courses and lectures and what standards are employed in doing so. Adding to the increasing demand for accountability to tax payers, East Asian universities are facing intense pressure to demonstrate their educational and research quality to global stakeholders, such as partner universities and industry in advanced economies. Based on highly developed student mobility and historical ties with the higher education systems of the British Commonwealth, the Asia-Pacific region has taken a leading role in international higher education quality assurance networks. Within

the various regional sub-networks of the International Network for Quality Assurance Agencies in Higher Education (INQAAHE), the Asia-Pacific Quality Network (APQA) is the largest network with the most diversified members. In part by utilizing these international networks, many Asian countries are strengthening their higher education quality assurance systems (Bigalke and Neubauer 2009).

Adding to the regional network of quality assurance agencies, various types of international collaboration for enhancing the quality of Asian higher education are ongoing. As discussed by Yavaprabha in Chap. 5 and Hirosato in Chap. 8, ASEAN countries and universities are actively engaged in the development of credit transfer systems for facilitating increased student mobility, in collaboration with international organizations such as the Asian Development Bank (ADB).

Asian higher education institutions and governments are strongly motivated by the desire to boost the competitiveness of their higher education systems by implementing quality assurance measures. To illustrate, South Korea emphasizes information disclosure in quality assurance and quantitative evaluation and has introduced an additional accreditation system to promote international student enrollment. In Chap. 7, Byun and Um refer to the CAMPUS Asia project's impact on strengthening national initiatives to raise the international reputations of the higher education systems of its members, partly in collaboration with regional neighbors. At the same time, measures for internal quality assurance and university autonomy are also seen among top universities in Singapore, the Philippines, Vietnam, and others.

A worrying development in Asia is the widening separation between prosperous universities and higher education institutions in lower-quality settings. At the same time, Asian universities are starting to build more partnerships within the region. To this end, exchanges should not stop at those between universities that are engaged in leading-edge research and high-quality education. Within Asia, we need to stimulate academic support from leading universities to others that are trying to catch up and to encourage collaboration between universities of developing countries, as exemplified by the strong efforts of AUN. At the same time, we also need to acknowledge that studying aboard is no longer the privilege of elite or wealthy students. As Liu-Farrer discusses in Chap. 10, some countries such as Japan and Korea enroll high numbers of non-elite international students.

The Public Nature of Higher Education

One of the most important issues related to higher education in Asian countries associated with its expanding private nature would be how to balance the increase in quantity and the improvement in quality (OECD 1999). At the same time, the development of the private sector in higher education does not always transpire as intended (Levy 2012).

Higher education has been expanding rapidly in Asian countries, and, as a result, a remarkably high number of new universities have been established, especially in

emerging economies. One of the reasons behind this rapid rise in the number of university entrants is the expansion of the middle class, due in part to the region's steady economic growth (Santiago et al. 2008). The surge in social demand for higher education is also observed in countries throughout Indochina (e.g., Cambodia, Laos, and Myanmar) where the expansion of higher education has lagged behind other Asian countries. However, an overly rapid expansion of higher education has sometimes resulted in excessive market fundamentalism and sagging quality of education (Hirosato and Kitamura 2009).

By design, higher education is expected to serve a public function (Nixon 2011). However, with the term higher education "market" (including "quasi-market" under the widely shared concept of new public management) gaining usage, more emphasis is being placed on financial efficiency and effectiveness in understanding higher education in recent years. This attitude is more conspicuous in the least developed countries in terms of the expansion of higher education in East Asia. Therefore, serious reflection on the meaning of the public value of higher education is necessary, especially in the Asian region (see Marginson in Chap. 2).

How can large budgetary expenditures on higher education be justified? The contents of education itself may possess public value, such as education for sustainable development as explained by Kitamura and Hoshii in Chap. 11. Particularly in comparison with other educational stages such as elementary and middle school, however, the number of direct recipients of benefits (students) of higher education is more limited. The cost per person receiving higher education is high compared with that required in the lower stages, due to higher costs for research facilities and other infrastructure. With regard to the rate of social profitability (i.e., the level of contribution to economic growth) against the investment in each educational stage, it has been confirmed that the rate in primary education is highest, while that in higher education it is the lowest, regardless whether the country is developed or developing. As for the private profitability rate (i.e., the level of contribution to private income), which indicates how much profit individuals receive, the rate is not very high in developed countries where education has already been prevalent, while the rate is very high in developing countries where the gap in educational opportunities is large (Psacharopoulos and Patrinos 2004). Therefore, most of the discussion over public investment and international development had reflected suspicion toward the further expansion of public investment in higher education in the age of the structural adjustments of the 1980s–1990s.

However, over the past 15 years, the role of higher education in socioeconomic development has been stressed as an indispensable device in gaining access to the knowledge-based economy. The mobility of highly skilled workers is also changing from the one-way "brain drain" from South to North toward "brain circulation" that benefits emerging economies with high private investment into education and research (Kuznetsov 2006; Saxenian 2005).

It should be noted that there are differences in expected roles and functions between cases where the government takes the lead in establishing higher education institutions, as through state facilities as observed in continental Europe, and cases where corporate-type market-oriented higher education institutions, which are

typically observed in the United States, are established. Particularly in many Asian countries, as a part of development policies, it had until recently been common practice to establish state facility-type universities. However, at present, many (especially leading public) universities exhibit a corporate-type management style under the idea of new public management. Adding to this, both public and private higher education institutions with limited public resources are relying on tuition fees for further expansion. On the other hand, the role of government in East Asian higher education systems is still very strong as a driving force for system development (Marginson et al. 2011).

Conclusion

Based on the discussion above, we could conclude that international dimensions are becoming more important in East Asian higher education, both at the regional and global levels. These dimensions are visually depicted in Fig. 1.1.

Firstly, top universities in East Asia have started to act across national borders to pursue excellence in research at the global level. The prospective governments of emerging and advanced economies in this region intentionally support these global research university initiatives.

Secondly, the significant increase in the international mobility of human resources, including both students and academics, has changed the nature of educational programs in East Asian higher education. Many advanced and emerging countries in East Asia are starting to attract international students and academics mainly from within the region. The increase of "international" programs in the English language also reflects increasing demand and policy directions to foster human resources who can work actively across borders.

Thirdly, various initiatives are also augmenting regional-level collaboration and partnerships among top Asian universities. In South East Asia, the ASEAN University Network, comprising leading universities from ASEAN member countries, has contributed to competitiveness of ASEAN higher education systems and individual institutions alike. Governments and universities from China, Japan, and South Korea are also trying to collaborate among ASEAN members and other Asia-Pacific countries and universities.

Fourthly, quality assurance in higher education is becoming more important in both the domestic and international contexts. The quantitative expansion of Asian higher education has led to the diversification of quality within and across the prospective higher education system. Adding to national initiatives, regional- and global-level collaboration for quality assurance in higher education is ongoing through networks of quality assurance agencies as well as the establishment of credit transfer systems among ASEAN members and throughout the Asia-Pacific region.

Lastly, the public nature of higher education needs to be reconsidered. Higher education systems in East Asia could be identified as being among the most

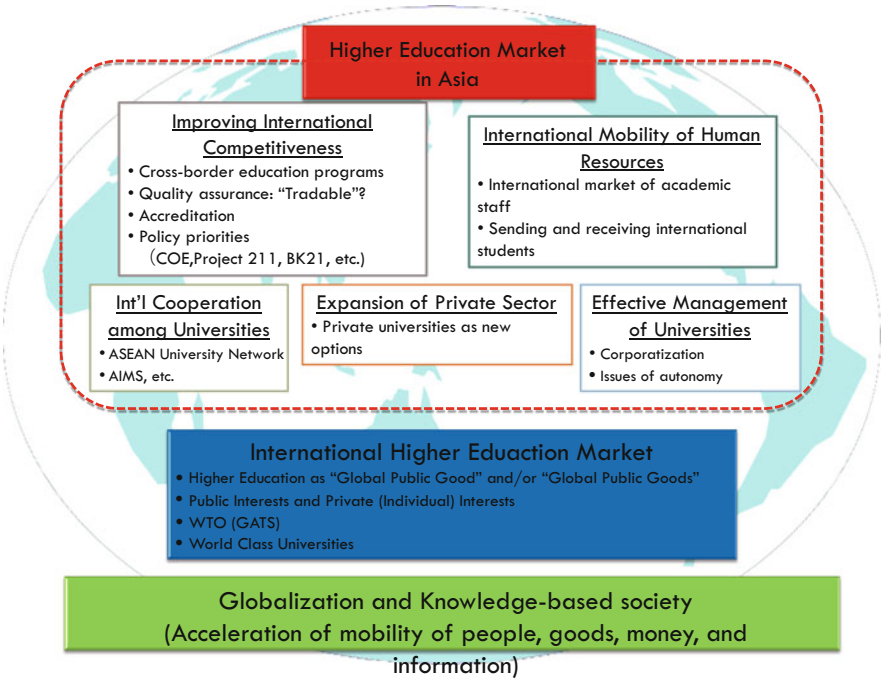

Fig. 1.1 Current issues in Asian higher education

privatized in terms of their heavy reliance on the financial contribution of students and their families. They also closely follow market- and competition-oriented institutional governance as private institutions or corporatized institutions under the idea of new public management. However, the public role of higher education under the knowledge-based economy is increasing, and governments are representing a driving force in higher education reform under the new global and (de facto) regional higher education framework.

Then, how can we develop a future vision of East Asian higher education under the increasing influence of international dimensions? Considering the historical context of a long dependency on Western higher education, the inclination toward "world-class" status, or "global excellence" based on the globally unified valuation system, is not desirable for establishing a distinguished identity for East Asian higher education. For the autonomous development of East Asian higher education, regional-level collaboration and partnership is crucial, even under the underdeveloped geopolitical "regional" framework.

Current issues faced by higher education in Asian countries are mainly related to quality but also have various aspects such as equity and relevance. It is impossible to change the current situation all at once, but it is both possible and necessary to improve them gradually, one by one through steady effort. To achieve this goal, it is

essential for stakeholders with different backgrounds to explore the societal roles of universities from critical and constructive perspectives.

It is particularly important to design higher education systems in such a way as to assure and improve quality to assure favorable learning and research conditions for students and academics in this region. Another important factor is to enhance the management and operational capacities of universities and, concurrently, to concentrate efforts to improve the competence of faculty members. In implementing these efforts, the establishment of a system for internationally viable accreditation and credit transfer systems may help verify outcomes in a tangible way. It is therefore hoped that governments and universities in Asian countries will focus more attention on these efforts.

Many difficulties will arise should individual Asian countries attempt to pursue or satisfy the public nature of higher education within their own contexts. However, for East Asian countries to promote socioeconomic development in the knowledge-based society of the twenty-first century, the roles that higher education should play are extremely important. To fulfill these roles, universities and governments in each country must concentrate their efforts on improving their capabilities, and, additionally, universities and relevant institutions within and outside the Asian region must become involved in extensive and forthright international cooperation. In particular, as their respective histories make clear, the inherent nature of universities implies high-level public value at the national, regional, and global dimensions. In conclusion, then, we would like to emphasize the importance of promoting exchange among universities across borders in order to achieve this regional and global public value.

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Chapter 2
Higher Education as a Public Good in a Marketized East Asian Environment

Simon Marginson

Introduction

This chapter is focused on shared and collective benefits in higher education, in a policy setting in East Asia and elsewhere where higher education is formally positioned as a competition between universities and as a tool of national competition in a globalizing world. Market ideologies are universalizing and tend to blank out everything else. Unfortunately, this obscures from view public goods, which are exactly those goods that cannot be provided in markets because of their shared nature. The chapter is concerned with two related matters: (1) defining and identifying the public good and the different public goods in higher education and (2) augmenting those public goods, both national and global.

Higher education is collaborative as well as competitive, especially in research and people mobility. The sector has more public roles and collective effects than acknowledged. The problem is to identify what they are and where they fit.

The chapter begins with discussion of the setting: global integration and partial convergence, neoliberalism in policy, the dominant idea of the "competition state" (Cerny 1997), and the "arms race" in innovation in East Asia. It then reviews the conceptual/empirical problem of public good and public goods in education, using theorizations from economics, normative political theory, and Jurgen Habermas' communicative sociology. The next section looks at global public goods and global collaboration: important but little theorized or governed. Conclusions follow.

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The Setting

Globalization

"Globalization" can be defined as "the widening, deepening and speeding up of all forms of world-wide interconnectedness" (Held et al. 1999, p. 2). Globalization is about partial convergence and integration of nations and local sites on the world or planetary scale. It is powered by worldwide flows of technologies, people, finance, language, and ideas, especially the instantaneous transmission of data and ideas in real time. Globalization includes all trends toward world systems and "one worldness" (Marginson 2010). In higher education and other spheres, it is marked by the growing role of the global dimension of action, including global spaces, systems, agencies, and products, and by the impact of global systems and phenomena in local and national affairs. Sometimes the global pushes aside the local and national dimensions. Sometimes it does not, so that the global coexists with the local and national, and seeps into daily life and ordinary common sense.

Global integration and convergence are long-standing processes. They can be dated to the Neolithic Revolution, or the Asian world religions beginning 2,500 years ago, or the European trade and conquer seaborne empires of the sixteenth century and after, or the spread of science. Christopher Bayly (2004) remarks on the impact of global thinking in the nineteenth century, the era of the rise of the modern nation in Prussia, England, and Japan, with its new techniques for governing the whole nation and superior capacity to harness industrial development as military force. The nineteenth century nations saw themselves as operating in a competitive setting, constantly compared themselves to other nations, and responded to competitive advantages by imitating them. Far from being opposed in any fundamental sense, modern nationalism and globalization originated together.

Globalization has now been further accelerated in the present era of communicative globalization, which began with the Internet in the early 1990s. The processes of global convergence play out not only at the world level but at the part-world level, in regions larger than nations in scale, for example, in the formation of the European Higher Education Area, and in regional groupings such as Mercosur in South America, ASEAN, and ASEAN Plus Three. The post-1990 dominance of the English-language nations in global systems, in both economics and knowledge, seems to have encouraged a tendency for regional groupings to clump along cultural and political lines.

Knowledge flows freely across borders. Globalization has many implications for universities, which are among the most globally sensitive of all human institutions. In the last two decades in higher education, cross-border interactions have become more extensive, intensified, regularized, and much faster. The local and global dimensions are increasingly intermeshed, so that local events are transmitted everywhere and distant events can have a magnified impact at home. Each of the world's research universities can take a virtual tour of each other research university via its web page. Global science leaps over every border. Global systems,

networks, and relationships now play a major role in higher education, especially in research, though they are felt more deeply in some places than others. Globalization does not abolish nations or governments in higher education. Nation-states remain the main power in the sector. Its central role continues to be the nation-building one. Yet globalization has relativized the nation. For the first time in history, it is impossible to completely cut off a nation from global relations (though the North Korean regime still tries to do this). Nations are preoccupied with the problem of global competitiveness and want higher education institutions to help with that. Yet higher education, while it must satisfy government, and local families and employers, also marches to the beat of a different drum. Global rankings, research flows, and the need for open borders impose their own logics that do not always mesh perfectly with national policy. Universities are active at the same time in all three dimensions of activity, global, local, and national (Marginson and Rhoades 2002; Marginson and van der Wende 2009), and are often regional as well. In short, we are in a "glonacal" era of higher education. Glonacal = *glo*bal + *na*tional + lo*cal*.

Activity in each one of the global, national, or local dimension can affect activity in the others. When a university does well in the global rankings, this lifts the university in the eyes of government and public. It might also draw local investment from business and student custom. When the university is granted a funding increase by national government, this enables it to do more and better work both locally and globally. Universities that effectively coordinate action in the three dimensions, so that activity in each dimension produces activity in the other dimensions—or at least does not work against activity in other dimensions—will tend to be more successful.

Neoliberalism in Government

The communicative globalization that began in the early 1990s coincided with the rise of neoliberalism in government, which began a little earlier in the 1980s Thatcher governments in the United Kingdom. For more than two decades now, the primary ideas about government and social organization in higher education, and the main propositions for reform, have been drawn from neoliberalism.

Neoliberal approaches to policy and government spread rapidly across the world in the 1990s and after, deeply shaping higher education policy and regulation everywhere. This historical coincidence, with accelerated globalization and neoliberal ideologies happening at the same time, was to deeply shape understandings of global convergence around the world. Global convergence and policy borrowing accelerated the flow of neoliberal ideas and techniques. At the same time, neoliberal thinkers developed their own distinctive narrative of global convergence, in which it was defined as the formation of deregulated competitive markets on a worldwide scale—as if globalization was nothing more than the Anglo-American neoliberal project—rather than a process of cultural integration or a matter of common

interest. The more collectivist and political approaches to globalization were left to the environment movement, which was committed to a one-world ecology. Meanwhile, those who wanted to resist neoliberal policies in higher education and other sectors often blamed globalization for those policies and wanted to strengthen national resistance to global flows. But this was futile. A better approach was (and is) to develop an alternate political globalization to neoliberal globalization, pushing the different national cultures out into the global dimension.

Neoliberalism models society and government in terms of financial rationales, competitive capitalist markets, and business templates (Harvey 2005). These templates serve as the basis for concrete changes in policy, regulation, and funding arrangements. At the same time, neoliberalism functions as a "social imaginary" in the sense of Charles Taylor (2002) in that this body of ideas has come to constitute what is commonly seen as normal and possible (Rizvi and Lingard 2010). Neoliberalism is the dominant social imaginary of the time. Increasingly, in domains such as higher education, business culture and market behaviors, especially competition, are seen as practical and inevitable. It has become increasingly difficult to conceive "places and spaces" that are "not neoliberal" (Clarke 2007, p. 239). Yet neoliberal practices are not universal in human affairs or in government and will not always be hegemonic in higher education. It is better to treat neoliberalism as an ideological template for action which can be accepted or rejected, rather than a reality, and "as a project seeking to make the world in its image rather than an achieved condition" (p. 240).

Neoliberal ideas about education can be traced to a 1955 essay by Milton Friedman on the role of government in education, republished in *Capitalism and Freedom* (1962). He argued for the creation of economic markets or market-like relations in education, a sector then largely administered as a public service or provided by nonprofit private institutions. As Friedman saw it, competition between producer institutions was the natural mode of system organization, and over time, in an evolutionary process, competition would generate innovations and efficiencies. It should be noted that neoliberal ideas do not monopolize higher education policy. Concerns about social and gender equity affect most national systems (OECD 2008). Notions of university engagement in city and region building have gained currency. These practices owe more to social democracy than neoliberalism, though they are often couched in neoliberal language about "consumers" and "stakeholders." Policies on global linkages and intercultural relations also extend beyond the terms of market economics. While some nations like the United Kingdom, Malaysia, and Australia treat international education as a commercial business, others such as Japan and South Korea see it as cultural exchange and foreign aid. Nonetheless, in the last two decades, neoliberalism has been the main inspiration for government-driven reform in higher education.

Neoliberal ideas are manifest in higher education at two levels. The first level is the large and heterogeneous family of activities often called the new public management (NPM). The NPM has origins not only in business models in education but also in the earlier program budgeting movement, and notions of transparency, participatory democracy, individuation, and public accountability partly

sourced in the New Left and social movements of the 1960s/1970s. Features of the NPM include executive leadership, the remodeling of educational institutions as business firms ("corporatization"), performance management, the devolution of responsibility within central control systems, routine competition between units, contractual agreements, goal-driven production, output measurement, cost unbundling, shadow pricing, competitive bidding, simulated "bottom lines" in nonrevenue areas, customer focus, quality assurance technologies, and continuous self-evaluation. Though NPM reforms often sit uncomfortably with the social and cultural goals of nonbusiness organizations, the NPM is not only tolerated, but it is mostly taken for granted as normal practice across the range of public institutions, nongovernment organizations (NGOs), and nonprofit sector. But by thinking of organizations such as universities as self-interested firms in competition with other firms like them, government obscures their contribution to the collective interest.

The second level of neoliberal ideas goes further. It can be called the neoliberal market model (NLMM). The full market model sees higher education as functioning global and national markets of a capitalist kind—higher education produced on a commercial basis, as a set of commodities subject to buyer-seller relations, in contestable markets with free entry of new producers, produced by competing institutions/firms financed by shareholders, and committed to profit making, within a deregulated setting with little government interference. The market model functions at the same time as a description of an alleged reality, as an ideal to be achieved, and as a template against which existing practices are judged and found wanting, powering the argument for further market reforms. The NPM and the full market model have a symbiotic relationship. The full market model provides an ideological rationale for NPM reforms. At the same time, the NPM functions as a halfway house to more thoroughgoing changes. Competition, product formats, user payments, and corporatization have been introduced or augmented in many national systems. Chunks of the market model are present, especially in commercial sub-sectors such as private training and in some countries, international education. There are also large gaps. Paradoxically, the full capitalist market remains fairly distant, higher education remains distinctively non-neoliberal in some respects, and far from deregulating itself out of the picture, the nation-state looms as large as ever. But in the fashion show that is higher education policy, the competitive market is the only model in town. It is another case of neoliberalism operating more as ideology than as practice.

The Global Competition State

Communicative globalization and neoliberal marketization have together driven a fundamental overhaul of nation-state strategies, with more attention than before to global competition. Cerny (1997) calls the nation-state in this era the "global competition state." Its commitment to neoliberal transformation "does not lead to a simple decline of the state but may be seen to necessitate the actual expansion of

de facto state intervention and regulation in the name of competitiveness and marketization" (p. 251). In addition:

> . . . state actors and institutions are themselves promoting new forms of complex globalization in the attempt to adapt state action to cope more effectively with what they see as global 'realities'. This interaction of economic transformation and state agency is leading to a restructuration of the state itself at a wide range of levels. (Cerny 1997, p. 251)

This includes the reform of higher education institutions—seen in nearly all countries as a part of the state or as a responsibility of the state—in order to render them more international and global in their content and orientation and successful on the world scale when comparisons and rankings are made. This also generates conflict, as Cerny remarks. States pursue their own nationally specific political agendas, but global convergence and comparison tend to homogenize the differences. There is a "growing tension" between adaptations to globalization and "embedded state/society practices" (p. 251). The latter can include the public functions of higher education institutions, which developed in the context of local requirements and national cultures. Cerny's argument is 15 years old but provides an explanatory description of the current policy terrain in higher education—especially in East Asia, Malaysia, Singapore, France, Germany, and other countries that make lifting the global position of their universities an open objective. Normally, such goals are linked to global rankings. These rankings tend to homogenize national systems in terms of English-language global standards based on an ideal form of the Anglo-American science university.

Global ranking began only nine years ago with the Shanghai Jiao Tong University index but now exercises a strong influence on both private and public patterns of investment in higher education, especially investment in research (Hazelkorn 2008). Ranking has intensified the "arms race" in spending on higher education.

Higher Education in East Asia

Nowhere in the world is the "arms race" in spending on higher education and research more apparent than in East Asia. Nations and universities are striving to catch up and move past the West while keeping up with competition within the region. Policymakers talk about market competition in higher education in neoliberal terms. No system is truly organized as a commercial market—government exercises close control of the product, tuition in public institutions is subsidized, and price signals mediate demand and supply only in lesser status private institutions. But it is taken for granted in policy circles that a competitive national economy needs research universities of global status. Global status means success in global university competition and being seen to be successful. The measure is rankings.

Rankings are inaccurate and intrusive but not illusory. They give meaning to reputational judgments. Social status derives from the university attended and from

the value of the "brand." The value of the brand is confirmed and often largely determined by national and global ranking. And ranking rests mainly on research performance. In the research university sector, research is the essential foundation of any market. In the last analysis, research underpins student selectivity. As will be discussed, research is also the foundation of many public goods created in research universities.

There is more interest in university rankings in East Asia than anywhere else in the world except the United States, where institutional status is shaped by *US News and World Report*. This shows how prevalent the culture of competition is in the region. However, systems can only compete effectively if they have the economic means to do so. Post-Confucian East Asia has the means, but apart from post-Confucian Singapore, Southeast Asia does not. East Asia and Singapore now produce 24.3 % of world GDP compared with 23.0 % in North America (IMF 2012). All Post-Confucian economies, except China (and Vietnam, if it is in this category), enjoy per capita incomes at Western European levels. Parts of China such as Shanghai and Beijing are approaching that level. In Southeast Asia, per capita incomes range from a comparatively healthy $14,220 in Malaysia and $8,190 in Thailand to $1,950 in Myanmar. Six of the ten members of ASEAN have per capita incomes of less than $5,000 per year. Only Singapore, Malaysia, and Thailand have research systems that publish more than 350 scientific papers per year (NSF 2012). The "arms race" in spending is currently confined to the post-Confucian nations and Malaysia.

East Asian competition in higher education has ancient cultural roots. The foundations of post-Confucian higher education and research lie in the Confucian tradition of educational cultivation in the family, the respect accorded to learning in society, and the all-embracing nature of social competition through education, which triggers the additional student learning outside formal school which has helped to make Northeast Asia and Singapore the world's strongest zone for student learning, dominating the 2009 OECD PISA survey (OECD 2010). But other elements in the Confucian tradition, the items that balance social competition—such as emphases on self-cultivation as moral formation, the responsibilities of the scholar to the society, and the virtues of social improvement and social order—seem to be less prominent.

On top of the foundations of strong student learning at school level, all nation-states of Northeast Asia and Singapore have built modernized higher education systems, boosted participation rates, and undertaken major investments in R&D. East Asia is now the world's third great zone of research, development, and innovation, after the United States and Canada, and North Western Europe and the United Kingdom. Japan has long been a world leader in science but has now been joined by Korea, Taiwan, Singapore, the Hong Kong SAR, and China. In 2009, East, Southeast, and South Asia together spent $402 billion on R&D, not far behind $433 billion in North America (NSF 2012). China now spends about 40 % of the American budget and is increasing research spending at 20 % a year (NSF 2012). The national target is 2.5 % of GDP by 2020, which would lift China to more than two thirds of the US level.

Increased investment leads to greater output. In 2009, China, Japan, South Korea, Taiwan, and Singapore between them produced a number of science papers equal to 80 % of the American output. China, 12th largest producer of science papers in 1995, is now the second largest in the world having passed Japan in 2007. There has also been an exceptionally rapid growth of outputs in each of Korea, Taiwan, and Singapore (NSF 2012). The remarkable growth in research output has yet to fully show itself in citation performance and in the Shanghai Jiao Tong ranking. Apart from five universities from Japan (Tokyo, Kyoto, Osaka, Nagoya, and Tohoku), there were no East Asian or Singaporean institutions in the Jiao Tong top 100 in 2012, and there were only five non-Japanese universities in the top 200—NUS in Singapore, Seoul National in Korea, National Taiwan University, Tsinghua, and the Chinese University of Hong Kong. Japan has Hokkaido, Tokyo IT, Kyushu, and Tsukuba in the second 100 (SJTUGSE 2012). There is a lag before publications show up in cite numbers and a further lag before cites reach the Shanghai Jiao Tong index. The weight given to Nobel Prizes (30 %) also disadvantages East Asia. In the Leiden ranking, just 12 East Asian and Singaporean universities published at least 5,000 papers from 2005 to 2009 with more than 10 % of their papers in the top 10 % in the field: Tokyo, NUS and Nanyang in Singapore, KAIST in Korea, and Hong Kong University and the Chinese University in Hong Kong. There were 47 such universities in Europe. But another 20 Asia Pacific universities had at least 5,000 published papers (CWTS 2012), though with less than 10% of their papers in the top group for citations.

As quality improves, cite rates in post-Confucian East Asia will lift. The fact that there is still a clear gap between East Asia and the West will continue to drive high rates of investment in higher education and research. What is less clear is what this focus on competition means for the public good activities of East Asian universities.

Competitive and Collaborative

For research universities in East Asia, the imperatives are clear—to improve research performance and move up the rankings. But it is not that simple. Even when higher education is organized as a market, it is still more than a market. Universities are not business firms focused on market share and profitability. They have multiple economic, social, political, and cultural goals, they create knowledge—which is an end in itself—and they collaborate with each other as well as compete with each other. Research depends entirely on cooperation and exchange, mostly on an open access basis, and people mobility across borders is also collaborative in form. No institution is more effectively focused on global competition than the National University of Singapore, but no institution does more in the form of partnerships and consortia. Universities also have strong institutional personalities of their own and want to maintain and develop their own agendas, rather than being dictated by market forces.

Higher education institutions constantly move between these two modes. In the research, "arms race" universities find themselves competing and cooperating with the same institutions. They all want to recruit talent at each other's expense, but they constantly learn from each other. Each institution wants to beat all the others in the ranking, but they all want their own national system to rise en bloc. They all contribute to collective public and individual nonmarket benefits in their own nations. They also contribute to cross-border and worldwide public goods. A key difficulty here is that while competition is central to neoliberal policy and so has become well and widely understood, public and common benefits do not fit the dominant policy template and are not understood. This is a major lacuna in policy. As Cerny (1997) remarked, it is the source of much dissatisfaction. The next section looks at ways that we might better define the noncompetitive benefits of higher education.

Public Good and Public Goods in Higher Education

A key difficulty created by the market imaginary is that it prevents policymakers (and many scholars) from thinking clearly, in either a social science sense or a policy sense, about those functions and activities of higher education and university-centered research that do not fit the neoliberal market model. The market imaginary allows one to think clearly about private goods but not public or social goods. This is compounded by the genuine difficulty of observing and computing many public goods. This problem is little discussed in policy circles. It should be discussed, because it goes to many questions of national, social, and individual interest.

Outcomes in education invoke complex problems of definition and measurement. The easier issue is private goods in higher education, but it is not as simple as it appears. These are normally just equated with graduate earnings. More sophisticated approaches focus on income differentials between graduates from higher education and from secondary school and distinguish between the effects on income due to higher education and effects due to other factors such as ability or social origin. There are also private nonmarket benefits such as the better health outcomes and personal financial management experienced by graduates and nonpecuniary private benefits such as enhanced aesthetic sensibility (McMahon 2009), which are often overlooked. Such calculations are partly governed by the assumptions that are used. In the case of the public benefits of higher education, assumptions are more crucial.

There is a large and eclectic literature on the alleged public benefits of higher education. Statements are made on the contributions of higher education to collective productivity at work, social literacy, knowledge, culture, local economies and communities, more equal opportunity, the training of graduates in social leadership, democracy, tolerance, and global understanding. Much of this is very loose. It is necessary to develop more rigorous approaches capable of observation. The more

serious literature includes three approaches. First, there is the notion of "public goods" (plural), which derives from economics and is objectivist and empirical in form. Second, there is the more normative notion of the "public good" (singular). This tends to be more collective in orientation and is also more eclectic in usage. Third, there is the notion of the "public sphere," first identified by Jurgen Habermas (1989) as a form of civil and communicative association in eighteenth-century England.

Public Goods in Economics

Samuelson (1954) provides a schema for distinguishing public and private goods. As he sees it, public goods are defined not by ownership (state or nonstate) but by social character. Public goods are one or both of non-rivalrous and non-excludable. Goods are non-rivalrous when consumed by any number of people without being depleted, for example, knowledge of a mathematical theorem, which sustains its use value indefinitely on the basis of free access. Goods are non-excludable when the benefits cannot be confined to individual buyers and are consumed jointly, such as national defense. Private goods are neither non-rivalrous nor non-excludable. Private goods can be produced and distributed as individualized commodities in economic markets. Few goods are both fully non-rivalrous and fully non-excludable. But many have one or other quality in part or full. Public goods and part-public goods are unproduced or under-produced in markets. It is unprofitable to pay for goods that can be acquired free as the result of someone else's purchase and unprofitable to make goods available for no cost. Hence, there is a case for state and/or philanthropic financing of public goods, and possibly also provision, to ensure the desired quantity—though "the desired quantity" raises normative issues. For example, how close should higher education be taken toward full equality of educational opportunity without regard to background? How much resources should be allocated to this, given other objectives?

Public goods can take individual or collective forms. An example of a collective good is clean air or equality of opportunity. An example of an individual good is the externalities created when a new educated worker enters the workplace. The worker's educated attributes (knowledge and skills) may spill over to other workers who did not contribute to the cost of the education, helping to enhance their productivity and thereby augment the economic returns to the firm. "Human capital" can become embodied in public as well as private goods. Amartya Sen (2000) also notes that human "capabilities" contribute to both individual and collective goods.

Another economist, Joseph Stiglitz (1999), reflects further on the public good nature of knowledge. When first created, new knowledge is confined to its creator. It can provide an exclusive first mover advantage and function as a private good. Intellectual property laws attempt to prolong that advantage. But knowledge is often rendered public when created, and open science speeds innovation

everywhere (OECD 2008). Knowledge is also a global public good. The mathematical theorem retains its valuable all over the world no matter how many times it is used. Basic research in the form of open science is subject to market failure. Everywhere, regardless of the public/private balance in other respects, basic research is funded by governments or philanthropy. The public good nature of knowledge also affects teaching. The knowledge content of teaching is non-rivalrous and non-excludable. Therefore, MIT provides free access to its courseware on the Internet, without impairing the private value of an MIT degree, which entails more than knowledge. Places in MIT are valuable and scarce, providing social position and access to elite networks. This enables high tuition. In contrast, universal education is a public good unable to support high tuition fees. Teaching programs are mixed and ambiguous, either predominantly public goods or predominantly private, depending on the social arrangements. Economists of education take divergent positions on whether higher education is or should be a public good, depending on their assumptions about society, and whether or not they support a neoliberal market reform agenda.

Samuelson's theory is useful. It helps to explain the mixed character of the outcomes of higher education. Higher education institutions produce both public and private goods, regardless of whether the institution concerned is privately owned or state owned. State-owned universities create not only common benefits such as the spread of higher levels of scientific knowledge but also private benefits, such as income earning advantages net of other factors. Exclusive private universities not only advance the economic earnings and social status of graduates but also contribute to lifting general social literacy and cultural activity. At the same time, all else equal, publicly owned institutions are more open than are private institutions to democratic policy intervention and a common social agenda (Marginson 2007).

In a comprehensive survey of research on the benefits of higher education, McMahon (2009), working with Samuelson's schema, finds that the value of non market goods produced in higher education exceeds that of market-derived goods. First are the private nonmarket benefits received by individuals such as better health and longevity for graduate and children, better savings patterns, etc. These average USD $38,020 per graduate per year, 22 % higher than the extra earning benefits per graduate per year ($31,174). Second, higher education is associated with social benefits including more stable, cohesive, and secure environments; more efficient labor markets; faster and wider diffusion of new knowledge; higher economic growth; viable social networks and civic institutions; greater cultural tolerance; and enhanced democracy. These direct nonmarket social benefits of higher education—the externalities received by others, including future generations—average $27,726 per graduate per year. McMahon also notes that externalities of higher education also include the indirect social benefits, which are contribution of the direct social benefits to value generated in private earnings, and the private nonmarket benefits. Once this indirect element is included, externalities total just over half the full benefits of higher education. The proportion of all benefits of higher education that are externalities "is the best guide to how far the trend toward

privatization in the financing of higher education should go," states McMahon. The other basis for public funding is equity policy.

> If control of higher education is to be relinquished to private markets, there needs to be analysis of the extent of market failure leading to distortions. . . If there is poor information available to the average citizen and politician about the value of the non-market private and social benefits of higher education, then poor investment decisions and policy decisions will result (2009, p. 2).

This is an important finding.

Samuelson's schema also has limits. First, whether an outcome is "public" or "private" cannot simply be read from nature but depends partly on the policy-political choices and social arrangements, for example, the degree of selectivity of universities. Second, public goods in Samuelson's sense are open to disagreement. There is more than one possible healthy ecology, or knowledge, or universal language. Again, the normative policy-political choices that are made determine the kind of collective goods that are produced and distributed. Third, Samuelson's schema implies that public goods and private goods are zero-sum in relation to each other. Unless something can be produced in a market, it has to be a public good. But in real life an element of higher education or research may advance both public and private goods at the same time. For example, a cure for a disease is a public good, and it also creates spin-off goods in the form of profitable products and even industries.

The Public Good

The second set of notions about "public" is drawn from social and political theory. This focuses on relational aspects. In some arguments, higher education and research are seen as part of a residual "public good" in the sense of the medieval commons, a shared resource that all can utilize, not subject to scarcity, akin to universal elementary education (Calhoun 1998; Mansbridge 1998). Equality of social opportunity in and through higher education is one example.

This kind of notion of the public or collective good is radically opposed to the neoliberal market model. It rests on social democratic political philosophy, in which the common public good is associated with democratic forms, openness, transparency, popular sovereignty, and grassroots agency. This is not the only extant interpretation. In pro-capitalist discourse, the general benefit is achieved by the unrestricted operation of Adam Smith's (1776) invisible hand of the market. The accumulation of profit, free from interference, drives the prosperity of all. In contrast, in socialist discourse, the general benefit or public good is secured by statist regulation, which is the opposite of an unregulated capitalist market. A third possibility is to base notions of the collective public good on civil society rather than nation-states and on institutions such as universities that are only partly controlled by states. Public good (singular) is more often linked to higher education

than public goods (plural). At best, public good ties universities into a larger process of democratization and human development. At worst rhetoric about public good is joined to empty self-marketing claims about the social benefits of higher education or research with no attempt to define, identify, or measure the alleged benefits.

As with public goods (plural), the questions "whose public good?" and "in whose interests?" arise. Nevertheless, most notions of public good refer to broadly based interests, whether pursued democratically or by surrogate as when someone claims to represent the public interest on behalf of the public. It is also expected that public good is widespread if not universal. For example, it is often assumed that public higher education is open, egalitarian, and accountable to the larger community beyond higher education. A key issue here is how external accountability is manifest. Governments claim to represent the community but have their own interests and agendas. Privileged "stakeholders" like employers may secure a voice in curriculum or professional registration. Outsiders may be elected to the governing body. How do local communities become involved? It is hard for non-professionals to share control over expert functions such as research.

The Public Sphere

In *The Structural Transformation of the Public Sphere* (1989), Habermas describes the public dimension of discussion, criticism, debate, and opinion formation in eighteenth-century England. This was the network of homes, salons, coffee shops, inns of court, counting houses, and semigovernment agencies: the places where people met and opinions were formed and communicated on the matters of the day. This was principally in London, extending to the universities and the country houses of the well-to-do. The Habermasian public sphere sustained a capacity for criticism independent of the state—and often directed toward it—while throwing up strategic options for the state to consider, and contributing to its ongoing reform and renewal. It was a space of freedom episodically connected to power (Habermas 1989, pp. 41, 51).

At one remove, this notion of the public sphere is suggestive in relation to the university (Calhoun 1992; Pusser 2006). Habermas does not draw the link. He sees the public sphere as degenerate in the twentieth century, the heyday of the university. But there are resonances. Habermas' public sphere provided for nonviolent social integration based on discourse rather than power or money, like the university today. Information and education enable the public to reach not just a common but also a considered opinion (Calhoun 1992, pp. 6, 14, 29–30). At best, the university, like the public sphere, is a semi-independent site for criticism and renewal of the state—though the state is not always listening. The rational-critical function of the bourgeois public sphere foundered because it could not sustain both homogeneity and openness. The university has a lesser requirement for homogeneity of values. It does not necessarily face the trade-off between critical capacity

and scale. Universities have a notable capacity to hold in a bounded heterogeneity. Some contain much diversity of world view, location, interest, project, and discipline.

One way to conceive the public dimension in higher education is to imagine the sector as an umbrella public sphere sheltering projects that pertain to the public good (singular) and more narrowly defined public goods (plural). Most such public functions are associated with the university's roles in knowledge, learning, and discourse. Habermas' own focus on communicative relations points in this same direction. Pusser (2006) imagines the university as public sphere as an institutional space for reasoned argument and contending values. Higher education has been a principal medium for successive transformations: the civil rights movement, the 1960s/1970s student power and grassroots democracy, the 1970s feminism, gay liberation, antinuclear and pro-ecology movements, and the 1990s/2000s "anti-globalization" protests against global injustice, corporate power, and violations of national sovereignty. This suggests one test of the university, as a public sphere is the extent to which it provides space for criticism and challenge. Another test is how widespread is social criticism in practice. Of course not all academic freedoms lead to the generation of new ideas. Faculty may opt instead for the comfortable life.

Can the university be a public sphere? On a good day, perhaps. At best the argument is carried by the merits of the case not the identity of the arguer, and the university rests on "a kind of social intercourse that, far from presupposing the equality of status, disregarded status altogether." It replaces "the celebration of rank" with the "parity of common humanity" (Habermas 1989, p. 36). From time to time, there are flat collegial relations in academic and student circles. But the good days do not come often enough. It is not simply a problem of commercial capture (Bok 2003) or managerialism. Flat discursive association is also undermined by the necessities of expertise and by status differentiation between universities.

Habermas' idea also highlights communicative relations as constituting what is "public." It suggests "public" higher education is inclusive and engaged, operating at the nexus between knowledge formation and communications. Note here that universities all over the world were early adopters of the Internet and are intensively engaged in global and local/regional networking. This suggests that one way to track the public contribution of higher education is to monitor and compute its communications, including the amplitude and direction of flows.

Comparative and Global Public Goods

Perhaps the greatest challenge is to understand public goods in higher education and research beyond the limits of the normal policy framework, that of the nation-state. The problem has two aspects: the comparative aspect and the global aspect.

Comparative Public Goods

First is the comparative. It is now understood that across the world there is marked variation in private/public funding balances in higher education (e.g., Lomax-Smith 2011, pp. 18–22; OECD 2011). In two thirds of the OECD, government-dependent institutions charge local students less than USD $1,500 per year. In the five Nordic countries, the Czech Republic and Turkey, public students pay no fees. Tuition fees in the English-speaking systems are relatively high, and in Japan and Korea, private funding outweighs public funding by three to one, with China on the same path. What is less understood is the marked variation across the world in policy notions of public goods and the significance of private earnings. Behind this lie the differences in notions of the social role and character of higher education, the scope and responsibilities of government and family, and the relations between family, state, professions, employers, and higher education. Adam Smith's limited liberal state prevails in English-speaking political cultures, to a lesser extent Western Europe, and where the colonial legacy is strong. In East and Southeast Asia, a more comprehensive idea of the state prevails.

A feature of post-Confucian East Asia is that government and politics are dominant in relation to economy and civil society (Gernet 1996). This aspect has not changed under the influence of Western modernization. Thus, in East Asia and parts of Europe, higher education is firmly positioned as part of the state, while in contrast, in the United States, higher education is positioned largely in civil society. Yet statism is not the same in all instances: while in East Asia comprehensive state responsibility is associated with high levels of household funding and stratified systems, in Nordic countries the state provides equitable access to universal high-quality public services, though neoliberal reform is gaining ground. There are also common elements across nations in university/government relations and in the mission, character, and practices of institutions (King et al. 2011). This suggests the need for a new typology for public goods that can both (1) interpret the differences in national systems and also (2) isolate the public goods that are common across systems. This raises the question of the global aspect.

Global Public Goods

As noted, higher education is subject to part global convergence in the flows of ideas, knowledge, messages, faculty, students, money, and policy and organizational systems, including the new public management and the full market model. Much activity spills freely across national borders. Much generates cross-border benefits. Inge Kaul and colleagues (1999) define global public goods thus:

> Global public goods are goods that have a significant element of non-rivalry and/or non-excludability *and* made broadly available across populations on a global scale. They affect more than one group of countries, are broadly available within countries, and are

> inter-generational; that is, they meet needs in the present generation without jeopardizing future generations (Kaul et al. 1999, pp. 2–3).

Whereas public goods produced in the national dimension are often associated with nation-states, it tends to be different in the global dimension of action. Nations contribute formally to public goods through foreign aid and multilateral cooperation, but many other global public goods are generated in global civil society. Universities are major contributors to global public goods, often operating beyond the auspices of the nation-states that constitute them legally and partly fund them. An obvious example is research-based knowledge. Another example is the global systems, such as recognition protocols, that facilitate people movement.

Universal knowledge and human mobility are synonymous in their reach across the world. Both of these goods are possessed in common, in networked relations, and often by the same people. They are not possessed by all people, not by any means. Knowledge and ease of mobility have always been largely monopolized by social and scholarly elites. Nevertheless, mass higher education, mass international higher education, and the Internet between them have expanded the circle of beneficiaries, a process quickened by global convergence. This is the democratizing potential of global higher education. The educated person, with her/his capacity for reflexive self-determination, becomes more common across the world. That kind of behavior is spreading outward within a thickening world society. This larger process can be seen as another public good.

The concept of global public goods in higher education (Marginson 2007; Marginson and van der Wende 2009) has now entered the policy discourse of several nations including Singapore, South Korea, and the United States (Sharma 2011). Existing global public goods are produced by nation-states or, alternately, by institutions operating in the unregulated global space (King et al. 2011). Globalization has enlarged this space for free "public" exchange (Peters et al. 2009), despite recurring efforts by governments, firms, and universities to close that space in their own interests. Global public goods raise issues of regulation and financing. For example, when research in one country generates benefits elsewhere, should the cost of that research be shared? What governance mechanisms should be created to identify, regulate, and finance global public goods in education and knowledge (Kaul et al. 2003)? Likewise, negative global externalities ("global public bads") such as brain drain raise questions of cross-border compensation.

The fact that globally transmitted knowledge in the technical economic sense is a global public good does not exhaust questions of content and value such as "whose public good?" and "in whose interests?" There is also the question of the extent to which the processes of producing, disseminating, and assigning value to knowledge encourage diverse approaches—or whether universal knowledge is mono- and hegemonic and universal*izing*. Arguably, fostering of diversity of knowledge is a global public good. Yet paradoxically, standardization is also a global public good, to the extent it helps all to communicate and share a common information system. In nations with academic cultures in, say, Spanish or Arabic, globalization

generates both public goods *and* public bads unless there are broad two-way flows between the national and global domains.

Cross-border public goods do not have to manifest at the worldwide level. Technically, any cross-border good in higher education is a global public good. This includes the fruits of regional cooperation, which is becoming the most readily recognized form of global public goods. In Europe, East Asia, and South America, states are explicitly committed to resourcing common benefits. The most advanced form of regional cooperation is the Bologna Process, including large-scale mobility schemes, pooled research funds and a common process of decision-making concerning research projects, and the design of a common template for degree structures and program outcomes that facilitates academic mobility and a single pool of professional labor. The main initiatives in East Asia are student and staff mobility, benchmarking, and collaborative research through ASEAN. Student exchange in Northeast Asia is also now being formalized. Campus Asia and BESETOHA are signs of things to come. The enthusiasm of institutions and governments for regional programs shows that the market competition model is not universal and does not provide for all needs.

Conclusions

Higher education institutions have a broad potential to produce multiple public good(s). The one-sided fixation with market competition—and particularly the ideologies associated with policies that focus on competition—has obscured this rich potential for public good(s). Unlike market commodities, common, collective, and social outcomes need to be consciously planned and decided if they are to happen. Public goods and the public good in higher education are under-produced in economic markets. State intervention or philanthropy is *always* required. Policy analysts and higher education scholars need to do much more work in defining, identifying, observing, and computing the individual and collective public goods produced in higher education and university-based research. Not all such goods can be measured, but many can, and a sound social science of public goods in higher education would facilitate the complex judgments needed in areas where the benefits are too large, intermeshed, or otherwise complex to be readily measured.

It is important to remember civil institutions contribute to public good(s), as well as nation-states. This is especially significant at global level. There is no global state. Operating in the global dimensions, universities often behave less as arms of the state and more as independent agents that are contributing to global civil society.

The communicative aspect of universities is now centrally important to the evolution of their public character, even more so in the global dimension than at home. Many universities are good at the one-way broadcast of self-interest and self-promotion. Most universities neglect two-way flows and flat dialogue. But they have the technologies and discursive resources to conduct more plural, de-centered

conversations. If so, universities need to more explicitly value its own contributions to public debate and policy formation, and in its incentive systems they should favor not just the creators of saleable intellectual property but socially communicative faculty.

Research universities make a major contribution to global public good(s) by creating, applying, and disseminating knowledge. There is much collaborative activity in research on common global problems such as climate change, food and water security, urban infrastructures, public health, and cross-border epidemiology, but there would be more if the market model was less dominant. Research universities also create public good(s) by sustaining traditions of free inquiry and discussion. These are not a Western monopoly—despite what some in the West think—but are integral to intellectual life everywhere, though the exact practices that associate with researcher and scholarly freedom vary from culture to culture. Consider, for example, the key political role played by Peking University (Beida), as a critically minded independent spirit at the heart of the Chinese nation, at many crucial times during the last century.

Nevertheless, as Cerny (1997) notes in relation to competition, there is potential tension between nation-state agendas and the global public good activities of institutions. Higher education institutions are dependent on governments and local student fees. They cannot consistently put the collective global good ahead of local and national interests. The question is, to what extent will their paymasters permit them to act globally at all, except in pursuit of the goals of the "competition state"? In relation to global public goods, governments can say "what's in it for us?" in terms of the generation of profit at home. Here the market ideology not only limits the potential for public goods at home, it slows the immense potential offered by collaborative higher education on the planetary scale.

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Chapter 3
Asian Research: The Role of Universities

William K. Cummings

Introduction

The West, and most recently the USA, has provided the leadership in the scientific and technological revolution(s) of the last two centuries, and many expect that to continue. But there are new challenges to Western supremacy: (a) Perhaps the most newsworthy are those relating to national security—nuclear proliferation and Internet instability. (b) But also there is the possibility that the West and especially the USA may be slipping across the board relative specifically to new Asian players.

The popular version of recent trends is the Flat Earth perspective (Friedman 2005), that increasing amounts of US secondary S&T are being shipped offshore. Friedman argues that this trend was eased by the new globalizing reduction of trade barriers of the 1990s, but the Internet revolution of the late 1990s enabled a significant acceleration. GM has an India branch for its car design. IBM has major research laboratories in India, China, and Japan. Following on the export of secondary S&T, the new beneficiaries are projected to increase their capability in primary S&T. And thus the S&T world will become flat, or at least there will be a more equitable distribution of peaks and valleys in S&T across the more or less flat Earth.

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While it may be that the Earth is becoming flat, the particular variant I wish to explore here is the tilting to Asia hypothesis.[1] For a variety of reasons, Asia is beginning to catch up on S&T—and if forward projections can be trusted, Asia could easily surpass the USA in 15 years. And as S&T wages in most parts of Asia are relatively modest, Asian S&T firms may be less inclined to offshore their R&D work. Thus, the research world may tilt upwards to Asia; Asian universities will play an important role in this transformation.

The Beginnings of Asian Higher Education

Before considering the Asia tilt, it will be useful to compare the structure of education and higher education systems. In comparative education, the classic debate focuses on the extent to which educational systems have become more similar or retain distinctive structural differences over the course of modernization/globalization. I think the evidence is overwhelmingly in favor of the differences position (Cummings 2003). Modern education was not created overnight in similar contexts but rather emerged over an extended historical period of 150 years in highly diverse ideological, political, and economic contexts. Thus, rather than a single form of modern education emerging, I argue that there are at least six distinctive models: the French, German, British, American, Japanese, and Soviet models.

These variants were planted in Asia from the mid-nineteenth to the mid-twentieth century—Japan-Korea-Taiwan followed the German-Japanese model, China the Russian, Vietnam-Laos-Cambodia the French, Singapore-Malaysia-Hong Kong-Australia the British, and the Philippines followed the American model. But the colonial era is long past; so to what extent are these legacies still impacting—and to what extent are there converging tendencies? We will keep these questions in mind as we look at recent Asian experience.

Japan is one Asian system that avoided colonial dominance, and it was the first to take major steps towards a distinctive higher education system. Within a few short years of the Meiji Restoration (1868), a new leadership emerged in Japan that declared its determination "to seek knowledge throughout the world" and to accept Western science at the same time as they reaffirmed Eastern morality (Bartholomew 1989). At first, the Japanese focus was on knowledge imitation. A new institute was established to translate foreign knowledge and other new institutes specialized in engineering, shipbuilding, armaments, and other technological areas; subsequently several were consolidated in Tokyo University, which was in 1886 rechristened as the first Imperial University. Over the next decades, numerous

[1] An alternate scenario is, according to the OECD, Education at a Glance 2005, that there may be a current tilt towards Europe. European OECD countries aspire to pass the USA. But the European tilt is nowhere near as prominent at the Asia tilt, at least in a number of indicators we will discuss.

other public and private higher educational institutions were founded, most with a focus on Western science, technology, law, and languages. By the 1920s, increasing emphasis was placed on knowledge innovation, and from the 1970s Japan began to place a stronger emphasis on knowledge creation (Cummings 1990). Some of the themes underlying this shift were drawn from the West and especially from the USA. But as will be argued below, Japan has also fostered some new strategic directions (Kodama 1991).

Over time and especially over the past three decades, other Asian societies have, like Japan, taken bold steps to accelerate the processes of knowledge innovation and creation. Korea, Taiwan, and Singapore are most notable for their bold steps over the past decade or so, but the trend is evident throughout the region. Each nation faces its unique set of opportunities and obstacles that we also acknowledge. One obstacle frequently cited is the supposed Western and especially US dominance of global knowledge production, so, according to this view, the West usually makes discoveries first and similarly is more efficient in translating its basic discoveries into applications; thus, Asia is said to be locked in a peripheral or semi-core position in the global knowledge production (Altbach and Umakoshi 2004; Marginson 2004). While recognizing the obstacles, we will argue that the region has much more potential than is generally appreciated—investment, talent, unique biosphere, humanistic objectives, and a collaborative spirit—and an impressive array of recent accomplishments. This suggests the prospect that the Asian region may be emerging as a new powerhouse of knowledge production.

The Context

Before considering recent trends in development strategies, it will be useful to highlight several relevant characteristics of the region:

A Rich and Distinctive Intellectual Tradition

The Asian region is both the sight of some of world's greatest civilizations that have in past times added immensely to the world's stock of knowledge and of some of the world's most primitive peoples. India has given birth to the great religions and philosophies of Hinduism and Buddhism that include profound insights into the nature of the cosmos, and China is the home of the Confucian political and social philosophy as well as an extraordinary tradition of scientific and technological discovery that superceded the accomplishments of the West at least through the sixteenth century (Needham 1956).

The strong intellectual traditions of these two civilizations provide an important part of the base for contemporary developments. As Shigeru Nakayama (1984) observes, Asia in these early times developed a distinct mode of inquiry, the

documentary tradition, which stands in sharp contrast to the Western rhetorical tradition. The documentary tradition trains the mind to build a strong foundation in basic principles, to carefully assemble all of the relevant information, and to take small first steps in discovery as the foundation for a later stage of boldness. The subsequent exposure to Western modes of inquiry complemented the Asian documentary tradition.

Colonialism Stunted the Development of Educational Development and Knowledge Production

Whereas major civilizations and large societies prevailed in India and China, in other parts of the Asian region, notably Oceania and to a lesser degree in the areas now known as the Philippines and Indonesia, human settlement was sparse, social organization simpler, and the practices of writing and recording very limited. For example, the major empires of Indonesia and mainland Southeast Asia largely borrowed their social and political theories from the cultures of India and China.

The cultural and scientific development of much of the Asian region was punctuated by the arrival of Western colonizers and settlers who set about introducing a new layer of externally oriented institutions on old societies. The primary focus of the Western invaders was on the exploitation of agriculture—silk from China, tea from India, and spices from Polynesia and Micronesia.

In order to advance these extractive goals, the colonizers and pioneers set up minimal educational systems leading in most cases to a handful of higher educational institutions focused primarily on law and the humanities, fields believed appropriate for the development of civil servants. In some locations, fledgling institutes for the study of agriculture and the biosphere were also begun—e.g., raffles initiated the Botanical Gardens of Bogor—but in general knowledge production was not given much consideration.

Asian States Treasure Their Autonomy

With the conclusion of World War II, the colonial powers began to depart from the Asian region and there ensued a period of political consolidation. The Maoist victory in China was the first step with the Kuomintang government exiting to Taiwan. From the early 1950s, nationalist guerillas in Indo-China began to mount their struggle against the French and later against the Americans.

The process of state formation led to the emergence of societies that varied widely in terms of ethnic-cultural diversity. For example, India and Indonesia both include many religious and national ethnic groups, whereas Japan and Korea are more homogeneous. In between are nations such as Thailand and Malaysia that

favor one group by stressing the cultural assimilation of their minority groups. Occasionally the cultural differences within particular Asian nations become a source of conflict as in the recent protest of the Muslim minority in Southern Thailand. When domestic tensions appear in an Asian nation, most Asian nations view this as an internal matter and restrict their criticism. Myanmar's neighbors have tolerated its repressive system for decades without exerting notable pressure for reform.

During the late 1950s and early 1960s, tensions flared between Indonesia and its neighbors, and Malaysia also experienced a communist incursion. Thus, the region has experienced considerable tension and periodic conflict. As most of the Asian states have, in relatively recent times, had to defend their boundaries against outside incursions, they are wary of foreign penetration.

This wariness about foreign political penetration extends to Asian views on foreign economic penetration. Most of the states of the region have a history of setting up barriers to unwanted penetration of their economies by foreign investment or imports. While South Korea accepted large loans from the World Bank in the early decades of its development, it later placed high priority on closing these loans out and observing clear limits on foreign indebtedness (Stallings 1990). China until recently did not accept World Bank loans or foreign investment; while China's policy has seemingly radically changed over the past decade, it is nevertheless the case that Chinese firms usually maintain a controlling interest in partnerships that involve foreign investment. Looking across the Asian landscape, perhaps only Indonesia has allowed itself to be seriously overexposed by foreign investment.

Asian States Place a High Priority on Economic and Social Development

Partly as a result of the postcolonial history of political struggle, many of the Asian nations emerged with strong states that were accustomed to making the major decisions on the future directions for national development. Some observers refer to the Asian pattern of politico-economic organization as the Development State (Johnson 1982), implying strong leaders, a single party, a high commitment to economic development, and a minimal commitment to democracy. While it cannot be said that the structure of the Asia Development State provides the explanation, it nevertheless is noteworthy that several of the Asian countries have been exceptionally successful in promoting economic development with equity. A World Bank study (1992) highlighted the success of Korea, Taiwan, Singapore, and Hong Kong referring to these as "miracle" economies. The study also suggested that China, Indonesia, Thailand, and Malaysia were near miracles. Since that time, Vietnam has begun to show promise, as have parts of India.

Overtime, several of the Asian states have become more politically inclusive, though usually within a framework of firm political leadership focused on

economic development. Increasingly, these states have beamed in on knowledge production as an important key towards furthering national development. Of course, the differences in context outlined above have influenced the respective approaches to knowledge production.

Asian States View Human Resources as the Foundation of Development

Most Asian states recognize the importance of a well-educated population for the realization of development goals and thus stress universal basic education of high quality with considerable opportunities for further education up through graduate studies. In most Asian school curriculums, science and mathematics are featured from the earliest grades, and as demonstrated repeatedly in international studies of academic achievement, Asian young people do exceptionally well; for example, in the Third International Mathematics and Science Achievement Survey, the average achievement scores of young people from Singapore, Korea, Japan, Hong Kong, and China were ranked at the very top among some 40 countries (IEA in NSB 2004, pp. 1–13). Similarly, Korean, Hong Kong, and Japanese youth were at the top in the 2009 PISA surveys of learning in reading and math (OECD 2010). Science and math are featured in the secondary and tertiary levels of Asian education with the result that China, India, and Japan graduate a larger number of first-degree holders in science and engineering than does the United States or Russia, not to speak of the Western European countries. The strong foundation in human resources means that the Asian research and development enterprises have a substantial reserve of candidates when they seek to staff new entities.

Asian States Vary in Their Development Priorities

Virtually all of the Asian nations place a high priority on self-sufficiency and thus have, at least in the past, placed much emphasis on improving the quality and efficiency of their agricultural production. Several nations continue to emphasize agricultural exports as a major component of their national revenues. However, many Asian states have high population densities and labor costs which strain their potential for further gains in agricultural productivity, and thus they have elected to emphasize manufacturing and the services as current and future areas of economic growth. With the stress on manufacturing and service, each nation has choices concerning particular industries to emphasize and whether the focus should be on world-class cutting-edge products or the more efficient production of familiar products. The respective choices have clear implications for national science and technology policies (Low et al. 1999).

Defense-Related Knowledge Production Is Not a Priority

While the region has a history of conflict, especially over the past two decades the level of conflict has considerably subsided. Regional tranquility has been realized, at least in part, because of regional dialogues fostered by organizations such as ASEAN, APEC, and ESCAFE. Thanks to regional tranquility, most Asian regions devote relatively modest amounts of their national budgets to defense budgets as well as to defense-related research and development. Whereas in the USA and Western Europe, upwards of one-third of a nation's R&D expenditures might focus on defense, the typical proportion in the Asian region is one-tenth, leaving much greater scope for commercial and academic R&D.

The Scale of Asian Nations Varies

Asian nations vary immensely in geographic scale from massive China and Australia on the one hand to tiny Singapore on the other. Of even greater importance for the execution of research and development programs is the wide difference in demographic scale: Without a critical density of researchers in a particular area of inquiry, it is difficult for a nation, on its own, to foster major discoveries in research and development. To a certain degree, a high allocation of resources can compensate for small scale as is demonstrated by Finland and Switzerland and in the Asian region possibly by Singapore. Also, small scale leads a nation to buy brains (expatriate researchers) and ideas (technology licensing) alongside energetic efforts at homegrown science and technology. Even so, large nations such as China and India have a natural advantage, as the sheer human scale of their research and development enterprise enhances the probability of identifying native talent and nurturing homegrown discoveries.

New Focus on Knowledge Creation

For most of the past century, knowledge production was centered in the West, and other regions of the world including the Asian region sought to draw on Western knowledge to catch up. Into the 1970s, this strategy was clearly evident even in the case of Japan, the region's most technologically advanced society. For example, Japan's early successes in textiles, steel, automobiles, and electrical and electronic goods were largely based on the application and refinement of imported technology.

However, from at least the late 1960s, Japanese policymakers came to recognize that Japan was pressing on the upper edge of imported technology utilization and thus that the future prospect for low-cost borrowing technology was bleak. Thus, it

would be necessary for Japan to place increasing emphasis on the autonomous development of technology. Just as Japan began to make this policy shift, over the next two decades, other Asian nations came to the same conclusion: Korea and Taiwan in the mid-1980s and Singapore, Malaysia, and Australia in the early 1990s. An example is Malaysia's vision 20–20 (Sarji 1993) which, among other innovative concepts, proposes the development of a new information highway and to that end a range of new programs aimed at fostering a homegrown creation of a wide range of information technologies.

The new focus on knowledge creation is accompanied by increased funding for research and development. Whereas in the 1960s, Japan was devoting only about 1 % of its GDP to R&D, this was doubled by the early 1980s and has continued to rise since then. In 2007, it was 3.4 % or 4th in the world. In that same year, the average expenditure for R&D of EU countries was 2.3 %, and that in the USA was 2.7 %. Among other countries in the Asian region, Korea's expenditure for R&D had risen to 3.5 %, Singapore to 2.6 %, Taiwan to 2.6 % (only civilian R&D), and Australia to 2.0 %. Several other countries in the region devote upwards of 1 % to research and development (NSB 2010, pp. 4–34).

The Purpose of Science and Technology

From the earliest days of Japan's Meiji era (1868–1912), increased knowledge of Western science was seen as a means towards increasing national strength in the face of possible Western domination. Japan, avoiding colonization, rapidly became a significant world power and increasingly an aggressive one taking on China in 1894 and tsarist Russia in 1904. While Japan assumed a minor role in World War I, in the ensuing years, it declared a Greater East Asia Prosperity Sphere and proceeded to conquer much of East and Southeast Asia. Science including academic science was mobilized for Japan's militaristic expansion, but this aggressive push was ultimately concluded by a science-based response: the horrific bombings of Hiroshima and Nagasaki leading to Japan's unconditional surrender. With Japan's defeat, the Japanese people concluded and wrote into their new constitution that they wished to have no more involvement in war. And Japan's academic establishment expressed its shame that it had contributed to the wartime effort. Hence, for the future Japan declared that science should be for peace and not war, for the people and not the leaders.

Out of this sober reflection, Japan began to envision a new role for science involving not only the economic prosperity of the nation but also the improvement of the natural and social environment (Nakayama 1991). This vision has been reflected in the subsequent development of Japanese science and technology policy. Official descriptions of Japanese science and technology policy are notable for their humanistic emphasis on such topics as environmental preservation, improving the

quality of urban life, and creating a more comfortable setting for older people.[2] The allocations of government S&T resources by purpose in Japan place far less emphasis on defense-oriented science than does the USA or the UK and far more on other areas such as energy, industrial applications, planning of land use, and university research (the funds in the general university funds and nonoriented research categories). The allocations in S. Korea, the only other Asian nation for which comparable data is available, tend to follow the same pattern as Japan—relatively small allocations on defense, more on civilian priorities (including agriculture and land use) and university research (Hicks 2001).

A Distinctive Strategy or Strategies for Knowledge Creation

While science and technology have played a major role in the development of nations for several centuries, it is only after World War II that the major industrial nations, led by the United States, began to develop coherent science and technology policies. Vannevar Bush, then President of MIT and science advisor to the President of the United States, observed that

> . . ...there is a perverse law governing research: Under the pressure for immediate results, and unless deliberate policies are set up to guard against this, *applied research inevitably drives out pure*.

The moral is clear: It is pure research which deserves and requires special protection and specially assured support (Bush 1945, p. 83).

Bush and his colleagues depicted a *linear model of knowledge production* with basic research as the foundation generating fundamental breakthroughs that would foster applications that could then be developed into new products and services. One outcome in the USA was the establishment of the National Science Foundation and the National Institute of Health as federal government sources for basic research funds that distribute these funds to capable scientists on the basis of peer-reviewed evaluations of their research proposals. In the years that were to follow, basic science was strengthened in the USA, especially in the top strata of higher educational institutions that came to be known as research universities. Additionally, the US federal government came to play a prominent role in the support of applied and development research in laboratories of private industrial firms. Thus, the science and technology model pioneered by the USA stressed strong support for basic research and a substantial role for the federal government in the support of both basic and applied research.

[2] As noted below, public funding of research is substantial in all countries tending to average about one-third of all funding, but the government's proportion of funding is largest in the USA primarily due to the US government's substantial commitments for defense-related research. Government's share is somewhat less in the Asian region.

While the US model was able to leapfrog American science into a leadership position in basic science in the postwar period, few other governments had an equivalent level of resources for the actual funding of research. Rather in other settings, the government decided to limit its role to serving primarily as a facilitator of research through providing information and offering tax and tariff incentives while looking to other sources, notably the private sector for funding. This pattern was particularly noticeable in Japan and since then in many of the other Asian nations. For example, whereas in the USA in 1985 nearly 40 % of all research and development was supported by the federal government, the Japanese government only funded 22 % of all Japanese R&D. Over the last two decades, there has been a modest convergence with the US government's share of funding decreasing to 35 % and the Japanese government's share increasing to 25 %. But the basic contrast persists. The Japanese pattern of a greater reliance on commercially funded research is also found in Korea, Taiwan, and Singapore.

The Asian emphasis on applied research and a larger role for the commercial sector in research and development implies a distinctive approach, sometimes referred to as the *interactive model of knowledge production*. In the interactive model, each sector has a substantial role in research and development, and, moreover, each sector devotes at least some effort to all phases of the R&D continuum from basic to developmental research. Also, whereas the linear model assumes that basic research is the source of new research directions, in the interactive model it is acknowledged that important new research directions may be suggested as researchers discover shortcomings in their applied and developmental research. Rather than a unilinear conception of the R&D endeavor, the interactive model makes no assumptions about directionality (Kimura 1995).

The Role of the Universities

Depending on the model, the role of the university differs. In the linear model, the university has a prominent role in basic research and human resource development. Because of the university's considerable funding for basic research, it is able to employ a large army of research assistants to facilitate the research mission. Because of the generous research funding, the university is able to recruit this assistance from around the world and thus is not so dependent on its own efforts for human resource development (Postiglione 1997).

In the interactive model that tends to characterize the approach of several Asian settings, the university shares the responsibility for basic research with the other sectors and thus has relatively less funds to support research and recruit research assistants. However, the universities, especially those in the public sector, have a critical role in the development of human resources for the other sectors. The overall levels of access to higher education are higher than in other regions of the world (NSB 2004, pp. 1–46), and for those young people pursuing higher education, the 1st and 2nd degree training is heavily skewed to science and engineering. For

example, in Japan and Korea's public sector, approximately 40 % of all first degrees are in science and engineering. In China, over 50 % are in these fields. By virtue of this S&E emphasis, the university systems of Japan, Korea, and Taiwan each graduate a larger proportion of their college age cohort in the natural sciences and engineering than does the USA (NSB, pp. 2–39). In terms of the total number of first-degree S&E graduates, China, Japan, and India produce about the same number annually as does the USA with Korea not far behind.

Recent Efforts to Stimulate Creative Research in the Academy and Elsewhere

In the interactive model, universities share many research functions with other sectors. But especially in recent years, steps have been taken to improve the research environment, especially at the universities:

- *Increased funding for research, including basic research.* As indicated above, most of the Asian nations are steadily increasing the resources they are devoting to research and development. Parallel with the overall increase in R&D funds, increasing resources are being channeled to the academic sector.
- *Science cities with universities as the core.* In the mid-1970s following on Russian and American models, Japan launched Tsukuba Science City as its first science city. The new and well-funded Tsukuba University was placed in the center of the city, and many government laboratories were moved to this new site. Tax incentives were set up to encourage industrial firms to locate there. Similar developments followed with the relocation of Osaka University and the upgrading of Tohoku University and Kyushu University. Taiwan has established several new science cities, and Singapore has established a Science Park adjacent to the National University of Singapore.
- *Greater autonomy for the universities.* In the imitation and innovation phases of higher educational development, leading public universities in the Asian regions tended to be outposts of national policy and subject to extensive regulation by national authorities. With the new push for creativity, the pervasive public regulations including line-item budgets have come to be perceived as obstacles. To erase the bureaucratic feel of these universities, the Japanese, Thai, and Indonesian governments have sought to make universities autonomous statutory authorities with "full" authority over their resources and operations. These initiatives are being carefully followed by other nations in the region.
- *Ranking universities and/or ranking academic units.* With the shift to greater university autonomy, Asian governments have begun the search for new criteria on which to base public allocations to universities. One possibility is to rank universities and to distribute funds through block grants adjusted by ranking (and other criteria such as total number of students or faculty). China several years ago spoke of focusing central funding on the top 100 universities. In 2001,

Minister Aoyama of Japan spoke of focusing funding on the top 25 Japanese universities. In fact, no government has actually implemented these proposals. However, a related principle has been to rank the component units of the many universities in a system and use these unit rankings for preferential funding. Over the past several years, Japan has experimented along these lines with its "Centers of Excellence" program.

- *Peer review of research proposals*. In the state-regulated university, it was customary to allocate research funds on an equal basis to each academic unit regardless of their productivity or potential. A "new" approach is to require those units and individual professors who desire research funds to prepare a research proposal for anonymous review by a committee of peers. This approach is presumed to elicit more careful development of research programs and to channel funds to those researchers most likely to realize innovative results.
- *Increased support of large- and medium-scale projects of longer duration*. When research funds were limited, there was a tendency to annually distribute small allocations across the university system. As units could expect to get the same modest amount year after year, this approach did facilitate multiyear research agendas. In keeping with the modest funding, these agendas tended to focus on small problems. But in recent years, R&D policymakers have come to understand that big research breakthroughs require big efforts. Thus, in several of the Asian systems, new funding opportunities are emerging which encourage large ambitious multiyear projects. In some instances, these are awarded to individuals or groups who work in the conventional academic units. Parallel to these conventional awards, many new and generously funded research institutes are also being established.
- *Trial periods for prospective researchers*. In many Asian systems, universities were inclined to recruit new staff from among the top students of their recent graduating classes and in keeping with the spirit of "civil service" appointments to offer these new employees the equivalent of lifetime tenure. While this personnel policy guaranteed the loyalty of new recruits, it did not always result in the best choices. As many candles burned out as continued to shine brightly. Recognizing the weight of deadwood, many systems (or particular universities within the respective systems) have introduced a trial period for initial appointments.
- *Efforts to reclaim drained brains*. Asian universities "lose" many graduates to the research and development entities of the USA and Western Europe (NSB 2010, pp. 3–52). The quality of first-degree training in Asian universities, especially in the sciences and engineering at the top-ranked universities, is quite high. Thus, graduates from these institutions tend to be successful when they apply for graduate education in the West. And many who complete graduate education in the West tend to stay on for postdoctoral and other employment opportunities. China and India are numerically the largest suppliers of foreign talent to the knowledge industries of the West, though not an inconsiderable number of young knowledge workers migrate from other Asian countries such as Japan, Korea, Malaysia, and Singapore. But in recent years as the research

conditions in the Asian region improve, this trend may be changing. There is evidence that more Asian students are electing to stay home for graduate studies and postdoctoral opportunities. After two decades of steady growth in the number of Chinese young people seeking overseas graduate education, their numbers appear to be leveling off since 2001.

- *Opening the doors to foreign talent*. Additionally, Asian universities are experiencing greater success in recruiting foreign students for their graduate school and postgraduate fellowship opportunities. For example, in Japan in 2001, foreign students make up 8 % of all Japanese graduate student enrollments in engineering, 10 % in the natural sciences, and 20 % in the social sciences (NSB 2004, pp. 2–38). Asian universities, especially those in the smaller countries that have limited indigenous pools of knowledge workers, are increasing their efforts to attract established professionals from other countries. Most Japanese and Korean universities now have numerous positions available for overseas visiting professors and researchers, and in Singapore higher education institutions advertise internationally for virtually every academic opening. According to one study, Japan in 1999 attracted 240,936 high-skill immigrants, an increase of 75 % over the 1992 figure (Fuess 2001). Singapore has been able to attract many outstanding researchers to its laboratories including recently a noted biochemist who is a Nobel laureate.

Asian Science and Technology Is Gaining International Prominence

The Asian region's new commitment to research and development is beginning to show results. The most obvious indications are in the application of science and technology for commercial purposes:

- Asian countries, most notably Japan and Korea, have steadily increased their numbers of domestic patents over the past two decades as well as their applications for patents in foreign markets.
- Asian countries, especially Japan, Korea, and China, have shifted substantial proportions of their industrial production towards high-tech products. Currently, Korea reports a higher proportion of its industrial production is in high-tech areas than is the case for the USA.
- Asian nations are also beginning to increase their share of high-tech production in the service industries, a market formally monopolized by the USA.
- Finally, over the past two decades, China and the Asia 9 (Korea, Malaysia, Singapore, Taiwan, India, Indonesia, the Philippines, Thailand, and Vietnam) have been expanding their share of the global market for high-tech products. This combination of countries was supplying less than 8 % of global high-technology exports in 1980 compared to 30 % for the USA. By 2008, China

and Asia 9's share had increased to 48 % and the USA share had dropped to 14 %. During this period, Japan's share dropped from 25 to 8 %.

Asian knowledge products, it is often said, are based on foreign technology, but as noted above Asia in recent years has an impressive record in the indigenous development of patents. Japan currently generates twice as much in revenue from the sale of its patents to foreign entities as it spends on the acquisition of foreign technology, and the balance sheets for Korea and Taiwan are about equal.

Related to the emerging strength of the Asian region in knowledge products is the parallel emergence of a more active and creative academy. One illustration of this new creativity is the increasing prominence of articles written by Asian scholars in internationally refereed journals. Focusing on articles in the science and engineering fields, both Japan and Other Asian nations have experienced rapid gains in their number of referred articles over the past 20 years, a doubling in the case of Japan and a quadrupling in the case of other Asian nations. By way of comparison, the volume of articles written by US researchers has been stable over this 20-year period, and the volume written by Western European scholars has increased about 65 %. As a result, in 2007, Japanese scholars alone were publishing 7 % of the world's total, China (including Hong Kong) 7.5 %, and the rest of Asia an additional 7.3 %. While the Asian region total of 22 % is less than the US share of 27.7 %, the Asian proportion has steadily gained in recent years and shows every sign of maintaining that trajectory. While growth in Japan and Korea may slow down, other countries in the region are likely to surge forward.

A noticeable trend in recent scientific publications is the tendency for articles to have multiple authors reflecting collaboration in research projects. Much of the collaboration is between researchers in the same country, but in 2001 the percentage of article coauthored by researchers in two or more countries had risen to 33 % (NSB 2004, pp. 5–47). One factor influencing cross-national coauthorship is the location of graduate study; young researchers who have studied in another country are likely to coauthor with their former professors. Given the numerical prominence of the USA in graduate education, nearly half of the world's coauthored articles involve a US author. However, over the period of 1988–2001, the number of coauthored articles with an Asian author steadily increased. Of special interest is an apparent trend for an increasing proportion of cross-nationally coauthored articles with an Asian partner to involve another Asian partner, while the proportion with a Western coauthor has remained stable (NSB 2004, pp. 5–48). This implies that a new Asian science community may be emerging. It might be noted that bodies such as UNESCO and ASEAN are devoting substantial resources to foster this very outcome.

An indication of the relative prominence of academic research is the frequency that it is cited by other scholars, including citations by scholars in other countries. For the advanced countries, the relative frequency of citation is roughly in line with the relative frequency of publishing articles. Citations for US-authored articles (first author from the USA) made up 43.6 % of all citations in 2001 followed by UK articles with 8.2 % and Japanese articles with 7.3 %. Relative to the above science

and engineering giants, articles authored by researchers in other Asian countries were not numerous nor frequently cited. However, their likelihood of being cited has sharply increased between 1992 and 2001: "citation of literature from East Asian authors in China, Singapore, South Korea, and Taiwan more than quadrupled in volume during this period, with the collective share of these countries rising from 0.7 % of the world's cited literature in 1992 to 2.1 % in 2001" (NSB 2004, pp. 5–49).

Clearly Asian research is becoming progressively more prominent in the international arena. If one were to think back to the time of Sputnik or some other distant scientific splash, no one would have thought of Asian research as capable of making similar breakthroughs. Nor would most researchers outside of particular Asian countries know much about Asian universities and research centers. In contrast, Asia is increasingly in the spotlight. China routinely sends up rockets to launch satellites for commercial and academic purposes, having a reliability record that is superior to that of most Western nations. Japan is viewed as the center of research on earthquakes and volcanoes and also is highly regarded for its work in biotechnology. Scientists in Korea recently announced pioneering work in the cloning of human beings that shocked the world. Asian research, while still more modest in scale than Western research, is hot.

At the turn of the twenty-first century, a Chinese research institution sought to rank the universities of the world using as its major ranking criterion the relative contribution in terms of absolute volume of articles of each university to the world's corpus of scientific and engineering research (Shanghai Jiao Tong University Institute of Higher Education (SJTUIHE) (2003). Not surprisingly, given the prominence of Western science as reported above, the top universities in the world were in the West. But approximately 15 % of the institutions identified in this survey were from the Asian region including ten in Japan, two in Korea, two in China, two in Australia, and one in Korea. If the focus were on particular fields, in all likelihood the Asian regions would fare better. Engineering is prominently emphasized in many Asian universities, and in the sciences chemistry receives relatively more emphasis and physics and biology less emphasis. Similarly in that the science departments of many Asian-Pacific universities have only a few professors (whereas the engineering departments have many) if the methodology divided the absolute number of published articles by the number of scientists, the faculties of several Asian universities might be ranked at the top. For example, according to one study, the University of Tokyo's department of chemistry is the most productive chemistry department in the world.

Obstacles to Academic Knowledge Production

While we have suggested thus far that Asian knowledge production has much promise and that academic research is an important component of this promise, it would be remise to ignore the obstacles to realizing this promise.

Practical Bias

Globalization is pushing economies around the world to place increasing emphasis on the commercialization of knowledge. Asian higher education systems from their inception placed an exceptional emphasis on the practical fields of agriculture, engineering, and medicine. At the same time, influenced by the example of Germany science, many researchers in Asian higher educational institutions urged a greater focus on seeking scientific breakthroughs; however, they were a minority in the policy circles. The legacy of a practical focus has made it difficult, despite the recent recognition of the need for greater creativity, to shift resources towards increased support for fundamental research. In a sense, Asian science was "globalized" long before this concept became prominent in international discourse.

Difficult to Change Academic Field Coverage of Academic Sector

The academic structure in the more established Asian universities is likely to have been established several decades in the past taking into account the hot research fields of that era. Over time, science and technology has shifted its focus: Recent examples include the explosion of the information sciences and the biological sciences as well as biotechnology, but given past commitments to the traditional sciences of physics and chemistry and a reluctance to simply add on new academic appointments before closing down old ones, many Asian universities have difficulty in adjusting to the times. They may be overstaffed in the traditional fields and shorthanded in the new ones. For example, in Japan much of the interesting biotechnology research is carried out in the faculties of agriculture rather than in faculties of engineering or the departments of biology.

Legalism

Most Asian academic systems have their origins in state-sponsored higher educational systems. These systems were initially under the tight control of a central Ministry of Education that imposed rules on academic life not that distinct from those in the bureaucratic sector. Thus, for example, professors even today are expected to sign in daily to indicate that they are on the job and in at least one system are expected to be on sight at their desks from 9 in the morning to 5 in the afternoon. Annual vacation days are specified and monitored, as are trips to attend academic conferences and both local and overseas research sites; professors who fail to conform to these regulations may be penalized. Other regulations place unusual restrictions on the use of available resources. For example, in Japan it is

difficult to use these funds to pay for salaries or certain types of equipment. These legalistic restrictions are always under review and in many instances are becoming liberalized. Even so, legalism continues to frustrate many of the good intentions of academic researchers.

Difficulty in Building Relations Between Academia and the Private Sector

The original purpose of many Asian universities was to train human resources for the modern sector, not to assist in the public-private effort of knowledge production for development. Due to the public status of many universities, regulations were established to protect the institutions against undue influence from the outside. Thus, grants from private organizations were to be monitored to insure they did not induce favoritism or corruption by the professor public servants. Moreover, in the national tax laws, these grants were to be considered as a routine expense of the private firm rather than as a tax-deductible act of charity, hardly an incentive for generous private sector support of uncertain academic research. When professors considered visiting private sector laboratories to carry out aspects of their research agenda, they also encountered obstacles. Formally, they were expected to report these excursions and limit them to a certain number of days each year. Additionally strict regulations were established in relation to any "personal" benefit they might receive such as honoraria or travel funds. Barriers of this kind have not made it easy for universities to cooperate with the corporate sector in knowledge production. Of course, these barriers are always under review and have, in many instances, been liberalized in recent years.

Shortage of Qualified Researchers

In that many universities are public institutions, most of the appointments to university posts are guided by civil service regulations or special adaptations of those regulations designed for "independent" universities. But the adaptations tend to be minor and often place serious obstacles in the way of professors who seek to hire research assistants or other support staff for their work. Often for staff to be hired, a new position has to be created, and long-term resource streams have to be specified, but as research funds are time restricted, the fulfillment of these conditions is difficult. Thus, the Asian university researcher is likely to be short-handed in terms of support staff for their research projects.

Obstacles of these kinds can be found in any academic system, and as their effects come to be spotlighted, steps can be taken to remove them. It is certainly the case that many of these obstacles have been reduced in recent years. Nevertheless, they still seem to loom larger in the lives of Asian academics than is the case in other parts of the world.

Conclusion

Regardless of where one comes out in the numbers game, there is little question that the Asian region is steadily expanding its presence in the global platform for knowledge production. The region for nearly three decades has been acknowledged as a leader in knowledge utilization, especially the manufacture of high-quality high-technology products. Over the last decade or so, the quality of basic research carried out in the region has also gained recognition. As one illustration, over the last decade ten Nobel prizes have been awarded to Japanese scientists. Of equal note, two have been awarded to Japanese novelists.

The academy plays an important role in Asian knowledge production but so do the other sectors of society. A relatively greater proportion of Asian research and development funds comes from the corporate sector than is the case in the West, and a smaller proportion comes from government. We have suggested that the more even distribution of funding across sectors in the Asian region suggests a distinctive interaction model of knowledge production. Nakayama adds that civil society might be added as another component of the Asian model along with the universities, the corporate world, and government; he notes, for example, that civic groups have provided the leadership in promoting environmental research and putting brakes on defense-related research. In a sense, the civic groups are encouraging a humanistic dimension in Asian knowledge production that may be more muted in the West.

While many generalizations about Asian knowledge production have been advanced in this paper, it is important to stress that each of the areas included in this study (Japan, Korea, China, Singapore, Malaysia, the Philippines, Indonesia, Oceania, and India) is unique. As outlined at the beginning, they have different contexts, traditions, and resources. It does appear that there is a sentiment in the region to enhance intra-regional collaboration and that there has been much progress in this regard. Thus, it is possible to point to a common direction in the strategies for academic sector knowledge production in the region. At the same time, there are distinctive national visions and achievements.

The role of the universities in increasing the prominence of Asian knowledge production has different explanations by country. In the more established university systems such as Japan, Korea, and Taiwan, the new creativity seems to be a function of increased resources and their more effective distribution, as the actual size of the academy has been relatively stable. In contrast in other settings, notably China, Singapore, and Australia, there has been a combination of increasing scale and increasing resources.

An interesting line of speculation would be to propose that the different academic systems of the Asian region might develop distinctive directions of excellence in the decades ahead. Japan appears to have strength across the board. China is notable for its achievements in space and in computer-related areas. The Philippines is notable for its training of doctors and other health personnel and with an infusion of increased resources might show promise in the health-related

Table 3.1 Distribution of government R&D budget appropriations in selected countries, by socioeconomic objective: 2000 or 2001

Socioeconomic objective	USA −2001	USA −2001	Germany −2001	France −2000	UK −2000	Russian Federation −2001	South Korea −2001
Total (millions of US dollars)	86,756	23,153	17,946	14,605	10,030	5,889	6,195
Exploration and exploitation of the Earth	1.2	1.9	1.8	0.8	1.3	1.5	1.5
Infrastructure and general planning of land use	2.0	*4.4*	1.7	0.6	1.2	1.2	*4.2*
Control and care of the environment	0.7	0.8	3.1	2.9	1.6	1.6	*4.5*
Protection and improvement of human health	*24.8*	3.9	4.0	5.8	*14.6*	2.0	7.1
Production, distribution, and rational use of energy	1.5	*17.4*	3.4	3.9	0.5	2.0	4.7
Agricultural production and technology	2.5	3.5	2.4	2.1	4.1	*9.9*	*8.4*
Industrial production and technology	0.5	7.5	12.1	6.3	1.7	11.4	*29.5*
Social structures and relationships	0.9	0.9	4.5	0.8	4.1	2.0	2.6
Exploration and exploitation of space	7.1	6.7	4.7	*9.8*	2.2	*10.1*	3.2
Research financed from GUF[a]	NA	*34.8*	*39.0*	21.6	19.6	NA	NA
Nonoriented research	6.3	13.8	16.1	19.8	12.1	14.0	*18.5*
Other civil research	0.0	0.0	0.1	2.3	0.3	0.9	0.0
Defense	*52.7*	4.3	7.1	23.2	*36.6*	*43.5*	15.8

Source: National Science Board. *Science & Engineering Indicators – 2004* from OECD, unpublished tabulations (Paris, 2003); and OECD, *Main Science and Technology Indicators* (Paris, 2002)

Notes: Conversions of foreign currencies to US dollars are calculated with Organization for Economic Co-operation and Development (OECD) purchasing power parity exchange rates. Percents may not sum to 100 because of rounding. US data are based on budget authority. Because of GUF and slight differences in accounting practices, the distribution of government budgets among socioeconomic objectives may not completely reflect actual distribution of government-funded research in particular objectives. Japanese data are based on science and technology budget data, which include items other than R&D. Such items are a small proportion of the budget; therefore, data may still be used as an approximate indicator of relative government emphasis on R&D by objective

GUF general university funds, *NA* not available separately

[a]USA, Russian Federation, and Korea do not have a category equivalent to GUF

sciences. Agriculture and horticulture are strong throughout the region and lend support to future breakthroughs in biotechnology. This is a region of great academic promise, and it is destined to claim an increasingly central position on the world's stage (Table 3.1).

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Chapter 4
The Institutional Prospects of Cross-Border Higher Education for East Asian Regional Integration: An Analysis of the JICA Survey of Leading Universities in East Asia

Kazuo Kuroda, Takako Yuki, and Kyuwon Kang

Introduction

The impact of globalization and internationalization is expected to rise in prominence on the agendas of national- and institutional-level systems of higher education. Although the concepts of globalization and internationalization refer to two distinct phenomena, they are often used interchangeably. While Altbach (2006, p. 123) defines globalization as "the broad economic, technological and scientific trends that directly affect higher education and are largely inevitable in the contemporary world," he argues that internationalization is more related to specific policies and programs by governments, academic systems, and institutions that deal with globalization. This Altbach's definition of internationalization is in agreement with the definitions of Knight (2004, p. 11), which suggest that "internationalization at the national, sector, or institutional level is defined as the process of integrating an international, intercultural or global dimension into the purpose, functions and delivery of post-secondary education." By dividing internationalization into layers, Knight refers to "top-down" effects that national and sector levels force on the internationalization process by implementing policies and strategies and "bottom-up" effects that institutions enact on the internationalization process; both effects reflect global dimensions. Cross-border higher education can be motivated and initiated by either bottom-up or top-down mechanisms. For example, bottom-up collaborations are initiated by individual universities that build partnerships with foreign universities to open up opportunities for student and faculty exchanges in

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the service of improving academic quality. In contrast, top-down mechanisms are often initiated by national governments that push for the international collaboration of universities with the governments' economic and political incentives (Postiglione and Chapman 2010, p. 378). To make internationalization active, both top-down and bottom-up effects are required.

In the context of globalization and internationalization, the trend of regionalization is emerging in many parts of the world (not only in Europe but also in East Asia), and how and where the concept of regionalization fits into this context is another issue. The concepts of the globalization and regionalization of higher education share some similar aspects in that their effects cannot be controlled by any one actor or set of actors; rather, they are the de facto unexpected outcome of worldwide transformation. The internationalization process of higher education in policies and actions at the national, sector, and institutional levels is responding to the trends of globalization and regionalization. Therefore, when examining the progress of East Asian regionalization with regard to higher education, it is important to review internationalization processes from the viewpoint of both governments and institutions (e.g., universities).

Examining an overview of the current development and transformation of East Asian higher education with the perspectives of the institutional and governmental-led internationalization process, the "East Asianization of East Asia" that is prevalent in the regional economy also seems to be confirmed with regard to the cross-border activities of higher education. Intra-regional student and faculty mobility and university partnership-based cross-border activities are rapidly growing within the region and have shown the de facto integration of higher education in this region (Kuroda and Passarelli 2009). Policy discussions on the East Asian regional integration of higher education are also progressing and becoming active. Governments, higher educational institutions, international organizations, and international university associations are all discussing the construction of a new East Asian collaborative higher education framework as well as fostering the cross-border activities within East Asia. To make such policy processes more effective, it is important for policymakers to know the current status and perceptions of institutions on internationalization or regionalization. However, other than the International Association of Universities (IAU) studies by United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2003 and 2005, few analyses are available to systematically describe the perceptions of Asian higher educational institutions on cross-border activities in the region.

Therefore, this chapter aims to analyze the current status and views of leading East Asian universities on their cross-border (or international) activities, using data from the original survey conducted under the research project of the Japan International Cooperation Agency Research Institute (JICA-RI) titled, "Analysis of Cross-border Higher Education for Regional Integration and Labor Market in East Asia." It will examine universities' responses to the activeness of their cross-border activities, the significance of their expected outcomes, and the preferences of their region of partners; then, we will try to project the directions of a future East Asian regional higher education framework.

The rest of the chapter is organized as follows. The next section examines to what extent East Asian integration has progressed by discussing ongoing economic East Asian integration and exploring the current status of East Asian higher education integration. With an objective of suggesting the future directions for the regional higher education framework in East Asia, the section ends with a list of research questions. Section "Prior research" lays out the prior relevant empirical research with findings applicable to the research questions of this chapter. Section "Methods and data source" discusses the method of the research and includes the explanation of criteria for selecting target universities for the survey, as well as the overview of the survey. Section "Findings" presents the findings of the survey, and lastly, section "Discussion and reflections on the findings" discusses the findings and attempts to draw policy implications.

Contexts and Research Questions

East Asian Integration Prospects

Behind the concept of the "East Asian Community" lays a situation where the weight of this region in the world economy is expanding and where, due to the growing interdependence within the region, a relatively more independent economic system that does not rely on the Western economy is forming. With the growing presence of East Asia in the world economy, this region is experiencing a shift from reliance on traditional Western dominance to an intra-regional network. Therefore, the economic interdependence exists with increasing mobility trade, financial flows, services, investment, and capital across the whole region. Watanabe (2004, p. 9) demonstrated "the East Asianization of East Asia" based on an analysis of the amount of trade within the region and concluded that "the most important issue now is whether this de facto economic integration can be transformed into a framework for institutionalized integration."

Examining Asian economic regionalization, the discussions and experiences on the issues of regional integration have already taken a firm rooting within Southeast Asia compared to the other Asian subregions, and it is a more recent phenomenon to discuss Asian regionalization within the scope of East Asia as a whole. For instance, at the Fourth ASEAN Summit in Singapore in 1992, the ASEAN Free Trade Area (AFTA) was established, and ASEAN committed to establishing an ASEAN Community by 2015. Beyond Southeast Asia, ASEAN also became a central forum for discussing East Asian regional cooperation and a long-term prospect for East Asian regional integration since the establishments of the ASEAN + 3 (China, Korea, and Japan) framework in 1997 and the First East Asian Summit (10 ASEAN countries + China, Japan, Korea, Australia, New Zealand, and India) in 2005.

East Asian Higher Education Integration

The regional integration in the area of higher education in Asia is still at an embryonic stage, with a lack of the "awareness about the interconnected of these issues and the overall structure of higher education system within the region" (SEAMEO RIHED 2008, p. 77). However, in terms of an institutional-led mechanism, the de facto "East Asianization of East Asia" movement with regard to higher education systems can be increasingly seen in Asian universities, and there are government-led dialogues occurring for higher education cooperation in Asia.

The de facto "East Asianization of East Asia" movement is observed with the growing presence of East Asian countries as hosts of international students, the growing number of students moving from one part of East Asia to another part of East Asia, and the growing number of interuniversity linkages and cross-border activities within East Asia. According to Kuroda and Passarelli (2009),

> statistical data suggests that the tremendous growth in Asian student mobility is a circular pattern of knowledge flows, propagated through student exchange and made possible through greater collaboration between education systems. This heightened collaboration is one significant factor leading us to claim that a certain degree of de facto integration is observable, despite the lack of political and regulatory framework necessary to claim de jure integration.

Based on the de facto integration of higher education in East Asia, there are also growing policy discussions on the regionalization of higher education in East Asia. In 2005, at the First East Asian Summit in Kuala Lumpur, Malaysia, which served as the beginning of the political discussions directed toward promoting practices and policies for a regional framework in East Asia, the role of higher education was recognized as playing a vital role in political integration. At the Second East Asian Summit in Cebu, Philippines, an agreement was made to promote regional educational cooperation. Prior to the Fourth East Asian Summit, the Meeting on Higher Education of ASEAN+3 countries was held in Phuket, Thailand, in 2009, and its outcomes suggest dramatic changes in the policy environment surrounding educational cooperation in the Asian region. The policy statements in these meetings often acknowledge the meaning of the regional framework of higher education in relation to political and academic dimensions but less in relation to economic dimensions. In contrast, as Lujiten-Lub (2007) suggests on European higher education, economic rationales driving internationalization are seen as being increasingly important because national policies are moving toward more economic-oriented rationales. These rationales are "everything related to the direct (income and net economic effect of foreign students) and long term economic benefits (such as internationally trained graduates and foreign graduates as keys to trade relations, etc.)" (National Agency for Higher Education 1997, p. 213).

When looking at subregions, Southeast Asian countries began discussing educational regionalization in 2003, before the discussion of East Asian regionalization, by constructing the Socio-Cultural Community (which covered education) as the "third pillar" of the ASEAN integration. Furthermore, recent dialogues on the

Asian regionalization of higher education included "exploring the ideas of creating higher education common space in Southeast Asia" at the Southeast Asian Ministers of Education Organization/Regional Centre for Higher Education and Development (SEAMEO/RIHED).

Most recently, the discussion on cross-border higher education in Northeast Asia became active. At the joint press conference by Premier Wen Jiabao of the People's Republic of China, Prime Minister Yukio Hatoyama of Japan, and President Lee Myung-bak of the Republic of Korea following the Second Japan-China-ROK Trilateral Summit Meeting on October 10, 2009, Prime Minister Hatoyama said:

> I also stated that what will be indispensable for trilateral cooperation is exchanges among the youth of the three countries, in particular those among university students. As one aspect of university student exchanges, we should for example actively consider permitting the interchangeability among universities of credits earned. This would naturally require a degree of consistency in the levels of the schools concerned. While I do not consider this something that is possible for all universities, we will be promoting cooperation as qualitative levels are standardized. I proposed that through such cooperation, it would be possible for the various political and psychological hurdles still remaining among our three countries to be transformed and overcome.

In response to the trend of focusing on the collaboration of the three countries in Northeast Asia, the Asian version of European Region Action Scheme for the Mobility of University Students (ERASMUS), the Collective Action for Mobility Program of University Students (CAMPUS ASIA) was introduced. The program had an objective of facilitating student mobility in the three countries with a long-term goal of establishing the foundation of academic exchange in Asia and expanding boundaries by collaborating with the countries in Southeast Asia in the future (KEDI 2009, p. 2).

In East Asia, there are already regional organizations that aim to construct a new regional collaborative education framework. Some organizations are motivated by universities, and others are encouraged by governments for different coverage of countries. These organizations include university associations, quality assurance agencies, and ministry networks. For example, ASEAN University Network (AUN) and University Mobility in Asia and the Pacific (UMAP) are the university associations that foster collaboration among the universities and oversee the entire higher education sector within the region. AUN and UMAP are different in terms of membership affiliation and target region. The membership of AUN is limited to the major universities of the respective countries of ASEAN, whereas the membership of UMAP is relatively more open to the universities in the Asia Pacific region. Additionally, the Asia Pacific Quality Network (APQN), a nongovernmental private international institution, is a network of quality assurance agencies, and it also has an important policymaking function. Within the regional higher education framework in Asia, governments, universities, and evaluation institutions interact in complementary ways with government organizations. Furthermore, as an Asian version of ERASMUS, the Southeast Asian Ministers of Education Organization Regional Centre for Higher Education and Development (SEAEMO RIHED) promotes functional cooperation in Southeast Asia.

These organizations should be the basis of and play an important role in constructing a new East Asian collaborative higher education framework and fostering the cross-border activities within East Asia. However, compared to the European region, where the regionalization of higher education is more advanced, the East Asian region is still exploring the directions of the regional framework, such as what type of cross-border activities should be the target, what kind of objectives and functions this new framework should have, and what countries should be within this framework.

Research Questions

Despite growing political attention on the regional level of the governance framework of higher education in Asia, there are few empirical evidence-based studies on this issue. Thus, by examining the current status and views of leading East Asian universities on their cross-border (or international) activities, this chapter aims to envision the directions of a future regional higher education framework in East Asia and consider the policy implications of the internationalization of higher education in East Asia in the context of regionalization. More specifically, the chapter will examine the following questions:

1. Types of cross-border activities: What types of cross-border activities are perceived to be more active by leading universities? How does the current level of activeness differ as compared with the past and future? What types of cross-border activities of higher education should be targets of the future regional framework of East Asia?
2. Expected outcomes of overall cross-border activities: Which expected outcomes of overall cross-border activities are perceived to be more important than others by leading universities? How does the importance of expected outcomes vary across different time periods: past, present, and future? What expected outcomes of cross-border higher education should be targeted by the future regional framework of East Asia?

Prior Research

Among the few prior relevant research studies about the internationalization of higher education, the IAU Global Surveys were the only institution-level surveys that covered several countries in East Asia, whereas there are some other university surveys on internationalization for specific countries in the region, namely, Japan, Korea, and Malaysia.

In 2003, IAU conducted a survey of all IAU member institutions with the aim of gathering “impressions” from a sufficient number of institutions from each region

of the world about current institutional priorities, practices, and concerns about higher education internationalization (Knight 2003, p. 7). In 2005, IAU conducted another similar but more developed survey, adding more dimensions and targeting a larger number of higher education institutions, including those institutions that are not IAU members (Knight 2006). Both IAU surveys cover more institutions from American and European countries compared to Asian countries. From the "Asia" region, according to their definitions, 32 institutions responded to the IAU 2003 survey,[1] but the report did not indicate the specific countries of the universities that responded. For the IAU 2005 survey,[2] 96 institutions from 19 countries in the "Asia Pacific" region responded. Among the 19 countries, there are only 8 East Asian countries: Indonesia, Malaysia, Philippines, Thailand, Vietnam, China, Japan, and Korea. However, neither survey in 2003 or 2005 indicated the number of institutions that responded according to their country, in either the "Asia" or the "Asia Pacific" region. Thus, it is difficult to determine the number of responded institutions from East Asia.

On the types of cross-border activities, the 2003 IAU survey asked about the "level of importance" for difference aspects of internationalization. The 2003 data showed that, among the ten aspects, the universities' most important aspect in the "Asia" region is "strengthening international research collaboration" followed by "mobility of students." Both "mobility of faculty members" and the "international dimension in curriculum" were tied for the third most important aspect.[3] In addition, in the 2003 survey, the informative open-ended question was asked, "What is the most quickly expanding aspect of internationalization at your institution?" For Asian universities, the most quickly expanding activity was "mobility of students/faculty," followed by the "recruitment of international students" and "international research collaboration." The 2005 IAU survey also indicated that the biggest growth area for Asian universities was "international institutional agreements/networks," followed by the "recruitment of fee-paying foreign students" and "international research collaboration." Comparing the results of the 2003 and 2005 surveys, some shifts in priorities were observed, although these shifts may be partly due to the differences between the two surveys in the sample selection criteria and the number of universities that responded. In the context of dynamically changing cross-border higher education, it is also important to address the status of different types of internationalization for universities over the different time

[1] All 621 IAU members received the survey, and 176 completed surveys were returned from 66 countries, which represents a 28 % response rate. Universities that responded from the "Asia Pacific" region represent 18 % of the total respondents.

[2] A total of 3,057 HEIs listed in the IAU World Higher Education Database, after excluding incorrect and nonfunctioning e-mail addresses, received the survey, and of that number, a total of 526 completed surveys from 95 countries were returned, representing a response rate of 14.7 %. Universities that responded from the "Asia Pacific" region represent 18 % of the total respondents.

[3] The 2005 IAU survey also asked about the elements (cross-border activities) in which universities were actively involved. However, the survey report presents the results not only for Asian universities but for all universities that responded in the world.

periods. This status is one of the dimensions that our survey focuses on in order to understand leading Asian universities' views about the level of activeness of cross-border activities.

On the expected outcomes of cross-border activities, the 2003 and 2005 IAU survey did not use the exact term "expected outcomes"; instead, these IAU surveys asked about the reasons and rationales of internationalization. In the 2003 survey report, the reasons for becoming more international specifically among Asian universities were not presented, but in the 2005 survey report, the most prioritized rationale for Asian universities was to "increase student and faculty international knowledge capacity and production," followed by to "strengthen research and knowledge capacity and production." The following two rationales, "create international profile and reputation" and "broaden and diversify the source of faculty and students," were equally important.[4] However, these IAU surveys did not capture any changing priorities of Asian universities over time or their views on the regional-level objectives of cross-border activities.

The other relevant university-level surveys were not conducted on a regional scale, but they covered a larger number of higher education institutions within specific countries, namely, Japan, Korea, and Malaysia. Although these national-level studies may not be sufficient to project the direction of the future of the regional higher education framework, it is surely helpful for policymakers to consider internationalization and regionalization from the specific countries' viewpoints. In fact, their studies are more appropriate than surveys conducted on a global or regional scale for the countries whose governments have the political wills to be regional hubs or gateways of higher education.

For Japan, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and Tohoku University conducted a university survey on the internationalization of higher education in 2008. The MEXT survey (Yonezawa 2007)[5] examined the universities' managerial policies for internationalization, their awareness of globalization when setting the goals of many activities, their maintenance and utilization of indicators and data for assessment, and their comments on the assessment of the internationalization of Japanese universities. On the types of cross-border activities, the MEXT survey asked universities to check whether each of 25 cross-border activities had been implemented by universities. The most popular activity implemented by universities was "study abroad or workshops by students," followed by "hiring foreign scholars and researchers" and "study abroad or workshops by faculty and researchers." The least implemented activity was "establishing oversea branch campus(es)." In relation to the expected outcomes

[4] For instance, in the 2003 survey, the top three most important benefits were "student staff and teacher development," "research," and "teaching and learning," and in the 2005 survey, the top three most important benefits were "more internationally oriented students and staff," "improved academic quality," and "strengthen research and knowledge production."

[5] The questionnaires were distributed to all 756 universities' international affairs offices or their equivalent in Japan, and 624 completed questionnaires were returned, with a response rate of 82.5 %.

of cross-border activities, the MEXT survey asked universities about the significance of the five "causes for internationalization." The most significant cause was "to facilitate teaching and curriculum by internationalization," followed by "to increase academic, research, and knowledge standards and productivity by internationalization" and "to contribute to society and international cooperation with the university's (international) activities." This finding clearly shows that Japanese universities placed the most priority on improving their academic curriculums and standards by internationalizing their universities.

In 2007, the Korean Educational Development Institute (KEDI) conducted a university survey based on "indicators of cross-border higher education," that is, a tool created by KEDI to understand the current status of cross-border higher education in Korea (MEST and KEDI 2007). Thus, the survey questionnaire mainly consists of the current factual questions for each cross-border activity,[6] and it provides a comprehensive overview of the regional preference of Korean universities' cross-border activities. The published data show that, for cross-border collaborative degree programs, Korean universities built the most partnerships with universities in North America, followed by Northeast Asia, Western Europe, Southeast Asia, and the Oceania and Pacific region. For research collaborations, the most partnerships had been built with Western Europe, followed by Northeast Asia, North America, and Southeast Asia. These findings indicated that while either North America or Western Europe was the most active region of partners in some aspects, Northeast Asia was the second most active partner (or the first among Asian subregions) for Korean universities.

For Malaysia, the National Higher Education Research Institute (IPPTN) conducted a university survey to explore the important elements of cross-border activities, motivations, and ongoing partner countries or regions for its research, "Internationalization and International Linkages in Malaysian Higher Education Institutions" in 2007 (Sirat 2009). On types of activities, the IPPTN survey suggests that Malaysian universities regarded "foreign travel opportunities for faculty/staff" as the most popular activity (among 16 activities), followed by "international institutional agreements/networks" and "visiting international scholars." The most important motivation for Malaysian universities' internationalization was to "create international profile and reputations," followed by the motivation of "contributes to academic quality" and "strengthens research and knowledge capacity and production." On regions of partners, the IPPTN survey results indicate that Malaysian universities have established various regions of partners, and the degree of activeness for specific regions depended on types of activities.

Building on these prior surveys,[7] we designed a new university survey to generally address universities throughout East Asia. We aim to address research

[6] It was distributed to the 201 4-year Korean universities, and KEDI received 190 responses, with a response rate of 95 %. For example, the questionnaire asked the respondents to indicate, for example, how many students and foreign faculty members, and from which countries of origin, are involved in their cross-border activities.

[7] In addition to prior university surveys, we also reviewed relevant studies based on the researchers' visits to a small number of Asian universities (e.g., Kuroda and Sugimura 2009).

themes more comprehensively, with a focus on the perspectives of East Asian countries and with the purpose of providing policy implications for the future direction of the regional higher education framework.

Method and Data Source

This chapter uses the original dataset from a university survey that we conducted in 2009/2010 for Southeast Asia plus five other countries (China, Japan, Korea, Australia and New Zealand) under the JICA-RI's research project named, "Cross-Border Higher Education for Regional Integration and Labor Market." The JICA-RI team prepared the questionnaire and selected "leading" universities in ways discussed below with collaboration from SEAEMO RIHED. The prior relevant survey by IAU was closely reviewed to refine our survey design. The survey implementation (i.e., the sending and collecting of questionnaires) and data compilation were mainly conducted by Asia Southeast Asia Engineering Education Development (SEED) (a nonprofit organization) in close coordination with the JICA-RI team. The research design, draft questionnaire, and list of sample universities were discussed at a workshop organized by JICA-RI, SEAMEO RIHED, and Asia SEED, on June 30, 2009, in Bangkok, Thailand. The workshop was attended by policymakers and researchers from eight Southeast Asian countries (Brunei Darussalam, Cambodia, Indonesia, Malaysia, Myanmar, Vietnam, Philippines, and Thailand), in addition to Korea, Japan, China, and Australia. The inputs and endorsements received at this workshop were incorporated into the research project.

Definition and Selection Methods of "Leading" Universities

The questionnaire was distributed to the 300 "leading universities active in cross-border higher education activities" in 10 Southeast Asian countries plus 5 other countries. We target "leading universities in cross-border higher education activities" in this survey firstly because policy discussions on the Asian regional framework of higher education, such as AUN and CAMPUS ASIA, began by targeting national representative universities and, secondly, because the universities that are active in existing international or regional frameworks are the most important foundation for determining the future of the internationalization and regionalization of Asian higher education. Therefore, the selection of leading universities was based on counting the number of times the universities appeared in the three global university ranking sources and their status as members of eight regional or international university associations.

The three global university ranking sources are (a) World University Rankings (WUR) 2008 by Times Higher Education and Quacquarelli Symonds, (b) Academic Ranking of World Universities 2008 (ARWU) by Shanghai Jiao Tong University, and (c) Ranking Web of World Universities 2008 (RWWU) by Webometrics. Given the difficulty of comprehending the whole perspective of "leading" universities due to greatly stratified higher education systems worldwide, the ranking sources are used to select the target respondents even though the evaluation methods used to rank the sources of universities always remain controversial and have many methodological and technical limitations. The selected three global university ranking sources are well known, and rankings provided by Shanghai Jiao Tong University and Times attract most the public attention among the rankings. Although RWWU is not as well publicized as the other two, it ranks the largest number of universities worldwide. Because the global university ranking lists tend to be dominated by American and European universities, using sources that rank a large number of universities worldwide is important for ensuring the presence of Asian universities for the purpose of the study. In 2008, the RWWU, ARWU, and WUR ranked the top 5,000, 500, and 400 universities, respectively. As indicated in Table 4.1, although the number of universities presented from Southeast Asian countries is less than the number of universities presented from the additional five countries, the lists generated from the three ranking sources present a relatively large number of Asian universities.

The eight regional or international university associations have particular relevance in any discussions aimed at the construction of a new regional collaborative educational framework in Asia. These associations are the AUN, the UMAP, the Association of Pacific Rim Universities (APRU), the Association of East Asian Research Universities (AEARU), the Association of Universities of Asia and the Pacific (AUAP), the IAU, the International Alliance of Research Universities (IARU), and the Association of Southeast Asian Institutions of Higher Learning (ASAIHL).

As summarized in Table 4.1, we first checked how many and which universities are present in each university ranking source or as members of the eight university associations. Then, we checked how many times the same university was ranked or an association member. For each country, Table 4.2 indicates the number of universities that appeared in at least one of the sources (Column A), the number of universities that appeared in at least two of the sources (Column B), and the number of universities that appeared in at least three of the sources (Column C). To avoid the excessive representativeness of some countries, especially the five additional countries, different criteria were used to select universities from different countries, depending on their macro-level elements, such as the size of the population and the total number of universities. The highlighted cells of Table 4.2 show the number of selected universities (279 total universities). Finally, 21 additional universities were selected on the basis of information provided by the participants at the workshop in Bangkok. This addition resulted in 300 "leading higher education

Table 4.1 Number of universities by university rankings and regional/international associations in Southeast Asia and the five additional countries

	Rankings			Regional and international university associations							
	RWWU	ARWU	WUR	AUN	UMAP	APRU	AEARU	ASAIHL	AUAP	IAU	IARU
Southeast Asia											
Brunei Darussalam	1	0	0	1	1	0	0	1	0	0	0
Cambodia	0	0	0	1	4	0	0	1	1	0	0
Indonesia	23	0	3	3	0	1	0	32	20	1	0
Laos	0	0	0	1	0	0	0	0	0	0	0
Malaysia	20	0	5	3	20	1	0	15	4	7	0
Myanmar	0	0	0	2	0	0	0	1	0	0	0
Singapore	9	2	2	2	0	1	0	2	0	0	1
Vietnam	8	0	0	2	2	0	0	1	6	0	0
Philippines	13	0	2	3	20	1	0	30	54	10	0
Thailand	44	0	3	3	53	1	0	35	20	4	0
Subtotal	118	2	15	21	100	5	0	118	105	22	1
Plus 5											
China	334	18	8	0	0	6	5	0	28	3	1
Japan	265	31	23	0	41	6	6	4	4	44	1
Korea	92	8	7	0	8	2	3	0	14	3	0
Australia	41	15	21	0	38	3	0	21	14	13	1
New Zealand	12	5	6	0	4	1	0	5	0	2	0
Subtotal	744	77	65	0	91	18	14	30	60	65	3
Total	862	79	80	21	191	23	14	148	165	87	4

Source – Information from the websites of the above organizations in 2009

Note – *RWWU* Ranking web of world universities, *ARWU* Academic Ranking of World Universities, *WUR* World University Rankings, *AUN ASEAN* University of Network, *UMAP* University Mobility in Asia and Pacific, *APRU* Association of Pacific Rim Universities, *AEARU* Association of East Asian Research Universities, *ASAIHL* Association of Southeast Asian Institutions of Higher, *AUAP* Association of Universities of Asia and the Pacific, *IAU* International Alliance of Research Universities

Table 4.2 Method of selecting 300 sample "leading" universities

	By criteria				Added by participants from workshop	
	A	B	C	Subtotal	in Bangkok	Total
Southeast Asia						
Brunei Darussalam	1[a]	1		1	0	1
Cambodia	5[a]	1		5	1	6
Indonesia	50[a]	17		50	11	61
Laos	1[a]	0		1	0	1
Malaysia	28[a]	18		28	0	28
Myanmar	2[a]	1		2	2	4
Singapore	9[a]	2		9	0	9
Vietnam	12[a]	3		12	2	14
Philippines	89	30[a]		30	2	32
Thailand	83	38[a]		38	2	40
Subtotal	280	111		176	20	196
Plus 5:						
China	349	31[a]	11	31	0	31
Japan	286	78	29[a]	29	0	29
Korea	96	24	8[a]	8	1	9
Australia	47	38	28[a]	28	0	28
New Zealand	13	7	7[a]	7	0	7
Subtotal	791	178	83	103	1	104
Total	1,071	289	83	279	21	300

Note – *A* Number of universities appeared in at least one of the sources listed in Table 4.1, *B* number of universities appeared in at least two of the sources listed in Table 4.1, *C* number of universities appeared in at least three of the sources listed in Table 4.1

[a]Number of selected universities in each country

institutions active in cross-border activities" in Southeast Asia and the 5 additional countries. The number of selected universities in each source is indicated in Table 4.3 and organized by country.

Leading Universities That Responded

In August 2009, the questionnaires were distributed mainly by e-mail to the top officials in charge of international or external affairs, such as directors, managers, or vice rectors of the International Affairs Office or the equivalent in the 300 leading universities. Questionnaires were sent by fax for officials without e-mail addresses. After sending questionnaires, follow-up activities were conducted for all of the target universities in Southeast Asia and the five additional countries. For universities in Southeast Asian countries, local consultants stationed in Vietnam, Cambodia, Malaysia, China, and Indonesia were engaged in follow-up activities. Out of the 300 universities, 131 (44%) universities completed and returned the

Table 4.3 Number of selected leading universities by university rankings and regional/international associations in Southeast Asia and the five additional countries

	Ranking			Regional and international university associations							
	RWWU	ARWU	WUR	AUN	UMAP	APRU	AEARU	ASAIHL	AUAP	IAU	IARU
Southeast Asia											
Brunei Darussalam	1	0	0	1	1	0	0	1	0	0	0
Cambodia	0	0	0	1	4	0	0	1	0	0	0
Indonesia	22	0	3	3	0	1	0	32	20	1	0
Laos	0	0	0	1	0	0	0	-	0	0	0
Malaysia	20	0	5	3	20	1	0	15	4	7	0
Myanmar	0	0	0	2	0	0	0	1	0	0	0
Singapore	9	2	2	2	0	1	0	2	0	0	1
Vietnam	8	0	0	2	2	0	0	1	6	0	0
Philippines	5	0	2	3	17	1	0	19	20	9	0
Thailand	34	0	3	3	24	1	0	35	16	4	0
Subtotal	99	2	15	21	68	5	0	107	66	21	1
Plus 5:											
China	30	18	8	0	0	6	5	0	14	3	1
Japan	*29*	21	19	0	14	6	6	2	0	21	1
Korea	9	8	7	0	5	2	3	0	0	1	0
Australia	27	15	21	0	28	3	0	18	12	13	1
New Zealand	7	5	6	0	4	1	0	5	0	1	0
Subtotal	102	67	61	0	51	18	14	25	26	39	3
Total	201	69	76	21	119	23	14	132	92	60	4

Source – Information from the websites of the above organizations in 2009

Note – *RWWU* Ranking web of world universities, *ARWU* Academic Ranking of World Universities, *WUR* World University Rankings, *AUN ASEAN* University of Network, *UMAP* University Mobility in Asia and Pacific, *APRU* Association of Pacific Rim Universities, *AEARU* Association of East Asian Research Universities, *ASAIHL* Association of Southeast Asian Institutions of Higher, *AUAP* Association of Universities of Asia and the Pacific, *IAU* International Alliance of Research Universities

Table 4.4 Number of universities that responded, by country

	Responded universities	Response rate (%)	Target universities
Southeast Asia			
Brunei Darussalam	0	0	1
Cambodia	5	83	6
Indonesia	30	49	61
Laos	0	0	1
Malaysia	16	57	28
Myanmar	1	25	4
Philippines	7	22	32
Singapore	1	11	9
Thailand	9	23	40
Vietnam	14	100	14
Subtotal	83	42	196
Plus 5			
China	19	61	31
Japan	17	59	29
Korea	5	56	9
Australia	7	25	28
New Zealand	0	0	7
Subtotal	48	46	104
Total	131	44	300

Source – JICA Survey

questionnaire. Of 131 universities, this chapter analyzes 124 universities from the Northeast Asia and Southeast Asia regions, excluding 7 responses from universities in Australia because the focus of this chapter is on East Asia. Table 4.4 shows the number of universities that responded, by country.

Overview of the Questionnaire

The questionnaire was designed to capture cross-border activities for leading universities in the following three dimensions: (a) the level of activeness of cross-border activities by different types of activities, (b) the level of significance of their expected outcomes by different types of outcomes, and (c) the level of activeness of their partners' regions. The questionnaire also attempts to address any changes over time (past, present, and future). The level or significance of activeness was measured on a Likert scale, assigning five choices: "4, highly active (significant)"; "3, fairly active (significant)"; "2, moderately active (significant)"; "1, slightly active (significant)"; and "0, not active (significant)."

For the first dimension, the questionnaire asked about the activeness of cross-border activities by eleven different types of activities, which are also grouped into the three levels as follows:

1. Student level: Outgoing mobility opportunities and acceptance of foreign students
2. Faculty level: Outgoing mobility opportunities, recruitment of full-time foreign faculty members, and cross-border research collaboration
3. Institution level: Cross-border institutional agreement, cross-border collaborative degree programs, and the use of information and communications technology (ICT) for cross-border distance education

In general, the names of activities themselves explain their characteristics, but "cross-border collaborative degree programs" conveys different meaning among people within and across countries. Therefore, it is important to set a working definition that reflects today's realities. For this study, this term was defined as a higher education degree program that was institutionally produced/organized with cross-border university partnership by at least two institutions in two or more countries or as higher education programs organized by a foreign provider. This definition does not include, for example, conventional student exchange programs based on cross-border university agreements. Double- and joint-degree programs are common examples of "cross-border collaborative degree programs."

For the second dimension, universities were asked to indicate the significance of the eleven expected outcomes for overall cross-border activities in the following three groups: academic, political, and economic. Each group is divided into four levels: institutional, national, regional, and global.[8]

1. Academic: To promote intercultural/international awareness and understanding, to achieve research excellence, and to improve quality of education
2. Political: To promote global citizenship, to promote the regional collaboration and identity of Asia, to promote national culture and values, and to improve the international visibility and reputation of your university
3. Economic: To meet the demand of the global economy, to meet the demand of the Asian regional economy, to meet the demand of your national economy, and to generate revenue for your own institution

In contrast, the 2005 IAU Global Survey categorizes the rationales driving internationalization of institutions into four groups: political, economic, academic, and cultural/social. However, social and cultural expected outcomes are excluded from this study. Although social and cultural rationales relate to the promotion of intercultural understanding and national cultural identity still remains significant, "perhaps, in some countries their importance does not carry the same weight in comparison to economic and political based rationales" (Knight 2006). Also, the

[8] In addition, we also asked the significance of the expected outcomes according to each of five types of cross-border activities, which were regarded as commonly acknowledged activities among the list of eight cross-border activities from the first dimension. These five activities are "outgoing mobility opportunities for student," "acceptance of foreign students," "cross-border research collaboration," "cross-border research collaboration," "cross-border institutional agreement," and "cross-border collaborative degree programs."

global and regional levels of expected outcomes are added in this study to observe whether or how Asian universities' expected outcomes for internationalization are viewed on global and regional levels. Furthermore, in addition to indicating the level of significance of different expected outcomes, the respondents were asked to indicate the levels across different time periods: past, present, and future.

Findings

Types of Cross-Border Activities

Table 4.5 suggests that the level of activeness varies across the different types of cross-border activities. The column titled "Present" shows that conventional activities such as "international/cross-border institutional agreement" and "outgoing mobility opportunities for faculty members" are regarded as being more active than innovative activities such as "cross-border collaborative degree programs" and the "use of ICT for cross-border distance education." The international institutional agreements and international mobility of students and faculty members are generally well established and a growing feature of higher education, whereas the international mobility of institutions and courses such as cross-border collaborative degree programs (e.g., twinning, double- or joint-degree programs) on a large scale is a more novel phenomenon. This mobility is made possible in part by recent innovations in ICT (McBurnie and Ziguras 2007, p. 21). These conventional activities are the basis or conditions of initiating further innovative forms of collaborative activities. For example, to conduct collaborative degree programs, universities are often required to have institutional agreements, though having institutional agreements does not necessarily mean having active collaborative degree programs.

While the lists of cross-border activities in the ranking order of the level of activeness have not changed much over time, the level of activeness for innovative activities is expected to grow extensively in the future, given its merits for fostering cross-border higher education. The level of activeness increased from 1.10 in the past to 3.09 in the future for "cross-border collaborative degree programs" and from 1.10 in the past to 2.95 in the future for the "use of ICT for cross-border distance education." Regarding "cross-border collaborative degree programs," Knight (2009, p. 12) suggests that "for many academics and policymakers, double and joint-degree programs are welcomed as a natural extension of exchange and mobility," and they offer the benefits of leading to deeper and more sustainable relationships than many other international programs. In addition to "cross-border collaborative degree programs," another innovative activity, in which the level of activeness is prospected to grow, is the "use of ICT for cross-border distance education." Using ICT for cross-border distance education has revolutionalized how universities operate in recent years; it has significantly helped to broaden

Table 4.5 Level of activeness of cross-border activities for East Asia

	Past		Present		Future	
Rank	Cross-border activity	Mean	Cross-border activity	Mean	Cross-border activity	Mean
1	Outgoing mobility opportunities for faculty members (F)	2.36	International/cross-border institutional agreement (I)	3.08	International/cross-border institutional agreement (I)	3.75
2	International/cross-border institutional agreement (I)	2.29	Outgoing mobility opportunities for faculty members (F)	2.98	Outgoing mobility opportunities for faculty members (F)	3.74
3	Cross-border research collaboration (F)	2.06	Outgoing mobility opportunities for students (S)	2.78	Outgoing mobility opportunities for students (S)	3.68
4	Acceptance of foreign students (S)	1.91	Acceptance of foreign students (S)	2.77	Acceptance of foreign students (S)	3.65
5	Outgoing mobility opportunities for students (S)	1.85	Cross-border research collaboration (F)	2.74	Cross-border research collaboration (F)	3.64
6	Recruitment of full-time foreign faculty members (F)	1.47	Recruitment of full-time foreign faculty members (F)	2.06	Cross-border collaborative degree programs (I)	3.09
7	Cross-border collaborative degree programs (I)	1.10	Cross-border collaborative degree programs (I)	1.87	Recruitment of full-time foreign faculty members (F)	3.04
8	Use of ICT for cross-border distance education (I)	1.10	Use of ICT for cross-border distance education (I)	1.80	Use of ICT for cross-border distance education (I)	2.95

Source – JICA Survey
Note – *4* Highly active, *3* fairly active, *2* moderately active, *1* slightly active, *0* not active, *(I)* institution, *(F)* faculty, *(S)* student. The mean for both 'cross-border collaborative degree programs' and 'use of ICT for cross-border distance education' is 1.104348

access to higher education and strengthen collaborative research (Jowi 2009, p. 269). The development of ICT is an effective system to deliver and exchange knowledge without requiring the physical relocation of students and faculty members. With its great contribution to fostering cross-border higher education, ICT is expected to be used more actively in the future. Therefore, the "leading" universities in Asia plan to increasingly activate "cross-border collaborative degree programs" and the "use of ICT for cross-border distance education" in the future.

Expected Outcomes of Overall Cross-Border Activities

Table 4.6 indicates the level of significance of overall cross-border activities' expected outcomes for all targeted countries. At present, "leading" Asian universities' most prioritized rationale for driving cross-border higher education is "to

Table 4.6 Significance of overall cross-border activities' expected outcomes for East Asia

	Past		Present		Future	
Rank	Expected outcome	Mean	Expected outcome	Mean	Expected outcome	Mean
1	To improve quality of education (A-I)	2.59	To improve international visibility and reputation of your university (P-I)	3.23	To improve international visibility and reputation of your university (P-I)	3.78
2	To promote national culture and values (P-N)	2.54	To improve quality of education (A-I)	3.19	To improve quality of education (A-I)	3.78
3	To achieve research excellence (A–I)	2.39	To achieve research excellence (A-I)	3.17	To achieve research excellence (A-I)	3.78
4	To improve international visibility and reputation of your university (P-I)	2.39	To promote intercultural/ international awareness and understanding (A-N)	3.13	To promote intercultural/ international awareness and understanding (A-N)	3.75
5	To promote intercultural/ international awareness and understanding (A-N)	2.38	To promote national culture and values (P-N)	3.09	To promote national culture and values (P-N)	3.68
6	To meet the demand of your national economy (E-N)	2.36	To meet the demand of your national economy (E-N)	3.01	To promote regional collaboration and identity of Asia (P-R)	3.63
7	To promote regional collaboration and identity of Asia (P-R)	2.24	To promote regional collaboration and identity of Asia (P-R)	2.93	To meet the demand of your national economy (E-N)	3.53
8	To generate revenue for your own institution (E-I)	1.94	To meet the demand of global economy (E-G)	2.69	To generate revenue for your own institution (E-I)	3.39
9	To meet the demand of Asian regional economy (E-R)	1.89	To generate revenue for your own institution (E-I)	2.68	To meet the demand of Asian regional economy (E-R)	3.34
10	To meet the demand of global economy (E-G)	1.87	To promote global citizenship (P-G)	2.63	To meet the demand of global economy (E-G)	3.31
11	To promote global citizenship (P-G)	1.85	To meet the demand of Asian regional economy (E-R)	2.62	To promote global citizenship (P-G)	3.29

Source – JICA Survey

Note – 4 Highly significant, *3* fairly significant, *2* moderately significant, *1* slightly significant, *0* not significant, *(A)* academic, *(P)* political, *(E)* economic, *(G)* global, *(R)* regional, *(N)* national, *(I)* institutional

improve international visibility and reputation of [their] own university" (see the column titled "Present"). The movement of "world-class" university status can be witnessed over the last decade, not only in the West, but also in the East, as many universities in Asia are concerned with improving their international visibility and reputation; the result shows that "leading" Asian "universities are not an exception in this movement." The rationale "to improve international visibility and reputation" increased in significance over time because it was ranked as the fourth rationale for the past, after "to improve quality of education," "to promote national culture and value," and "to achieve research excellence." In fact, the 2005 IAU Global Survey also shows that overall, Asian universities place a certain priority on the rationale to "create international profile and reputation," which is the third most prioritized rationale among the seven rationales. The reputation of universities is greatly important in improving universities' statuses on the university ranking lists, which have been increasingly influential in shaping students' choices for universities. This influence exists despite the fact that no ranking list of universities is absolutely objective. Furthermore, appearing in the worldwide ranking list makes the universities better recognized nationally and internationally, facilitating the formation of partnerships with recruitment agencies and other universities. Therefore, Asian universities, especially "leading" ones, regard the rationale "to improve international visibility and reputation of own university" as the significant rationale driving cross-border higher education.

Despite how many observers may claim that the "for-profit" side of internationalization is increasing in many countries of the world, the level of significance of the expected outcome "to generate revenue for your own institution" is unexpectedly low at present. This low level of significance of expected outcome may be partly because our targeted universities are leading ones, and the majority is of these universities are publically funded. Knight (2008) also argues that the trend of a dramatic movement of internationalization rationales toward income production may be true for a small group of countries, but it is certainly not the case for the majority of institutions around the world. Both the results of the 2005 IAU Global Survey and the JICA-RI survey show that universities do not place much emphasis on generating revenue by fostering cross-border higher education. According to the 2005 IAU Global Survey report (Knight 2006), the leading rationales driving cross-border higher education in the Asia Pacific region are to "increase student and faculty international knowledge capacity and production" and to "strengthen research and knowledge capacity and production." Other relatively important rationales include the following: "create international profile and reputation," "broaden and diversify source of faculty and students," and "contribute to academic quality."[9] However, the least important rationale for the world in general, as well as

[9] Similar to the worldwide priorities of rationales, the Asia Pacific region's most important rationale is to "increase student and faculty international knowledge capacity and production" (21 %), and the second most important rationale is to "strengthen research and knowledge capacity and production" (20 %) (Knight, 2006). The least important rationale is to "diversify income

Table 4.7 Significance of overall cross-border activities' expected outcomes (academic/political/economic) for East Asia

	Past		Present		Future	
Rank	Expected outcome	Mean	Expected outcome	Mean	Expected outcome	Mean
1	Academic expected outcome	2.45	Academic expected outcome	3.16	Academic expected outcome	3.77
2	Political expected outcome	2.27	Political expected outcome	2.97	Political expected outcome	3.60
3	Economic expected outcome	2.02	Economic expected outcome	2.75	Economic expected outcome	3.39

Source – JICA Survey
Note – 4 Highly significant, *3* fairly significant, *2* moderately significant, *1* slightly significant, *0* not significant

the Asia Pacific region, is to "diversify income generation." Likewise, the result of the JICA-RI Survey, as illustrated in the column titled "Present" on Table 4.6, suggests that "leading" Asian universities also place a relatively low level of significance on "generating revenue for their own institution," which is ranked as the eighth most significant rationale among the eleven rationales.

Overall, the findings at the different time periods seem to agree with the perceived priorities at each time period (see from column "Past" to column "Future" of Table 4.6). For instance, the significance of the expected outcome "to improve international visibility and reputation of your university" remains high, as does the level of significance of the expected outcome.

Table 4.7 reveals that when expected outcomes are grouped into academic, political, and economic expected outcomes, "leading" Asian universities prioritize academic and political expected outcomes slightly more than economic expected outcomes. This order of priority among academic, political, and economic expected outcomes does not seem to change over time, whereas universities perceive all three groups of outcomes, including economic outcomes, as being more significant in the future than at present (see from column "Present" to column "Future" of Table 4.7).

Grouping expected outcomes by global, regional, national, and institutional levels, Table 4.8 shows that, at present, the levels of significance of institutional and national expected outcomes are higher than that of the regional and global expected outcomes. Furthermore, while the national and institutional expected outcomes are consistently regarded as being more significant than regional and global expected outcomes over the time periods, the level of significance of the regional expected outcome grows almost as high as that of the national expected outcome in the future. In the future, the significance of the national expected outcome is 3.59, and that of the regional expected outcome is 3.58, as revealed in the column "Future" of Table 4.8. This growth in the level of significance of regional expected outcome shows how Asian "leading" universities' perspectives

generation" (6 %). Both findings from countries worldwide and the Asia Pacific region show how the rationale to "diversify income generation" is regarded as the least important rationale.

Table 4.8 Significance of overall cross-border activities' expected outcomes (institutional/national/regional/global) for East Asia

	Past		Present		Future	
Rank	Expected outcome	Mean	Expected outcome	Mean	Expected outcome	Mean
1	National expected outcome	2.43	National expected outcome	3.07	Institutional expected outcome	3.68
2	Institutional expected outcome	2.33	Institutional expected outcome	3.07	National expected outcome	3.65
3	Regional expected outcome	2.08	Regional expected outcome	2.93	Regional expected outcome	3.63
4	Global expected outcome	1.86	Global expected outcome	2.67	Global expected outcome	3.31

Source – JICA Survey
Note – 4 Highly significant, *3* fairly significant, *2* moderately significant, *1* slightly significant, *0* not significant

on expected outcomes increasingly expand from the institutional and national level to the regional level, indicating their increasing recognition of the importance of Asian regionalization.

Discussion and Reflections on the Findings

The analysis of this original empirical research provides the implications necessary to construct the architecture of a new East Asian regional higher education framework. The policy implications are discussed according to the findings from each dimension of the survey. The findings from the first dimension, activeness of cross-border activities, reflect the current and projected trend of the activities. The second dimension, significance of expected outcomes, identifies the commonly shared interests among the East Asian universities. Lastly, the third dimension finds which Asian subregions are actively collaborating with which regions of their counterparts and delineates a cohesive and functional definition of "East Asia." Therefore, the findings, the types of cross-border activities, and common interests need to be interpreted to form an appropriate regional framework are discussed below.

Regarding the first dimension of the survey, the conventional activities are currently perceived to be more active than the innovative activities, but the level of activeness of innovative activities will increase extensively in the future. Among the conventional activities, the activeness of "outgoing mobility opportunity for students" grew the most over the time periods, implying the universities' support for a greater amount of student mobility in the future. Furthermore, the growing presence of innovative activities, "cross-border collaborative degree programs," and the "use of ICT for cross-border distance education" in the future suggest some specific actions on the part of the universities. Activating "cross-border

collaborative degree programs" implies an increase in the number of bilateral or multilateral institutional agreements to jointly provide curriculums or degrees to students, and for "use of ICT for cross-border distance education" to be more widely used in the future, universities will need to invest further in constructing infrastructure to facilitate its use. Therefore, when constructing the East Asian regional framework, the discussion about increasingly activated cross-border activities is an important component in order for the framework to respond properly to the trend of cross-border higher education.

For an effective and appropriate framework, the framework must reflect how universities' interests are driving cross-border higher education; therefore, it is important to closely examine which expected outcomes are more or less prioritized than others by "leading" East Asian universities. In the context of universities paying serious attention to building world-class status, one of the main findings in the second dimension of the survey was that the universities are most interested in improving their "international visibility and reputation," both at present and in the future. This high interest in improving their "international visibility and reputation" might have resulted from the recent phenomenon of the international ranking of universities influencing the internationalization policies of individual institutions as well as governmental policies. To construct the future regional framework, this aspect of the incentives of individual institutions should also be adequately incorporated.

Furthermore, when grouped by academic, political, and economic expected outcomes, the most important aspect for individual leading universities in East Asia is "academic expected outcomes." In general, rationales, such as improving quality of education and achieving research excellence, are highly prioritized. Reflecting such prioritized expected outcomes among leading East Asian universities, the promotion of a regional framework of higher education should begin as a functional mechanism for these directions, such as a regional quality assurance (QA) network. For example, currently APQN is a key regional QA network with the objectives of promoting good practices and providing advice and expertise to assist the overall condition of regional QA systems in member countries. Furthermore, APQN assists its members in the development of credit transfers and improving the mobility and standards of cross-border education activities (SEAMEO RIHED 2008, p. 83). Also, AUN and SEAMEO RIHED are establishing their own regional quality assurance mechanisms in Southeast Asia. Such regional quality assurance efforts may serve the universities' interests related to academic expected outcome in the process of the regionalization of higher education and should be promoted within the new framework of East Asia.

As original findings of this survey, the political and economic aspects of expected outcomes are also increasingly significant in East Asia. Considering the insufficient policy discussions on these dimensions, East Asian governments and other stakeholders should further discuss and articulate the political and economic implications of this framework in formulating the regional framework. Considering that the policy statements from meetings on regional integration, such as the Kuala Lumpur Declaration in 2005, often acknowledge the meaning of a higher education

regional framework in relation to political and academic dimensions, but less so in relation to economic dimensions, more policy discussions on economic dimension are necessary.

This chapter has sought to capture the current status and perceptions of leading universities in East Asia with respect to cross-border activities in the context of regionalization. Although some of the situations in East Asia are common to other regions of the world, we have sought to explain the East Asian dimension of cross-border higher education in terms that have gained widespread use and adherence: internationalization, regionalization, and globalization. This chapter has empirically identified several directions of regional-level efforts to promote cross-border activities in establishing an East Asian framework of higher education with shared goals. We should not underestimate the role that universities have played and will play in reaching out across borders and establishing collaborative networks with institutions around the world. In East Asia, this policy discussion to formulate a new framework has just begun.

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Chapter 5
The Harmonization of Higher Education in Southeast Asia

Supachai Yavaprabhas

Introduction

Many factors in this globalized world urge higher education to adjust itself to the era. This leads to a clear trend of regionalization or harmonization of higher education[1] in many regions, for example, Europe, Latin America and the Caribbean, West Africa, Arab states, and Asia, including Southeast Asia (Yavaprabhas 2009).

The first and the most advanced region in harmonization of higher education is Europe, which has realized its importance since the 1950s and began the prominent process under the Bologna Declaration since 1999. The Bologna process aims to create a European Higher Education Area (EHEA) by 2010, which has become the reality with the Budapest-Vienna Declaration of March 2010. Various features of higher education have been harmonized to be more comparable, compatible, and coherent in order to successfully create EHEA. Europe's next step is to consolidate the EHEA and further improve the harmonization process, which has been successful to a large extent compared to other regions (EHEA 2012).

Because of its success, so far the European harmonization process is widely regarded as "the model" for other regions, which learn from the European harmonization experience and adjust "the model" to suit their own regions. The author roughly conceptualizes key characteristics of the European harmonization process as follows:

[1] Normally, basic education is regarded as each country's right to "educate" and produce desired citizens. So it is internationally agreed that the harmonization process of education will only focus on the higher level.

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1. Shared vision among multi-stakeholders.

The European harmonization process started from politicians and high-level policy makers. Then, it is gradually joined by university administrators, students, academic staff, as well as the employment sector.

2. Clear strategy.

Since the beginning of the harmonization process, the Bologna action lines have laid out clear way and strategy that can answer all of the "who, what, and when" questions (i.e., who are responsible to carry out the "whats" and when they are to be accomplished).[2]

3. Strong commitment from Ministers responsible for higher education.

The Bologna process has made it clear that the Ministers meet every 2 years to follow up the process of the harmonization; they summarize what has been achieved and what needs to be done next.

4. Allocated resources from the European Union (EU) and member countries.

Both the EU and its member countries allocate sufficient budget resources to support the process. For example, the EU has been continuously providing funding for Erasmus Mundus, while Germany has been doing the same through DAAD.

5. Approaches that are fit to culture, voluntary, participatory, and transparent combined with resource motivation to induce changes.

These approaches are necessary to attract multi-stakeholders, who are key to the success of the harmonization of higher education. Every multi-stakeholder needs to have the same transparent information in order to voluntarily join the process and share the same vision.

The harmonization of higher education is a long and complicated process. The key characteristics of the harmonization process in Europe can be observed by other regions, particularly East Asia, who is still far behind "in promoting even a basic level of policy harmonization to achieve common objectives and interests in the area of higher education" (Nguyen 2009, p. 74). Southeast Asia as the subregion of East Asia is also still struggling in its harmonization. However, with less severe historical conflicts and being smaller in area, the progress of harmonization in this region seems more promising than in the larger Asian arena.

This chapter will summarize the current situation of the harmonization[3] of higher education in Southeast Asia. First, it will explore the background of the region in relation to its higher education. Second, it will define the meaning of harmonization in higher education. Third, it will explain why harmonization is a necessity. Fourth, it will explore key actors who have potential to motivate the

[2] The "why" question is answered in the Lisbon Strategy.

[3] The author prefers the word "harmonization" to "regionalization." Further explanation can be found in section "Definition: What is the harmonization of higher education?".

harmonization process in the region. Finally, it will suggest higher education systems that need to be harmonized, outline the efforts to harmonize them, and explore further possibilities. These are roughly grouped into four aspects: degree systems, quality assurance systems, credit systems, and academic calendar systems. The future of higher education in Southeast Asia and its harmonization will be speculated in the conclusion.

Background: Southeast Asia and Higher Education

Southeast Asia is comprised of 11 countries: Brunei, Cambodia, East Timor, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam. All countries except East Timor are members of the Association of Southeast Asian Nations (ASEAN). Since harmonization of higher education in this region has occurred partly due to the effort of ASEAN to become the ASEAN Community in 2015, only those 10 ASEAN countries will be mentioned in this paper. Also, the word Southeast Asia used in this paper refers only to those ASEAN members.

Southeast Asia is a diverse region in nearly every aspect. Variety in terms of politics, geography, economy, population, and culture in the region can easily be noticed. To illustrate, sizes of countries in this region range from small ones like Brunei and Singapore, having less than 6,000 km^2, to a very large ones, like Indonesia, with more than a million km^2. Political systems range from communist to various forms of democracy. All world religions, from Buddhism to Christianity to Islam, can be found here, not to mention countless local religious beliefs. Languages used are also diverse; different countries use different official languages and also various nonofficial languages. English has to be used as the standard, international language in the region. GDP per capita ranges from $1,700 in Myanmar to $62,400 in Singapore. Population ranges from 415,717 in Brunei to 251,160,124 in Indonesia. Further brief details on the diversity of Southeast Asia can be found in Table 5.1 below. All these aspects of diversity influence higher education in each country to different extents.

The issue most directly related to higher education is population, particularly in terms of numbers and structure, because it directly influences student enrolment at the higher education level. If the structure of a population is dominated by young ages, the student numbers will be high. This leads to high demand for higher education and expansion of universities. Vietnam is an example of a country in this region with such a structure. In contrast, if the structure of a population is old aged (resulting from low rates of birth and death), the demand for higher education will be low, as will be student populations at this level. Thailand is an example of a country with this structure (as are Japan and Korea in East Asia). It should also be noted that the numbers and structure of a population can be influenced by religion. For example, a major religion in Philippines is Roman Catholic Christianity, which forbids birth control. The birth rate there is not likely to decrease, which leads to stable or increasing demand for higher education and therefore high student populations. As for the aspect of politics, when countries have become more

Table 5.1 General information for countries in Southeast Asia

	Geography-size (km^2)	Population		Political systems	GDP per capita (PPP) ($)	Official languages	Religion	Literacy rates (%)
		Numbers	Birth rate (births/1,000 people)					
Brunei	5,765	415,717	17.63	Constitutional sultanate	54,800	Malay	Islam 78.8 %	95.4
Cambodia	181,035	15,205,539	24.88	Multiparty democracy under a constitutional monarchy	2,600	Khmer	Buddhism 96.4 %	73.9
Indonesia	1,904,569	251,160,124	17.38	Republic	5,200	Bahasa Indonesia	Islam 86.1 %	92.8
Laos	236,800	6,695,166	25.23	Communist state	3,100	Lao	Buddhism 67 %	72.7
Malaysia	329,847	29,628,392	20.44	Constitutional monarchy	17,500	Bahasa Malaysia	Islam 60.4 %	93.1
Myanmar	676,578	55,167,330	18.89	Parliamentary government	1,700	Burmese	Buddhism 89 %	92.7
Philippines	300,000	105,720,644	24.62	Republic	4,700	Filipino, English	Chirstianity 82.9 %	95.4
Singapore	697	5,460,302	7.91	Parliamentary republic	62,400	Mandarin, English, Tamil, Malay	Buddhism 33.9 %, Islam 14.3 %	95.9
Thailand	513,120	67,497,151	12.66	Constitutional monarchy	9,900	Thai	Buddhism 94.6 %	93.5
Vietnam	331,210	92,477,857	16.56	Communist state	4,000	Vietnamese	None 80.8 %	93.4

Data in this table are from CIA (2014): The World Factbook (https://www.cia.gov/library/publications/the-world-factbook/)

democratized, higher education will be in the process of massification. It will not only be limited to the elites anymore, but will be accessible to the masses. Myanmar, Cambodia, and Vietnam are examples of such countries. Economic aspects also influence higher education. When the economy of a country becomes better, parents are more likely to encourage their children to pursue higher levels of educational attainment due to the "Asian" value on studying. This will increase the demand for higher education, while its supply normally cannot catch up, which can lead to problems regarding "the quality" of education.

There are currently around 7,000 Higher Education Institutions (HEIs) in Southeast Asia, ranging from small to large ones. The numbers of HEIs in the region are not so different from those in Europe. However, it should be noted that while at least 850[4] HEIs in Europe are research universities,[5] only around 40 HEIs in ASEAN are research oriented.[6]

The numbers of universities in certain countries correspond with their total population. In Southeast Asia, Indonesia has highest population at around 250 million, followed by the Philippines at around 105 million, and Vietnam at around 92 million people. The three countries with the highest numbers of universities are also Indonesia, the Philippines, and Vietnam, respectively. More than half of HEIs in the region (around 3,700) are in Indonesia. However, only 80 of these are national universities; the rest are varyingly sized private universities. The Philippines has the second highest number of universities, at around 2,100, but only 10 % are public universities (110 central public, 80 regional public universities). It is noted that private universities in the Philippines seem to be more highly regarded than in other countries and that the most famous ones are normally affiliated with the Church. Vietnam, a country with the third highest number of universities, has around 400 mostly public universities. It should be noted that higher education in Vietnam has been growing very quickly; 20 years ago there was only a small number of universities there. This rapid growth in numbers of private universities can also be observed in Cambodia and Laos.

The total population of students in Southeast Asia is slightly higher than 20 million, which is similar to Europe with 24 million. Of this number, 12 million of are in Indonesia. The Philippines, Thailand, Malaysia, and Vietnam have around two millions each.[7] Most countries in the region enjoy having greater

[4] This is the number of EUA members, most of which are research universities. There are other research universities which are not members of EUA.

[5] Research is fundamental for national development. Recognition as a research university suggests high quality of the institutions and their graduates.

[6] These numbers are approximations, assigned by governments who took the global ranking of universities into account.

[7] It can be seen that Thailand and Malaysia have around the same student population as the Philippines and Vietnam, which have more HEIs. This is because of the size of universities. Some countries like Thailand may have fewer HEIs than certain countries like Philippines, yet its HEIs can support larger numbers of students.

than a 90 % literacy rate, except Cambodia and Laos with around 74 and 73 %, respectively.[8]

Higher education systems, like general education systems, vary from country to country. Some countries have systems that are highly centralized and regulated by the state Ministry, while others have highly autonomous ones. All of these varieties in higher education, which are themselves influenced by diversity in other aspects of the region, need to be taken into account when considering the harmonization of higher education. For example, different higher education systems mean different points of contact for coordination between and among countries. To illustrate, Myanmar has a highly regulated and centralized system; out of around 160 universities, 68 of them are under the Ministry of Education, while the rest are under ten other Ministries. Any contact regarding universities has to be made through the particular Ministry that a university is under. In contrast, Thailand and Singapore have highly autonomous systems, so it is not necessary to contact the Ministry (unless maybe for financial reasons). Important cooperative practices like exchanging students under a credit transfer system can be done at the level of the institution. The years and academic calendars of higher education also vary from country to country; there are only 2 out of 52 weeks that the 10 countries have a common academic calendar. This is due largely to the respective heritage of each education system's implementation during the time of colonization. This difference in academic calendar also represents a challenge for harmonization efforts.

This chapter speculates that there are at least four main systems in higher education which are crucial to the harmonization process: (1) academic calendar system, (2) quality assurance system, (3) credit systems, and (4) degree system, which will be further discussed in section "Methods: How to achieve harmonization".

Definition: What Is the Harmonization of Higher Education?

It cannot be denied that regionalization or harmonization continues to be a trend in higher education. In this chapter the word "harmonization" is preferred to "regionalization" since the word "harmonization" is by itself more widely known in the region and can also convey better the concepts that will be narrated later. The word "regionalization" provides more implication of the sense of homogeneity and uniformity, which actually will not be included in the current discussion of higher education. Still, many scholars use the word "regionalization" specifically noting that some concepts such as homogeneity and uniformity are not included in this word. For example, Jane Knight (2011) defines regionalization of higher education as "a process of facilitating, promoting, building and strengthening closer collaboration and alignment among higher education actors within a designated area or

[8] For more information, see Table 5.1.

framework called a region" (p. 10) and particularly notes that concepts of standardization, uniformity, conformity, and homogenization are not included in this regionalization. In contrast, the word "harmonization" itself literally means "to harmonize," and thus it does not convey the sense of such undesirable concepts as uniformity and standardization. Sameness is not required to be in harmony with others; compatibility, however, is. The harmonization of higher education therefore means having "a point of reference" for the comparison of the qualities and capabilities of students from different universities in different countries. The diversity and identity of each country will be preserved with harmonization, since they are what attract the process of harmonization in the first place. If higher education in every country were to pursue similarity, there would be no point to facilitate the circulation of human resources in the region, since these human resources would have lost their uniqueness. In contrast, the aim of harmonization is to make higher education in the region "comparable" and "compatible" while still able retain its charm of identity and diversity.

Reasons: Why Is the Harmonization of Higher Education in Southeast Asia Essential?

Education, particularly higher education, is not an end in itself; it is more like an instrumental path for a better society, since human resources are important for every aspect of development. To create a truly cohesive and peaceful regional community with effective cooperation, it is imperative to bring higher education among the nations in the region closer.

Stated simply, the harmonization of higher education in Southeast Asia is essential because it will immensely strengthen ASEAN and enable member countries to compete with countries in other regions effectively in this era of globalization. It is also a global trend in higher education to fairly accommodate education liberalization, transnationalization, and transformation toward knowledge-based societies (Yavaprabhas 2010).

Established in 1967, ASEAN currently aims to create an "ASEAN Community" by 2015. The "ASEAN Community" will be comprised of three interrelated pillars: economic, political, and sociocultural. To strengthen one pillar can also help to strengthen the others. Education is fundamental to all three pillars. The author speculates that these three pillars are not only inseparable but also intertwined in the way that education serves as a basis for its sociocultural pillar as well as the others. Education "educates" and "shapes" humans, while it also reflects society and human culture. Human resources created through education are surely important for the further development of better cooperation in regional politics and economics.

The harmonization of higher education is an essential infrastructure that can both improve the quality of human resources and facilitate the effective circulation

of human resources in the region. The ASEAN Community in 2015 is envisioned in the author's eyes as "the SEA of Knowledge," where qualified graduates of any ASEAN nation can be employed in another. Were his not to be the case, one could not pull strength from others and human resource synergy would not be able to take place. "Brain exchange" within the region and with other regions is important to the region and the world. The author hopes that ASEAN can establish a harmonized, common space for higher education that is multicultural in the sense that people respect diversity, realize common values, and are ready to deploy them in practical practices for better societies (Yavaprabhas 2010). Through the harmonization of higher education, ASEAN's economic and political pillars will be strengthened both directly and indirectly from strengthening the sociocultural one. In this way, ASEAN will become truly one community as aspired to by the ASEAN countries.

Actors: Who Can Lead the Drive for Southeast Asian Harmonization?

Multi-stakeholders who can drive Southeast Asia toward the successful harmonization of higher education can be roughly grouped into five groups as follows.

Governmental Sectors Responsible for Higher Education

In Southeast Asia, normally cooperation regarding higher education issues is done through governmental sectors responsible for higher education, which have different names in different countries, for example, the Ministry of Higher Education in Malaysia, the Commission on Higher Education and Development in the Philippines, and the Office of the Higher Education Commission in Thailand.

Normally, governmental bodies are comprised of two groups: the political group (ministries responsible for higher education) and the senior official group (senior officers). These two groups are not independent from each other. The senior officers are the one who normally "create" policy options and the ministries are the ones who decide what policies are to be supported, with the senior officers being the ones who carry out policy actions. The political group usually has a certain agenda that they want to support and pursue. Unfortunately, higher education issues, unlike basic education, are rarely prominent on their regional agendas. Prominent issues on individual country agendas continue to be "Education Hub," "Internationalization," "International Student Mobility," "Research University," "University Autonomy", and "World Class University." Most existing issues on regional agendas are tabled at the meetings of senior officers. Those policies that cannot gain public attention will usually receive little attention from the political group. Policies concerning international cooperation of higher education are discussed at two

meetings, SEAMEC and ASED, further details of which can be found in section "Regional organizations" below. More proactive roles in the harmonization of higher education at the regional table are essential in order to make it possible.

QA Agencies

Quality Assurance Agencies (or QA Agencies) are responsible for ensuring the quality of HEIs. Unlike in Europe and some other developed countries, all QA Agencies in Southeast Asia operate either under Ministries of Education or governmental sponsorships, except in the Philippines, whose QA Agencies operate independently (Dhirathiti and Yavaprabhas 2008). This means that agreement at the governmental level is important for cooperation within the international quality assurance network. QA Agencies are responsible for the external quality assurance[9] of each country.

Currently only half of the countries in Southeast Asia have their own national quality assurance systems and QA Agencies: Cambodia (ACC), Indonesia (BAN-PT), Malaysia (MQA), the Philippines (AACCUP, PAASCU, etc.), Thailand (ONESQA), and Vietnam (Department of Education Testing and Accreditation). In Myanmar and Laos, quality assurance systems are still in the developing stage.[10]

The external quality assurance exercise, for which the QA Agencies of each country are responsible, is not conducted every year, with frequency varying from country to country. For example, in Thailand, external QA is conducted every 5 years, and in Malaysia, if the university has passed the external QA, it will not be necessarily assessed on a regular basis in order for a university to become a self-accredited one.

AQAN (ASEAN Quality Assurance Network)[11] can be regarded as a regional external quality assurance body; for example, it cannot function without the cooperation of QA Agencies in different countries and cooperation at the governmental level.

Regional Organizations

There are a few regional organizations working toward promoting cooperation in higher education in the region, including the following:

[9] Further details on quality assurance systems in the region can be found in section "Quality assurances systems (QA systems)".

[10] Unlike other countries in the region, Singapore uses external QA systems from developed countries, and they are under the framework of the Ministry of Trade.

[11] For further information, see section "ASEAN quality assurance network (AQAN)".

ASAIHL – The Association of Southeast Asian Institutions of Higher Learning[12]
UMAP – The University Mobility in Asia and the Pacific[13]
AUAP – The Association of Universities of Asia and the Pacific
APRU – The Association of Pacific Rim Universities[14]
AUN – ASEAN University Network
SEAMEO RIHED – SEAMEO Regional Center for Higher Education and Development

However, in the past 10 years, it is noted that only two organizations, SEAMEO RIHED and AUN, have been taking prominent roles in promoting the harmonization of higher education. UMAP, ASAIHL, AUAP, and APRU do not have a clear agenda regarding the harmonization of higher education, even though their activities can help facilitate the harmonization process to some extent. In addition, only SEAMEO RIHED and AUN have their members exclusively in Southeast Asia (Table 5.2).

SEAMEO RIHED[15] (SEAMEO Regional Center for Higher Education and Development)

Established in 1965, SEAMEO (the Southeast Asian Ministers of Education Organization) is a regional intergovernmental organization that aims to promote cooperation in education, science, and cultures in Southeast Asia. Currently SEAMEO has 20 specialist centers, yet only one of them concerns higher education (i.e., SEAMEO RIHED) (SEAMEO 2012).

Initially founded in Singapore in 1959, reorganised and established in Thailand in 1993, SEAMEO RIHED works with high or senior officers responsible for higher education in all countries in the region. Since its work is at the level of "government," agreements at meetings hosted by SEAMEO RIHED are highly likely to affect all HEIs in every country in the region, which means around 7,000 HEIs.

The annual meeting among the Director General, Secretary General, and Commissioner of Higher Education in Southeast Asia were initiated in 2005. Before that time, there was no available stage for these senior officers to discuss higher education in the region. The meeting leads to possible "kick off" of harmonization initiatives in Southeast Asia, which SEAMEO RIHED has a clear agenda to support, particularly in term of policies.

Apart from hosting the important regional meeting annually, SEAMEO RIHED, the organization who initiated the harmonization process in the region and is the main organization that moves the process at the governmental level, has also

[12] Further information can be found at http://www.seameo.org/asaihl/
[13] Further information can be found at http://www.umap.org/en/home/index.php
[14] Further information can be found at http://www.apru.org/
[15] Further information can be found at http://www.rihed.seameo.org/mambo/index.php

Table 5.2 Comparison of regional organizations

		Members					
		Countries		HEIs			
	Year of establishment	Total	In SEA	Total	In SEA	Governmental or private organization	Harmonization agenda
SEAMEORIHED	1959	11	11	–	–	Governmental	Yes
AUN	1995	10	10	30	30	Governmental	Yes
ASAIHL	1956	21	9	183	132	Non-governmental	No
UMAP	1993	31	11	472	159	Non-governmental	No
AUAP	1995	18	6	218	113	Non-governmental	No
APRU	1997	16	5	45	5	Non-governmental	No

Data in this table are from their own websites (2014)
SEAMEO RIHED: http://www.rihed.seameo.org/
AUN: http://www.aunsec.org/
ASAIHL: http://www.seameo.org/asaihl/
UMAP: http://www.umap.org/en/home/index.php
AUAP: http://auap.org/
APRU: http://apru.org/

created numerous projects to further facilitating the harmonization process. The main achievements include "M-I-T Initiatives",[16] SEA-CTS,[17] and AQAN,[18] which facilitate the mobility of students and staff and help harmonize credit transfer systems and quality assurance systems.

AUN (ASEAN University Network[19])

AUN aims to serve as the policy-oriented body in higher education. It has an agenda in harmonizing higher education in Southeast Asia because it is part of ASEAN organization. The harmonization of higher education is supported to help pave the way toward the ASEAN vision for 2020. However, it should be noted that only 30 premier universities in ASEAN countries are members of AUN.

AUN is a leading organization that motivates the harmonization process at the university network level. It is the only gateway for cooperation between ASEAN and ASEAN partners, since it is the only body that can table proposals through ASED for the ASEAN Summit. It has thus been contributing heavily to the harmonization process in the region, primarily through AUN-QA[20] and ACTS,[21] bodies which can help harmonize the quality assurance and credit transfer systems, respectively. In addition, AUN also supports various academic exchanges, hosts regional academic meetings, and creates online academic networks and databases.

SEAMEO RIHED and AUN are also responsible for two main regional meetings concerning international cooperation in education in the region: the SEAMEO Council Conference (SEAMEC) and ASEAN Education Ministers Meeting (ASED).[22] SEAMEC, cooperated mainly by SEAMEO, is an annual meeting of the Council of Southeast Asian Ministers of Education Organization, which consists of education ministers from SEAMEO member countries (all countries in Southeast Asia). If the education ministers agree with certain methods or policies proposed in their meetings, they are likely to implement them in their countries, which can help facilitate the harmonization process. It should be noted that harmonization of higher education is still not regarded as a priority within SEAMEC and the meeting is not directly linked with upper-level meetings among nation leaders like the ASEAN Summit, which make it difficult for agreed proposals to realize implementation. Unlike in SEAMEC, agreements in ASED (through which AUN can make proposals) have greater potential to be put into practice, since ASED can

[16] For details, see section "UMAP credit transfer scheme (UCTS)".

[17] For details, see section "Southeast Asian credit transfer system (SEA-CTS)".

[18] For details, see section "ASEAN quality assurance network (AQAN)".

[19] Further information can be found in http://www.aunsec.org

[20] For details, see section "ASEAN university network-quality assurance (AUN-QA)".

[21] For details, see section "ASEAN Credit Transfer System (ACTS)".

[22] It should be noted that members of senior official meetings and ministerial meetings of SEAMEC and ASED are by and large the same persons.

further propose agreements to the ASEAN Summit. If nation leaders in the meetings agree with proposals, they have high potential to be effectively implemented.

The current challenge is to motivate more existing regional organizations to exploit their full capacities to press for the harmonization of higher education in the region.

Higher Education Institutions (HEIs) in Every Country

HEIs in every country, whether private or public, are also important for harmonizing higher education. Without the willingness of HEIs to cooperate, important progress in harmonization cannot be possible.

The point of whether or not a certain university is public or private influences its interest in certain aspects of the harmonization. Public universities, which normally contain a large number of students and are research oriented, usually pay attention to not only student exchange but also research collaboration and research-oriented dual/joint degrees. Private universities, which are normally teaching oriented, usually focus on students exchange and have international, full-fee students at their universities.

Some scholars (e.g., Hawkins 2012) suggest that one of the problems with harmonization in Asia, including Southeast Asia, is that although regional educational organizations attempt to facilitate the process, it seems that individual HEIs still have not sufficiently cooperated to allow significant progress. This problem can be found in every region, even in the most advanced region of the harmonization process, Europe. Here, it is apparently noted that not all 6,000 HEIs have enthusiastically participated in the Bologna process, even though it has been being implemented for around 14 years already.

The harmonization process is a long journey. It always takes time to have everyone on board. The "train," however, still has to move forward no matter how many passengers it has with its entrances remaining open to more potential passengers. When the "train" becomes more "desirable," there will be surely more passengers on board.

Others

Other possible actors in the harmonization process include students and employers. In the European harmonization process, student unions and employers, and particularly industrial sectors, play significant roles. The situation seems to be different in Southeast Asia, where students are not encouraged to become involved in university management as they are in Europe. Perhaps the exceptions are the Philippines, which have received an educational heritage from the USA and Indonesia, the latter of which has just started to encourage student participation in

decision making. Employers in this region also play much less significant roles than in Europe.

Participation of multi-stakeholders in the process of harmonization can be grouped into three levels. First, there is an intergovernmental process in which governments from different countries become involved in a series of negotiation discussions, which result in some forms of policies, framework, and guidelines. Second, the policies, framework, and guidelines initiated by government will be put into practice. HEIs, staff, and students are the ones who are expected to respond positively and also actively contribute to the process. Finally, public and employment sectors' inputs also play an important part in this process. As for the role of regional organizations in the process of harmonization, it is to enable cooperation between multi-stakeholders, which will foster the process and make it possible.

Methods: How to Achieve Harmonization?

As mentioned earlier in this chapter, four main systems that are directly related to the harmonization of higher education are (1) degree systems, (2) quality assurance systems, (3) credit systems, and (4) academic calendar systems. This section will explore these main systems in the region, outline attempts to harmonize them, and suggest further possibilities.

Degree Systems

"Degree systems" here refers to both time needed to complete a certain degree and grading systems. Having comparable and readable degrees is crucial for the harmonization of higher education in a certain region. This can be seen from Europe; the Bologna Declaration launched in 1999 has one of its main objectives the creation of a readable and comparable degree system. The author suggests that this is the most important factor for the harmonization of higher education in Southeast Asia. This is because the degree system is the base for other developments: the credit transfer system, quality assurance system, and academic calendar system.

The time required to complete basic education and higher education degrees in Southeast Asia are relatively the same, yet it can still be an obstacle for the harmonization of higher education. All ASEAN countries require 12 years for basic education except the Philippines and Myanmar, which require 10 years and 11 years, respectively. In most ASEAN countries, the minimum time required for completing higher education degrees is generally around 4 years for bachelor's degrees, 2 years for master's degrees, and 3 years for doctoral degrees. However, it should be noted that the time is slightly varied so as the number of hours required for certain credits (see Table 5.3 for more information). These can lead to the

problem of qualification recognition between and among different countries, which can bring about many other problems concerning student and staff mobility in higher education. To illustrate, exchanging students and academic staff between different countries and having joint/dual/double degrees will not be possible. This is because normally, hours and years that students have spent studying are used for comparing degree qualification.

Moreover, differences in grading systems can also be a great obstacle for harmonizing higher education in the region since the degree from certain countries may not be "readable" to others. Grading systems in Southeast Asia vary from country to country. To illustrate, Vietnam uses a 10-point grading level, Thailand uses A (4.00)–F (0.00), Singapore uses A to F, Philippines uses A to C, Laos uses A to D, and Indonesia uses A to E (See Table 5.3 for more information). This "non-readable" discrepancy is a problem not only for student mobility and the harmonization of higher education but also for the flow of human resources in the region.

Europe also used to face these problems. Its solution was to change the approach of comparing degree qualification from looking at the number of "years" students spend studying to their "learning outcomes".[23] These learning outcomes indicate students' capability and competency after earning certain degrees. In other words, it is a change of approach, from looking at "how many years a student has spent studying" to "what can students do after spending however many years studying." The learning outcomes can be stated in the "diploma supplement" or "degree supplement" to explain what the students can do with the degrees and thus make the degrees become "readable."

ASEAN can also adopt this approach to solve the problems it is facing. Southeast Asia should also have its own diploma supplements. Currently there are no specific policies and no broad implementation plans regarding the diploma supplement. In addition, many countries, such as Myanmar and Singapore, feel that their current transcripts already provide adequate information and do not have any interest in implementing the diploma supplements. Therefore, first of all, sufficient information regarding the diploma supplements and their immense benefits has to be provided to all ASEAN countries. Then, it is necessary to engage stakeholders in ASEAN like Ministries of Education and HEIs. After this, agreement on implementation can become possible (Yavaprabhas 2010).

These learning outcomes can be developed and designed for each and every level of education and then put into the same framework. This framework is normally called an "Educational Qualification Framework." In Europe, each country has developed its own National Qualification Framework (NQF), with all being linked together to become a European Qualification Framework. However, thus far,

[23] General regulations for standard learning outcomes in different degrees (e.g., basic education, bachelor's degree, master's degree) are in the Qualification Framework of each country. This Qualification Framework will state standard capacity that students who receive certain degrees are expected to have. Each country has its own Qualification Framework. For example, Qualification Framework of Higher Education in Thailand is regulated by Thai Qualifications Framework for Higher Education (TQF).

Table 5.3 Comparison of education systems in Southeast Asia

			Higher education					
			Bachelor		Master		Doctoral	
	Grading systems	Basic education	Years (minimum)[a]	Credits required[b]	Years (minimum)	Credits required	Years (minimum)	Credits required
Brunei	A^{+}–F (5.0–0.0)	12	4	124	2 (Some programs =1)	40	–	–
Cambodia	A–F (4.0–0.0)	12	4–6	120–160	2–3	45–57	–	54
Indonesia	A–E	12	4	144	2	36	2	≈ 40
Laos	A–D	12	5	150	1.5	36	–	–
Malaysia	2.7 to 3.00/3.70		3	120	1	40	3	–
Myanmar		11	3–5	140–200	2	138	5	–
Philippines	A–C	10	4	Varied	2	Varied	3–5	–
Singapore	A–F	12	≈3–4	–	≈1–3	–	2–5	–
Thailand	A (4.00)–F (0.00)	12	4	120	2	36	3	–
Vietnam	10 points	12	4	135–140	3	– (module system)	3	–

Information in this table is from Hotta (2010)

[a]Minimum number of required years is for programs in general. Certain programs such as medicine may have different numbers of years

[b]It should be noted that the numbers of hours required for each credit in different countries are varied

only few countries in Southeast Asia have developed their own National Qualification Framework (i.e., Indonesia, Malaysia, the Philippines, Thailand). Despite this fact, an ASEAN Qualification Framework is being developed to serve as an outline for a qualification standard.[24]

Quality Assurance Systems (QA Systems)

In order to harmonize higher education in the region, it is necessary to be able to compare the "quality" of students from different universities in different countries. To achieve this, the quality assurance systems in different countries need to be comparable and compatible. It is essential that the region develops quality assurance networks, the registration of quality assurance agencies, and standard guidelines for quality assurance in higher education.

Considering the disparity of quality assurance systems and their development in the region, striving for comparable and compatible quality assurance is certainly not an easy mission. Currently, only half of the countries in Southeast Asia have their own national quality assurance systems, as mentioned in section "QA agencies". Despite all difficulties, there have been attempts to establish quality assurance networks in the Southeast Asia region. Before the establishment of these networks, there had already been quality assurance networks in the Asia-Pacific region, such as INQAAHE and APQN, which are internationally recognized. Yet, it is still necessary to develop a subregional quality assurance network specifically for ASEAN countries in order to boost quality assurance development in the region and in turn to facilitate the harmonization of higher education in Southeast Asia. AUN-QA and AQAN were thus created to fill in the gap in the region.

These quality assurance networks were created to make quality assurance systems in the region comparable and compatible. AUN-QA can be said to be a form of international *internal* quality assurance, while AQAN can be regarded as international *external* quality assurance. In addition, AUN-QA will be applied basically only to AUN member universities, while AQAN aims to be applied to all HEIs in every country.

ASEAN University Network-Quality Assurance (AUN-QA)

AUN-QA was initiated by AUN in 1998 and has been gradually developed by the joint efforts of its members, comprising 26 universities in all 10 ASEAN countries. It is the first attempt to establish subregional QA networking in this region, supervised by a group of Chief Quality Officers (CQOs) appointed by AUN member universities. It can be regarded as a means of international internal quality

[24] http://thainews.prd.go.th/en/news.php?id=255503200016

assurance, because it is assessed by a group appointed by university networks. This implies that this kind of quality assurance is controlled by universities who are members of AUN.

AUN-QA has three milestones: (1) AUN-QA Guidelines, (2) AUN-QA Manual for the Implementation of Guidelines, and (3) AUN Actual Quality Assessment at Programmed Level. Despite having only 26 member universities, AUN-QA is open to all universities in the region who wish to be assessed. It is noted that AUN-QA is a voluntary assessment. If certain member universities do not wish to be assessed by AUN-QA, then AUN will not assess them. This is different from quality assurance as conducted by QA Agencies, which is required by national law.

ASEAN Quality Assurance Network (AQAN)

The ASEAN Quality Assurance Network (AQAN) was established in July 2008 with cooperation between SEAMEO RIHED and the Malaysian Qualifications Agency (MQA). AQAN is designed to create "a human network on quality assurance" which provides a better mobility and cooperation among higher education institutions (HEIs) in Southeast Asia. AQAN can be regarded as international external quality assurance network because its members comprise the national QA agency. Its aim is to enable representatives from different countries in the region to discuss and exchange ideas regarding policies and practices of quality assurance, which can lead to knowledge about the similarities and differences between the quality assurance systems in different countries. This knowledge is essential for the further development of comparable and compatible quality assurance systems in the region. In addition, AQAN can also help strengthen quality assurance networks in broader areas such as the APQN and the UNESCO-APEID by addressing clearer needs, problems, practices, and developments from the Southeast Asian perspective.

It is noted that AQAN emulates the European Association for Quality Assurance (ENQA) in Higher Education, which represents the EU's step in striving toward the harmonization of higher education in that region. Currently, AQAN is working closely with AUN to facilitate networks of QA assessors and share information on good practices in QA exercises. This active collaboration is very important for the harmonization of higher education in Southeast Asia. Moreover, both AUN and AQAN must discuss and develop joint proposal on QA guidelines and criteria and have them tabled to ASED and SEAMEC for consideration and endorsement. With endorsement and support from both ASED and SEAMEC, true comparable and compatible systems of QA in the region can be realized.

Credit Systems

The importance of a credit transfer system to the harmonization of higher education has long been recognized by the European Union, which has implemented the European Credit Transfer System (ECTS) since the 1980s. ECTS is used under the Erasmus program in the European Higher Education Area (EHEA), which includes all European countries partaking in the Bologna process.

After the creation of the ECTS, other regions also aspired to create their own credit transfer systems to help facilitate student mobility and move toward the harmonization of higher education. UCTS and ACTS are credit transfer systems that countries in Southeast Asia are currently deploying, while SEA-CTS is still in its initial development process.

UMAP Credit Transfer Scheme (UCTS)

UCTS, created by University Mobility in Asia and UMAP, is the first credit transfer system that was designed to be used in the Asia-Pacific region, including Southeast Asia. It was launched in 1993, modeled after ECTS to facilitate the mobility of university students in the Asia-Pacific region. UCTS is used with student exchange programs between UMAP member universities. It should be noted that although UCTS emulates ECTS, it does not focus on learning outcomes to the extent that ECTS does. This is because many features essential to state learning outcomes of students have not been sufficiently developed in the region.

Currently, there are around 438 universities which are members of UMAP. These universities are located in 21 countries across the Asia-Pacific region. Still, only 6 out of 10 countries in ASEAN join UMAP now. In addition, some scholars (e.g., Nguyen 2009) note that UCTS has been rather poorly put into practice and very few HEIs actually utilize it.

Some countries in ASEAN still attempt to further utilize UCTS to its full capacity. In 2009, a pilot project among three countries in Southeast Asia called "M-I-T Initiatives" was launched by SEAMEO RIHED. The three countries participating in the project were Malaysia, Indonesia, and Thailand as can be presumed from the capital letters in acronym. M-I-T Initiatives is a project for exchanging students among these countries, with their credits being transferred from their original universities to universities in the other countries. UCTS is utilized to assist this credit transfer for student mobility.

ASEAN Credit Transfer System (ACTS)

Awareness of the importance of having a credit transfer system specifically for Southeast Asian countries leads to the development of ASEAN Credit Transfer System (ACTS), which was modeled on ECTS by AUN in 2010. It is applied with

all 26 AUN member universities and particularly aims at preparing students for ASEAN integration in 2015. ACTS is utilized under the AUN Student Exchange Program. Currently, there are up to 12,270 courses available.[25]

Southeast Asian Credit Transfer System (SEA-CTS)

Although ACTS has been developed, it is still not applicable to all HEIs in Southeast Asia. Thus, there is a further attempt to create a more effective credit transfer system for all HEIs in the region by SEAMEO RIHED, called Southeast Asian Credit Transfer System (SEA-CTS). In the 5th meeting of Directors General/Secretary General/Commissioner of Higher Education in Southeast Asian Region in March 2011, six key recommended principles for the development of SEA-CTS were agreed to be enacted.

Establishing a regional credit transfer system is important as mentioned earlier, yet there are many obstacles for developing an effective credit transfer system in the region. First, some countries in Southeast Asia (Laos, Cambodia, and Myanmar) have not implemented the credit system yet. Second, the credit systems vary from country to country. One credit in each semester in each country requires a different duration of study; hours in the region can vary from 12 to 16 weeks.

In order to successfully harmonize credit systems in the region, it is imperative that one among various credit transfer systems created is adopted. This can be done first through discussion at the level of academia and universities and then table an agreement with senior officers, with final submission to ASED[26] for endorsement and enforcement.

Another option is through the effort of either AUN or SEAMEO RIHED, or both, to offer policy options on this issue. CTS tabled it to senior officers meeting, then to SEAMEC, or ASED for further consideration and endorsement.

Academic Calendar Systems

In Southeast Asia, academic calendar years in each country are different due to mainly their education system models. Currently, half of the ASEAN countries, Cambodia, Indonesia, Laos, Malaysia, and Singapore, follow the international bi-semester system (1st semester (September to December) and 2nd semester (January to May)). Vietnam and some universities in the Philippines have trimester systems. The rest have bi-semester systems, yet with different time spans.

[25] Further information regarding ACTS can be found on http://acts.ui.ac.id/

[26] See section "Regional organizations" for more information about the meetings on regional education.

Harmonizing academic calendar systems will facilitate the flow of student and staff in the region and also the harmonization of higher education as a whole. In order to harmonize academic calendar, it should be proposed in ASED that every country in the region has a similar academic calendar in the period that every country agrees upon.

Conclusion: Beyond the Boundaries

The harmonization of higher education is truly a long journey. In Southeast Asia, the way it has started – gradually moving and gaining momentum – is not the same as the process seen in Europe. In Europe, there is strong political will and sufficient resources since the significance of harmonization is recognized and shared among multi-stakeholders. Still, it has already been more than 14 years since the start of the process and it is still ongoing. Many important factors have been in place, for example, diploma supplements,[27] European Qualification Framework, quality assurance registrar and network, European Credit Transfer System, and similar academic calendar. The current attempts are, for example, joint degree and joint curriculum.

In contrast, in Southeast Asia, the political will is still under cultivation and the supporting resources are not always so available. Yet, dialogue among senior officers and key universities in the region has already taken place and gained momentum. Universities are quite aware of the need to "connect and be connected" with partner universities. Academic staff and students also realize the need to reach out to partners in the region and at the same time revisit their own systems.

The harmonization process in Europe can be compared to the orchestra management with the Bologna process as a conductor for others to play along. It is well plotted and well planned. In Southeast Asia, however, the harmonization process is more like the "jazz management," with focus more on the improvisation of every player who takes turns to be the leader. What can be done will be done first, and eventually all will be completed. This is the ASEAN way.

The ones who have to play significant roles in moving the harmonization process here are regional organizations, particularly SEAMEO RIHED and AUN, who have a clear agenda to harmonize higher education in the region. SEAMEO RIHED has to work at the level of government and the Ministries of Education, while AUN works at the level of leading universities' network. SEAMEO RIHED and AUN should cooperate in tabling policy options to senior officers meetings, SEAMEC and ASED, and then further it to the ASEAN Summit in order to promote a joint statement of ASEAN leaders, which can help in effectively implementing policies to broaden targets and further gain supportive resources. For example, AUN-QA and ACTS initiated by AUN should be further proposed by RIHED to the ministerial level in order to make them "national/regional policies," which can enhance their effects.

[27] Diploma supplements in Europe are still not successfully implemented in all HEIs.

In addition, exchanging knowledge and experience with other regions, especially "the plus 3" (Japan, Korea, and China) and Europe, is essential in the working process. Other existing regional organizations that currently do not have a harmonization agenda should also be motivated to realize the significance of harmonization and thus exploit their full capacities to move the process in the region.

Comparing to other regions throughout the world, the harmonization of higher education in Asia is still far behind. Southeast Asia, a subregion of East Asia and Asia, can be regarded as having taken a firm step in moving toward the successful harmonization of higher education. The harmonization process here is not only an important process in itself but also a significant step toward the harmonization of higher education in East Asia and the whole Asia, respectively.

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Chapter 6
China-ASEAN Relations in Higher Education: An Analytical Framework

Anthony Welch

Introduction

Just as with outside perceptions of China more generally, China-ASEAN relations tend to be seen through the prism of economics. At best, this represents an unfortunate compression of a much richer, more long-standing set of relations. While economics is certainly an important dimension, this one-eyed view ignores the long-standing history of relations between the two, the diverse and complex array of bilateral relations with China among ASEAN member states, a developing China-ASEAN regional architecture, the changing regional security situation occasioned by China's rise, the wider significance of the substantial Chinese diaspora in Southeast Asia and the much richer array of contemporary connections that certainly includes higher education.

That said, there is no doubt that the recognition of China's economic rise, together with growing China-ASEAN economic complementarity, has helped propel deeper relations, including in higher education. China's much appreciated intervention in the aftermath of the regional currency crisis of 1997–1998, offering a major loan to Thailand and helping to raise loans for Indonesia, was widely noted in the region, as were President Hu Jintao's repeated statements of 'China's peaceful rise', paralleled by China's formal assent to the ASEAN's Treaty of Amity and Co-operation and Joint Declaration on Strategic Partnership for Peace and Prosperity, in 2003 (Cheow 2004; Vaughan and Morrison 2006; Whitney and Shambaugh 2008). The US$ 3 billion provided in aid by China in the aftermath of the terrible tsunami of 2004 was also appreciated, as have been further soft loans to ASEAN member states, and partial funding for key development projects (Laksmana 2011).

Dedication: Dedicated to Janet Twigg Paterson (1938–2012)

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The China-ASEAN Free Trade Area (CAFTA) that came into effect in January 2010 offers great potential to ASEAN member states, more particularly in areas such as farm produce, mechanical processing and marine products but also in service sector trade, including tourism, finance and higher education. The spectacular growth of Chinese outbound tourism in recent years, for example, has been paralleled by a desire to explore the neighbourhood, with ASEAN member nations being major beneficiaries. Of the top ten destinations for Chinese tourists in 2011, four were from ASEAN. Of the overall total of 70.25 million trips taken by Chinese outbound tourists, Malaysia hosted 1.74 million, Thailand 1.52, Vietnam 1.14 and Singapore 1.0 million (*China Daily* 2012a). China is also becoming an important tourist destination for ASEAN, with 4.98 million visits registered in 2008 (Tong and Chong 2010, p. 7). In turn, this burgeoning trend is spurring demand for associated services, including higher education services and Chinese language training, in those countries. ASEAN is now a distinct and growing priority for China's higher education policy, part of its wider ambition to boost its projection of soft power within the region. A notable example consists of China's *Confucius Institutes* that are spreading among its ASEAN neighbours: 12 in Thailand, 7 in Indonesia, 3 in the Philippines, 2 in Malaysia, 2 in Myanmar, 1 in Singapore, 1 in Cambodia and 1 in Laos (Yang 2012). Nonetheless, as will be seen below, nationalism plays its part in restricting foreign incursions, including within the growing service sector. Two contrasting examples occurred in 2012, in the banking industry: In Indonesia, a proposed takeover of Indonesia's *Bank Danamon*, by Singapore's DBS Group Holdings, raised nationalist hackles (in the former), while at the same time, Singapore announced it would grant full banking licences to two Chinese banks (of which one would act as a clearing house for yuan-denominated transactions), under the umbrella of the China-Singapore Free Trade Agreement (*SMH* 2012b; Reuters 2012). In turn, China promised to expedite all applications by Singapore banks for the establishment of branches and sub-branches in China.

Overall, ASEAN's trade with China surpassed that of Japan in 2011, to become China's third largest trading partner, rising 24 % over the year to US$362.3 billion, after the USA at US$447 billion and the EU at US$567 billion (*China Daily* 2012b). An indication of growth is that in 1990 total bilateral China-ASEAN trade had been estimated at US$39.5 billion and US$139.9 billion in 2006 (Welch 2011b, p. 40). China is already Indonesia's largest trading partner, for example, with huge Chinese investment in Indonesia's oil and gas sector, despite the fact that the latter did not resume formal diplomatic ties with China until 1990 and a history of 'ambivalence' (Laksmana 2011). Bilateral trade surpassed US$40 billion in 2010, with Indonesia concerns at a trade deficit of over US$5.5 billion leading to it exempting almost 400 categories of goods from the 2010 CAFTA (Laksmana 2011). According to Zhang Wei, Vice-Chairman of the China Council for the Promotion of International Trade, the fact that trade with ASEAN is growing much faster than with the EU or the USA (each currently beset by significant economic headwinds that are unlikely to end in the shorter term [*New York Times*], 2012) means that ASEAN is set to overtake the other two within the coming years:

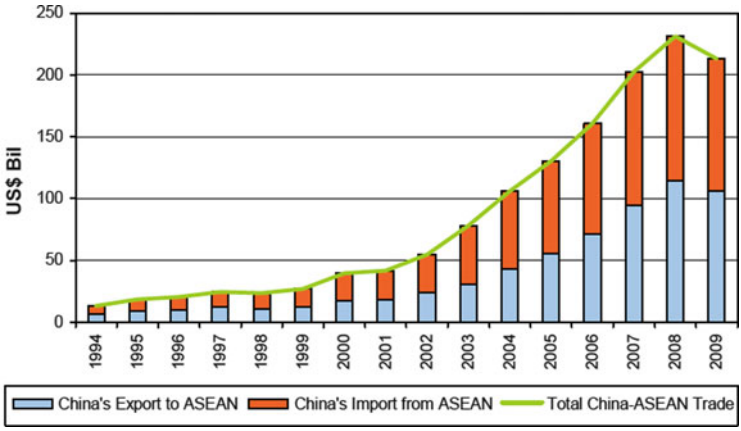

Fig. 6.1 China-ASEAN total trade, 1994–2009 (Source: Tong and Chong 2010, p. 4)

Thanks to zero tariffs, preferential trade policies, and geographic advantages, both the increasing speed and scale of that trade will be in the forefront globally, and ASEAN will become China's No 1 trading partner by 2015 (*China Daily* 2012b).

This trend would doubtless be enhanced if China decides to join the recently announced ASEAN Framework on Regional Comprehensive Economic Partnership (RCEP), as some indications suggest (Wu and Mealy 2012) (Fig. 6.1).

Territorial Disputes

What makes this all the more remarkable is that it occurs against a background of territorial disputes between China and almost all of its ASEAN neighbours (*Australian* 2012b). China, it should be recalled, is bounded on its southern border by several Southeast Asian states, Vietnam, Burma [Myanmar] and Laos, while also sharing sea borders with all of the Southeast Asian countries, with the exception of Burma [Myanmar] (see map following). As recently as 2011, China was involved in disputes with both the Philippines and Vietnam in the South China Sea, while 2012 saw a further maritime confrontation between China and the Philippines and the passage of a law in Vietnam asserting sovereignty over the Paracel and Spratly islands (termed by the Chinese Nansha and Xisha, respectively) that led to sharp Chinese criticism (*Australian* 2012b; *SCMP* 2012a, b; *SMH* 2012a).

Perversely, from China's point of view, such disputes have pushed each of these countries, and several neighbouring states, into closer defence alliances with the USA (*Australian* 2012a; Prantl 2012). Both China and her ASEAN neighbours have been boosting their maritime fleets, with a view to strengthening their capacity to defend what they see as their legitimate interests (Laksmana 2011). Notwithstanding close ties, growing trade and more integrated economies and a sense among

Fig. 6.2 China and ASEAN

some ASEAN member states that China's rise may help reduce their dependence on the USA, there is still a degree of reserve and hedging on the part of Southeast Asia, with respect to China's rise (*Australian* 2012a; Osborne 2006; Wang 2005; Whitney and Shambaugh 2008), and, at least among some, a sense that China may be trying to drive a wedge between the more pro-US ASEAN member states (Indonesia, Thailand, Malaysia, Brunei, Singapore, Philippines) and the more pro-China camp (Myanmar, Laos, Cambodia, Vietnam) (Laksmana 2011). Thus for some ASEAN states, the priority, as expressed specifically by Indonesia during its period as Chair of ASEAN, is to maintain a 'dynamic equilibrium' in the region (Fig. 6.2).

Anti-Chinese Sentiment

A further element complicating China-ASEAN relations is ethnic. Long-standing concerns about Chinese minorities in several ASEAN member states, notably their disproportionate importance in national economies, have also issued in intermittent outbreaks of violence directed against local Chinese groups. Such incidents began several centuries ago, as the history of Chinese settlement in Southeast Asia reveals (see below). In more recent times, the aggressive campaign against the *Partai Komunis Indonesia* (PKI) in Indonesia in 1965, at the time the second largest Communist party in Asia, was precipitated by an attempted *putsch* in 1965 that many Indonesians suspected had support from both local Chinese and Beijing. The putsch, which resulted in the killing of several (six) generals, unleashed bloody reprisals against the PKI across Indonesia. Of the hundreds of thousands of victims, some were simply killed due to their Chinese origin (Farram 2010; Suryadinata 2003; Wang 2005), part of resentment at Beijing's support for the PKI, and perceived attempts to lure local Chinese into greater loyalty to the Chinese regime. Indonesia-China diplomatic relations, formally re-established only in 1990, have long been affected by a widespread view of ethnic Chinese Indonesians as 'the other': 'a separate 'race' with a different religion and special economic privileges, unwilling to change and only concerned with its own well-being' (Laksmana 2011). Anti-Chinese riots occurred as recently as 1994, in Medan, while bilateral relations, frozen by President Suharto in 1967, did not fully recover until the short-lived Presidency of Abdurrahman Wahid, inaugurated in 1999 (Conboy n.d.). Notwithstanding improved relations, according to one source, the perceived 'triple China threat' (Communism, Indonesian Chinese and Beijing) never fully dissipated, at least among the more militant representatives of the army and conservative Muslim groups (Laksmana 2011), despite significantly improved relations after Indonesia's democratisation, post 1998.

In Malaysia, bloody riots erupted between Chinese Malaysians and ethnic Malays (known as *Bumiputras*) in 1969. Long-standing Malaysian policies conferring preference upon ethnic Malays, including quotas for Chinese Malaysians in higher education (now acknowledged by one of its major proponents as counter-productive), were supposedly to compensate for the under-representation of ethnic Malays in the domestic economy. These anti-Chinese sentiments have at times erupted into violent riots targeting Chinese minorities in both Malaysia and Indonesia, including incidents in higher education. In Indonesia, such riots occurred at the same HEI in 1965 and again in the dying days of the Suharto regime in May 1998, when four students were shot dead, followed by larger anti-government riots, some directed against Chinese communities that resulted in 1,217 deaths and many burnt alive (Welch 2011b, pp. 33–4; *Jakarta Post* 2012). Vietnam, too, which as recently as 1979 was engaged in a war against China, has again seen anti-Chinese demonstrations in 2011 and 2012, in response to rising maritime tensions between the two (Yale Global 2012).

In this context, it should be remembered that ASEAN, established in 1967 during the Cold War, was in large part founded as a bulwark against rising Communism in the region, notably what was then perceived as Chinese expansionism (Jarvis and Welch 2011, p. 3), although this did not prevent intermittent conflicts between China and Vietnam, sisters in socialism, as indicated above. Indeed, it was this same anti-Communist sentiment, at least in part, which meant Vietnam only joined the ASEAN club in 1995. It is also pertinent to point out that, in the Indonesian case, Chinese Indonesians were a substantial proportion of PKI members, and their loyalty was seen as at least questionable, by many, in a situation where anti-Chinese sentiments were at times being inflamed for domestic political purposes.

A Long-Standing History of Relations

In fact, however, relations between the Chinese Dragon and the dynamic Tiger Cub economies of current Southeast Asia are at least two millennia old. According to one of the major scholars of the relationship, intra-regional trade began around the third century BCE and was extended in the Three Kingdoms period (220–280 CE) and again during the Tang dynasty (618–906 CE), although it was not until much later that it grew significantly (Wang 2000). Historical records indicate trade with current day Vietnam, Cambodia, Java and Sumatra during the first millennium; voyages of exploration from China to Southeast Asia, during the third century CE; significant contact between Buddhists in China and counterparts in Southeast Asia during the fifth and sixth centuries CE; and later concourse among Muslim communities in China and what is now Indonesia (Chang 1988; Gelber 2007; Welch 2012a, b). Some efforts were more expansionist: During the Yuan dynasty (AD 1279–1368), for instance, *Kublai Khan* sought to extend China's territory and influence to the region, notably Java and Champa, Viet Nam (Lo, j-p 2012).

Trade and exploration were in both directions. Ancestors of today's Malays and Indonesians were active seafarers in the region in the fifth century BCE, while the Malay-speaking Hinduised Cham seagoing empire of central Vietnam dominated South China Sea trade until it was conquered by the Vietnamese about the time that European traders began to arrive in Asia. Trade between Champa (present day southern Vietnam) and Luzon was well established long before the Chinese drew their thirteenth-century map (*Australian* 2012b; see also Heidhues 2001, pp. 25–6).

In the late thirteenth and fourteenth centuries, for example, Chinese traders, including non-Han Muslims, settled in current Vietnam, Cambodia, around the Gulf of Thailand and in Java and Sumatra. In the early fifteenth century, the Chinese emperor gave his protection to the port of Malacca, thereby legitimising Chinese settlement in what is now Malaysia. Its ruler, Parameswara, after supposedly travelling to China, married one of the emperor's daughters and then returned to

Malacca with his new wife and retinue of over 200 retainers. A weakened government in Beijing from the 1620s to the end of the Ming dynasty in 1,644 provided further opportunities for traders, often Hokkienese, or Fujianese, to explore the region. Records of the time indicated thousands living in Java, Vietnam, Thailand, Cambodia and the Malay archipelago. The peak of Hokkien migration to ports of Southeast Asia in the late seventeenth and first half of the eighteenth centuries was paralleled by massacres of Chinese settlers in Manila and Batavia (the former name for Jakarta) (Reid 2008).

But perhaps the most famous episode remains shrouded in mystery, since imperial records were destroyed not long after the event. Six centuries ago, in the early Ming dynasty (1368–1644), famed admiral Zheng was charged by Emperor Cheng Zu with charting the Western Sea, in the region now known as Southeast Asia. Admiral Zheng led seven voyages, involving dozens of ships (some as long as 400 ft) and some 27,000 crew, between 1,405 and 1,433, bringing brocade and other fabrics, as well as celadon and Chinese enamelware, to some of the countries of the region, while bringing back building materials and other articles. A Muslim, Zheng would have felt comfortable among the Muslim cultures of what are today Malaysia and Indonesia, but the significance of his voyages was much larger and more enduring, as the historian Richard von Glahn confirmed:

> Zheng He reshaped Asia. Maritime history in the fifteenth century is essentially the Zheng He story and the effects of Zheng He's voyages. For instance, Malacca, on the Malayan peninsula, and Zheng He's most important port after those in China, in the fifteenth century became the great port and hub of a trading network that extended across Southeast Asia and up to China. (UCLA n.d.)

Epistemic Routes

But trade in ideas, just as important as trade in goods, is of at least long duration. And this movement of ideas strongly reshaped higher learning within the region. As early as the end of the period of the Warring States (c. 220 BCE), when Emperor Qin Shi Huangdi unified China, its territory extended to the Red River Delta, in current Vietnam. Chinese poetry, astronomy, medicine and arithmetic were influential in much of what is now northern Vietnam, as was Confucianism, which over the course of centuries became the major form of higher learning in the region, as a visit to *Van Mieu*, the serene Temple of Learning/Literature in Ha Noi (refurbished some time ago, compliments of American Express), will confirm (Gelber 2007; Welch 2010). The *Four Books* and *Five Classics* became the curriculum centrepiece of higher learning in what is now Vietnam during the Tang dynasty (618–907), which proved to be something of a Confucian revival. Vietnamese scholars also travelled to major centres of higher learning in what is now China, while Confucian learning was long practised in Vietnam's higher education institutions (HEIs). When Vietnam (called Nam Viet by the Chinese) broke away and

became quasi-independent around the time of the fall of the Tang dynasty, some Chinese stayed, rather than return to China.

So strong was his influence that Confucius was traditionally revered in Vietnam as 'the teacher of Ten Thousand Sovereigns':

> As for the recruitment of officials, examinations based on Confucianism, as applied in China, were organized ... for more than eight centuries (from 1,075 to 1,919) in Vietnam... South Viet Nam, (before the reunification of the country) remained particularly faithful to his thought, especially in the domain of moral education. (Yang 1993, p. 6)

As noted above, contracts between Buddhists in China and what is now Southeast Asia date from the sixth century CE. Islam represented another epistemic bridge between what is now China and ASEAN. Although poorly researched, centres of Islamic learning in current Southeast Asia have long been connected to China (Chang 1988; Gelber 2007; Welch 2012a, b). The Cham empire, in parts of what is now Vietnam and Cambodia, may have represented one tributary spreading Islam within the region. Many were Muslims, and the Cham prized literacy highly. The Silk Road and maritime Silk Road represented other regional tributaries that contributed to concourse between Muslims (Heidhues 2001).

The Chinese Diaspora in Southeast Asia

Long-standing Chinese settlement in parts of Southeast Asia, and the disproportionate weight exercised in several regional economies by ethnic Chinese minorities (Yeung 1999), is paralleled by very differing proportions of Chinese within ASEAN member states, from perhaps 1.5 % in Vietnam to over 25 % in Malaysia and more than 60 % in Singapore (see Table 6.1, following). While estimates vary, some sources suggest that around 16 million ethnic Chinese live in the ASEAN region (Chang 2008; Welch 2012a; Wang and Wang 2003). Research from elsewhere suggests that Chinese identity among the worldwide diaspora of perhaps 35 million or more (some estimates are of as much as 50 million) remains strong, at least among the current generation, and that the increasingly highly educated overseas Chinese communities (*huaqiao*) are not merely interested in, and proud of, China's development but also wish to contribute (Welch and Zhang 2008; Yang and Welch 2010). Across ASEAN, however, it is not merely proportions of ethnic Chinese that differ significantly within national populations. In Singapore, for example, Chinese is one of the four official languages, but is widely spoken. This is much less the case in Malaysia and much less again in Vietnam. In the latter, where according to a respected local economist, 'All the streets in Vietnam are named according to generals and emperors that have been fighting against the Chinese invasion for 2000 years', there is still cultural resistance to learning Mandarin (BBC 2012). In Malaysia, by contrast, around one quarter of the population (some seven million) are ethnic Chinese, of whom over 95 % choose to send

Table 6.1 The Dragon and the Tiger Cubs

Country	Population, millions	% Chinese	GDP per capita (2011) PPP	Development status, HDI rating	FDI to China, US$ million 2008	FDI from China, US $ million 2008	GDP growth 2011
China	1,346	100[a]	US$8,400	Developing .687	–	–	9.24 %
Malaysia	28.9	25+	US$15,600	Middle .761	247	46[b]	5.14 %
Singapore	5. 2	75	US$59,900	High .866	4,435	1,551	4.89 %
Vietnam	87.9	1.5	US$3,300	Developing .593	2	120	5.89 %

Sources: World Factbook, Population Reference Bureau (2011), East Asia Institute 2010, *ASEAN Japan Centre* (2009), *Congressional Research Service* (2012)
[a]Approximately 10 % of the population are from China's 55 designated minorities
[b]Malaysian data, 2009

their children to one of Malaysia's 1,293 Chinese primary schools and almost 140 Chinese secondary schools (The Star 2012a).

One Dragon, Three Tiger Cubs

So, history matters. Culture matters. Ethnic ties matter. Changing security allegiances matter. Nationalist sentiments continue to matter. And, clearly, political ideologies matter, including those of the great powers. How do these intertwined elements play themselves out, in current China-ASEAN relations, especially in higher education?

In order to make such an assessment manageable, three ASEAN member states were selected for analysis: Singapore, Malaysia and Vietnam. Singapore, while by far the smallest of the three, represents a prosperous, highly developed nation-state, with a well-developed infrastructure and strong ambitions within the region, including China. Around 60 % of its populace are of Chinese origin. Malaysia represents a middle-income ASEAN state, with a population that, at around 29 million, is somewhat larger than that of Taiwan or Australia. With an ethnic Chinese populace comprising around 25 %, it too has ambitions within the region, including the promotion of its higher education sector, but with less financial clout and with a less-developed infrastructure (including in higher education) than Singapore to do so. Vietnam, with by far the largest population of around 88 million, has the least well-developed higher education system, as part of an overall profile that places it within the lower-income range. Arguably, it has the most complex history of China relations of all three, with a war in 1979 at one extreme of the long-standing relationship. Ethnic Chinese form no more than 1.5 % of the overall population.

Singapore is often seen as a strong, even authoritarian state, while Malaysia, too, has largely been ruled by a single party over recent decades. In both cases, there are

significant signs of change. Vietnam, a sister in socialism to China, has often followed broadly similar policies, including in higher education, albeit maintaining a strongly independent stance. In both Malaysia and Vietnam, ethnic Chinese exercise a disproportionate influence within the overall economy; in the former case, this was paralleled by long-standing pro-Malay policies, while Vietnam has not been without some anti-Chinese sentiments, at times. All four states are members of the World Trade Organisation, with China having joined in 2001 and Vietnam in 2007. The China-ASEAN Free Trade Area (CAFTA) that became operational in January 2010 'will have significant trade and development implications for South East Asia, (especially if member states can) pool resources and combine markets to forge a comprehensive economic partnership with China'. Bilateral China-ASEAN trade increased by more than tenfold between 1995 and 2008 (from US$20 billion to US$223 billion), especially after China's accession to WTO membership in 2001. By 2008, China had become ASEAN's third largest trading partner (after EU and the USA), while ASEAN was China's fourth largest. Bilateral investment has increased, but still constitutes a small proportion of the total inflow of FDI to both China and ASEAN (EAI 2011, p. I; Welch 2011b). While ASEAN prospects as a whole are to a significant degree affected by the extent of its integration, different ASEAN member states face differing opportunities and challenges, based on their levels of development and history with China.

Regional Trade in Higher Education Services

For all four, key elements of the external environment affect both their domestic economy and higher education system. Of these, the rise in service sector trade constitutes a significant trend (UNCTAD 2004; Welch 2011b). Within the region, for example, FDI flows to service sector industries in ASEAN accounted for 50.5 % of total ASEAN FDI in 2008 (ASEAN 2009, pp. 12–13).

Parallel with the rise in service sector trade worldwide, and in the Asian region, trade in higher education services is also growing. While the worldwide total trade in higher education services was (under)estimated by the OECD at around US$30 billion in the late 1990s, more current estimates set the figure for trade in education services at US$2.2 trillion (ADB 2012; Ng and Tan 2010). Although growth in services worldwide grew at a rate double that of agriculture, for example, between 1990 and 2000, growth rates in developing countries were much faster than in more mature economies, where the service sector already often accounts for around two-thirds of the economy (Welch 2011b, p. 44). The move to enshrine education as part of service sector trade under the Global Agreement on Trade in Services (GATS) marked a further step in perceiving education as a tradeable commodity but also enables the more precise tracking of transnational forms of educational delivery of services (see chart below).

While data is far from perfect, and statistics are collected on different bases, a recent ADB analysis estimated that, while earnings from trade in higher education

services still favoured the wealthier and English language systems, significant (and much faster) growth was evident in Asia. Of total trade in education services, recently estimated at US$2.2 trillion worldwide, earnings from trade specifically in higher education services for 2008 were estimated at US$ 15.5 billion for the USA, US$11.2 billion for the UK, US$8.0 billion for Australia and US$3.1 billion for Canada (ADB 2012; Welch 2011a; Ng and Tan 2010). But with 260,000 international students enrolled in its higher education system, earlier estimates of Chinese income of US$1billion + are likely to have been conservative, while Malaysia's overall international enrolments in higher education of 86,900 in 2010 are also yielding significant income, inter alia. Singapore, too, whose international enrolments in higher education rival those of its much larger neighbour Malaysia, also derives significant income from this trade, among other benefits, despite offering numbers of scholarships (ADB 2012, pp. 37–8; Welch 2011b, pp. 82–9). Already, income from international enrolments comprises 3.3 % of Singapore's economy, with plans to increase this to 5 % in the coming years (Ng and Tan 2010; Welch 2011b, pp. 82–9, Welch 2011a). Vietnam, with few international students enrolled, and at least 15,000 of its own enrolled overseas, is a net importer of higher education services (Welch 2010).

Status and Standing of Higher Education Systems

The relative standing of each higher education system also differs significantly. The highly cited Academic Ranking of World Universities (ARWU), developed by a team at China's Shanghai Jiaotong University (SJTU), reveals that

> . . . other than Singapore, no Southeast Asian higher education system has a single university ranked in the top 500 of the SJTU list. Overall, the PRC has 22 HEIs listed among the top 500 on the ARWU list. (ADB 2012, p. 34)

In significant part, China's increasing presence among leading HEIs is a product of deliberate and long-range planning. China's 211 and 985 programmes, for example, were deliberated targeted at fostering world-class universities, by funnelling impressive amounts of additional resources to a select top tier of HEIs. The results, while mixed, are impressive (ADB 2012, p. 35; Yang and Welch 2012). Singapore, too, has invested very substantially in building top-tier HEIs, including via its Global Schoolhouse programme that aims to develop Singapore into a 'Boston of the East'. This includes successfully bidding for entire research teams from overseas, in specified priority areas, to re-establish themselves in Singapore, with substantial support, as well as enticing a number of major research universities from the global north to establish branch campuses in Singapore. While Malaysia lacks either the wealth or advanced infrastructure of Singapore, its ambitions are hardly any less. It recently deemed one of its universities (Universiti Sains Malaysia, or USM), an APEX (Accelerated Programme for Excellence) institution, with additional funding of RM25 million in 2008. This was matched by a stated

goal set by the government of competing with the world's best HEIs. Greater autonomy over staff, management, fees and recruitment was accompanied by higher expectations: specifically, to be among the top 200 of the ARWU within 5 years and top 100 or perhaps even top 50 by 2020, ambitious targets, indeed. Vietnam's plans for 'model' universities, part of its Higher Education Reform Agenda (HERA), involve deploying loans from the World Bank and Asian Development Bank (ADB) to develop multidisciplinary international research universities, with foreign partners who invest in their development. Vietnam, which has had at least one full-fledged overseas university (Australia's RMIT) for some time (Welch 2012b), plans to develop several further HEIs that are modelled on developed country HEIs. The Vietnamese-German University, a strategic initiative with Germany, already exists in Ho Chi Minh City, as does the University of Science and Technology in Ha Noi, a strategic partnership with France. As with Malaysia, these new institutions have expectations of greater autonomy from central government control (ADB 2010, 2012)

China-ASEAN Relations in Higher Education

It is important to reiterate that bilateral and multilateral collaborations in higher education consist of much more than trade and are influenced by the complex and dynamic histories, cultures and international relations of the partners that were sketched above. At the same time, the four modes outlined in the following chart provide a useful means to track collaborative and competitive higher education relations between China and the 3 selected ASEAN member states.

Before turning to the specific forms of collaboration between the 3 ASEAN member states and China, it is important to note the important trade agreements, framework agreements and consortia that link China and ASEAN in the higher education arena. Of the former, the China-ASEAN Free Trade Agreement (CAFTA), listed above, is key. Among framework agreements are APEC's Human Resources Development Working Group that includes China, Singapore, Malaysia and Vietnam, while regional consortia include the ASEAN University Network (AUN) where in 2009 a decision was made to establish an ASEAN + 3 university network that would encourage cooperation between ASEAN and Chinese universities, in key areas such as ASEAN and East Asian Studies. By 2010, the ASEAN-China Rectors conference was able to report successful collaboration with ASEAN by Sun Yat-sen (Zhongshan) University, Yunnan Agriculture University and Soochow (Suzhou) University. The Association of Pacific Rim Universities (APRU) comprises 42 Asia-Pacific university members, including institutions from China, Singapore and Malaysia, but not Vietnam (Welch 2011b, pp. 80–1). A third consortium, UNIVERSITAS 21, embraces 24 member universities, including National University of Singapore (NUS) and Fudan University and Shanghai Jiaotong University, in China (Table 6.2).

Table 6.2 Modes of provision of cross-border educational services (GATS)

Mode	Explanation	Examples	Size and potential
1. Cross-border supply	The service, rather than the person, crosses the border	Distance education Education software Virtual Ed. (incl. corporate training)	Small, but growing swiftly, with considerable growth potential, esp. via ICT
2. Consumption abroad	The consumer moves to the country of the supplier	Students who study in another country	Currently, largest share of international education
3. Commercial presence	The provider uses or establishes facilities in a second country	Local university, or satellite campus Private providers, including language and IT	Growing phenomenon, strong likelihood of growth
4. Presence of persons	Persons travelling to a second country, to provide a service	Professors, teachers, educational consultants	Given rising professional mobility, also likely to grow strongly

Welch (2011b: 47), adapted from OECD (2002)

Unsurprisingly, the profile of the 3 ASEAN member states differed significantly, within a context where, in both China and ASEAN, hierarchy remains a long-standing and important cultural value. Overall, while ASEAN students still total less than 20 % of total international enrolments in Chinese universities, numbers are growing fast. Based on meetings of China-ASEAN Ministers of Education initiated in August 2010, the 'Double 100,000 Plan' was adopted as part of the Guiyang Declaration. This ambitious plan would see 100,000 Chinese and ASEAN students enrol in each other's universities, respectively, by 2020. In 2010, China offered 3,337 scholarships to ASEAN scholars, of a total of 50,000 ASEAN students enrolled in Chinese universities (Xinhuanet 2011b). In 2004–2005, this comprised 2.75 % of the total scholarships offered by China, which planned to raise the number of scholarships to ASEAN students to 10,000 by 2020. By 2010, 70,000 Chinese students enrolled in ASEAN universities (Xinhuanet 2011b). Data for 2006 showed 1,743 Malaysian enrolments in Chinese universities, 1,392 from Singapore and 7,310 from Vietnam (Welch 2011b, pp. 74–5, Welch 2011a). By 2011, a total of 31 ASEAN universities had signed 135 cooperation agreements with 47 Chinese universities (Xinhaunet 2011a).

Of the 3 ASEAN member states surveyed, Singapore was found to have the most substantial relations with the Chinese higher education system. The fact that approximately three quarters of its population are of Chinese origin, and 90 % of its domestic university students, provides a firm foundation, notwithstanding differences of political ideology between the two states. Solid commercial relations, and Singapore's long-standing, substantial presence in regional service sector trade,

including its impressive Global Schoolhouse initiative, noted above, are another pillar supporting higher education links with China. Indeed, China continues to be a significant priority for Singapore's universities. An MOU, signed by the respective ministries of education in 2002, including a student and staff exchange programme, provided another firm base, while Singapore and China each offers training programmes for each other's officials (Xinhaunet 2009).

For Malaysia, middle-income status, a population that is one quarter of Chinese extraction, and an ambitious programme of developing an Eduhub, attracting both regional and trans-regional students, have translated only imperfectly into strong China relations in higher education. Of the total of almost 87,000 international enrolments in Malaysian universities for 2010, 10, 214 were from China (slightly higher than enrolments from Indonesia and fewer than from Iran). The far more entrepreneurial private sector accounted for almost 80 % (8,046) of the China total, which would seem to undermine to an extent the actual commitment of the Malaysian government to recruit Chinese students into its public sector universities, notwithstanding having mounted educational expos in China in recent years.

For Vietnam, its long and complex history of China relations includes the major and enduring influence of Confucianism, including in higher education. Its HDI status (see Table 6.1, above) is lowest of the four nations under review, and its peripheral status within the global knowledge network translates into generally dependent relations with Chinese higher education. More Vietnamese students study at Chinese universities than the reverse, a situation that is broadly paralleled by scholarships. This, however, does not do justice to the much closer relations between institutions on either side of the border, the so-called quiet achievers (Yang 2012) in China's Guangxi and Yunnan. Training of Vietnamese civil servants and teachers is offered by each province, which each enrolled several thousand students in their regional higher education institutions (HEIs) by around 2008, with several thousand students from Guangxi studying in ASEAN countries. Vietnam hosted the largest number. In Yunnan, links are equally diverse and dense, including 3 + 1 programmes with ASEAN countries and joint degree programmes with Vietnam. Hundreds of Chinese language teachers have been trained at Yunnan University and Yunnan Normal University, to work in ASEAN countries (Yang 2012).

The following table, based largely on Welch (2011b, pp. 77–105), summarises the relations across the 3 ASEAN member states, according to the four GATS modes in Table 6.2, above (Table 6.3).

Conclusion

A number of points arising from the above analysis bear further reflection. Of these, hierarchy and stratification is a key point. Singapore's greater wealth and highly developed infrastructure left it best positioned to extend its relations in China's higher education system, while at least the top tier of China's universities is keen to cooperate with universities such as Singapore's NUS. Malaysia's position is

Table 6.3 China-ASEAN cross-border educational services – a summary

	Mode I	Mode II	Mode III	Mode IV
Singapore	NTU management training (by distance)	Chinese students at Singapore universities	NUS Fudan (Shanghai College)	NTU management programme (in Shanghai)
		Singapore students at Chinese universities	NUS Peking (IMBA)	
		Tsing Hua executive programme	*SJTU NTU (MBA)*	
Malaysia		Chinese students at Malaysian universities	INTI college (Beijing Campus)	
		Malaysian students at Chinese universities		
Vietnam		VNU language courses for Chinese students		*Chinese consultants training Vietnamese*?
		Chinese students at Vietnamese universities		
		Vietnamese students at Chinese universities		

Welch (2011b, p. 105)
Notes: Italics indicate Chinese exports; non-italics indicate Chinese imports

complex, with its ambitious plans to extend its regional presence stymied to an extent, by a history of discrimination against Chinese Malaysians, at least in public sector HEIs. Vietnam's relatively less-developed higher education system and levels of infrastructure position it least well to take advantage of collaboration initiatives, as do to some extent its intermittently difficult relations with its large and troubling neighbour; but at the same time, there are important local initiatives by quiet achievers on both sides of the border that should not be neglected. There is much more to be learned about such important but lesser acknowledge initiatives, including in the private sector.

Clearly, there is significant potential for further growth in China-ASEAN collaboration in higher education, with potential benefits for both sides. ASEAN member states are positioning themselves as best as they can to take advantage of the China market, including in educational services, as China seeks to extend its soft power regionally, including via the numerous Confucius Institutes.

At the same time, this raises issues of the quality and definition of regionalism in this context. As a number of authors have pointed out, ASEAN regionalism is as yet less developed and lacks the more robust institutional architecture that characterises European regionalism. In some respects, the gap between the impressive declarations made at various ASEAN forums, and the strength of actual achievements,

remains substantial (Welch 2012a). Jayasuriya (2003) has argued that much of the existing analysis of Southeast Asian regionalism, including at times by ASEAN member countries themselves, has been both triumphalist and too focused on '. . .formal regional 'institutions', . . . to the detriment of the understanding of the domestic political mainsprings of regional governance' (p. 199). Simply put, ASEAN's regional initiatives largely lack the more established character of their EU counterparts, thereby limiting the capacity of what has been called regulatory regionalism (Jayasuriya 2003, 2010). Secondly, the complex and long-standing set of relations between the Dragon and the Tiger Cubs problematises the definition of region. While ASEAN may be well enough understood as a region, notwithstanding the limits indicated above, the developing architecture of China-ASEAN relations raises the question of whether the term may legitimately be applied to China and ASEAN. As ASEAN trade barriers continue to be reduced, including in the services sector, and existing free trade agreements with China extended, as well as higher education partnerships, people-to-people exchanges and cultural relations more generally, (CRS 2012, pp. 10, 17), it is arguable that the developing sense of China and ASEAN as a region will deepen, notwithstanding occasional reverses, territorial disputes and nationalist sentiments. If so, the potential for deeper and wider relations in higher education is great; and in turn, such relations can also assist in breaking down barriers of understanding.

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Chapter 7
The Regionalization of Higher Education in Northeast Asia

Kiyong Byun and Sangheon Um

Introduction

Over the past couple of decades, there has been a gradual movement toward the regionalization of higher education in East Asia, as witnessed by an overwhelming increase in cross-border higher education activities in this region (Kuroda and Passarelli 2009). This growing interest in the regionalization of higher education in East Asia can be attributed to a series of factors coming from both inside and outside the higher education community. These factors include (1) a proliferation of regionalism worldwide and increased economic interdependence among countries in East Asia; (2) changing demographics and rapid expansion of higher education systems in East Asian region, in particular, China; (3) advent of the World Trade Organization (WTO) regime and subsequent developments in commodification of higher education; and (4) an expansion of East Asian policy-makers' networks after the Asian financial crisis, through various regional collaboration frameworks, such as ASEAN+3 (Byun and Kim 2011; Chapman et al. 2010; Cheong 2005).

The East Asian region, however, is extremely diverse and complex and does not easily constitute a single political, economic, or cultural entity. Within East Asia, the

This chapter is an updated and expanded version of Byun and Um (2012).

The geographical notion of East Asia as well as Northeast Asia has been defined in many different ways. Following the usage of East Asia and Northeast Asia in previous regional integration literature (i.e., Cheong 2005; Kuroda and Passarelli 2009; Li 2007), in this chapter, Northeast Asia is referred to as the three major Northeast economies of China, Japan, and South Korea, with East Asia covering Northeast Asia, as well as Southeast Asia (comprising the ten ASEAN countries), unless otherwise specified.

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Southeast Asian region is, in many aspects, more advanced in multilateral higher education cooperation efforts and has actually made some progress over the years (see Chap. 5 of this volume). On the contrary, Northeast Asia has not developed, until recently, any meaningful regional collaboration schemes for higher education, despite the fact that intra-regional dependence of higher education systems among Northeast Asian countries has already deepened enough to form a "de facto regionalization of higher education" (Kuroda and Passarelli 2009). In response to these ongoing developments in cross-border higher education and the rising interests in regional economic integration among Northeast Asian countries, however, three core Northeast Asian economies (China, Japan, and South Korea) have recently started exploring the possibilities of closer higher education cooperation. In 2011, these three countries for the first time launched a multilateral student mobility program, called "CAMPUS ASIA" within their region, which they hope to develop further into a more comprehensive higher education cooperation framework within Northeast Asia and beyond. In fact, it is too early to predict whether these new developments will actually lead to the regionalization of higher education in Northeast Asia, as the process seems to be still in its infancy. However, in order to facilitate more productive policy discussions on higher education integration currently taking place in Northeast Asia, it is necessary to examine some of the critical issues and challenges associated with these developments at this critical juncture.

The purpose of this chapter is to overview recent developments in the regionalization of higher education in Northeast Asia and to investigate related issues, particularly focusing on China, Japan, and South Korea. To achieve this purpose, the next section will present some crucial features of the three Northeast Asian economies and will show how they currently depend on each other in terms of intra-regional trade and cross-border higher education activities. Section "Regionalization of higher education in Northeast Asia" will present a historical overview of the developments in the regionalization of higher education in Northeast Asia, with special reference to the recently launched CAMPUS ASIA program. Section "Issues and challenges" will discuss the implications of the regionalization of Northeast Asian higher education for establishing a wider East Asian higher education community and examine some of the important issues and challenges associated with the regionalization process. Finally, section "Conclusion: What next" will conclude with the prospect for the regionalization of higher education in Northeast Asia.

Deepening Intra-regional Dependence Among Northeast Asian Countries

Thickening Economic Interdependence in Northeast Asia

Kuroda et al. (2010) observed, "[b]ehind the concept of the East Asian Community lies a situation where the weight of this region in the world economy is

Table 7.1 Economic profile of the major Northeast Asian countries: share of the world's total (Unit: %)

	Population (2011)	GDP (ppp) (2010)	Merchandising Exports (2007)	Commercial Service exports (2007)	FDI (inflows) (2008)
China	19.3	13.6	9.6	3.8	6.4
Japan	1.8	5.8	4.7	3.8	1.4
Korea	0.7	2.0	2.9	1.7	0.4
C-J-K	21.8	21.4	17.2	9.3	8.3
EU	7.2	18.5	15.9 (2008)	26.9 (2008)	29.7
N. America	5.0	21.5	11.0	15.9	21.3
World	100	100	100	100	100

Source: PRB 2011 World Population Data Sheet (www.prb.org); Global Finance Magazine (www.gfmag.com)

expanding. . .a comparatively more independent economic system that does not rely on the Western economy is forming" (p. 5). To provide some empirical data in line with this observation, we will examine the relative importance of the three major Northeast Asian economies in relation to the world and also investigate how they depend on each other. Table 7.1 presents the economic profiles of China, Japan, and South Korea in terms of their share of the world's total in population, GDP, trade, and FDI (inflow) in 2010.

It is evident from these data that China, Japan, and South Korea are key players in the global economy. These three countries account for over 20 % of the world's population (21.8 %) and GDP (21.4 %), respectively. In fact, the Northeast Asian economy has grown faster than any other region in the recent past and is now equivalent to the economic size of North America and is even greater than EU in terms of GDP (PPP). In addition, the Northeast Asian region represented by China, Japan, and South Korea occupies 17.2 % of the world's merchandising exports, the biggest among the regional blocs in the world economy, although it still lags behind EU and North America in terms of commercial service export and FDI inflows.

In addition, various studies (e.g., Cheong 2005; Seliger 2011; Wong 2005) and statistics have indicated that there has been a growing economic interdependency among the Northeast Asian countries. Table 7.2 shows the changes in trade volumes in terms of both exports and imports among China, Japan, South Korea, and the USA between 2001 and 2010. When we closely examine Table 7.2, the economic interdependence among these three countries is in general increasing, while trade dependence of these three Northeast Asian countries on the USA, in terms of both exports and imports, has decreased over time.

With the rapidly growing Chinese economy during this period, the share of trade in both Japan and Korea with China has drastically increased in terms of exports and imports. For instance, South Korea's imports from China rose from US$ 31.4 billion or 9.4 % (of South Korea's total imports) in 2001 to US$ 50.1 billion or 16.8 % in 2010. The share of South Korea's exports to China also increased to US$ 117.2 billion or 25.1 % in 2010, up from US$ 18.1 billion or 12.1 % in 2001. The

Table 7.2 Intra-regional trade among China, Japan, and South Korea: 2001–2010 (unit: billions of US dollars, % in parenthesis)

		Exports to					Imports from				
Country	Year	CH	JP	KR	USA	All	CH	JP	KR	USA	All
China (CH)	2001	–	44.9 (16.9)	12.5 (4.7)	54.4 (20.4)	266.1 (100)	–	42.8 (17.6)	23.4 (9.6)	26.2 (10.8)	243.6 (100)
	2010	–	121.0 (7.7)	68.8 (4.4)	283.8 (18.0)	1,578 (100)	–	176.7 (12.7)	138.3 (9.9)	102.7 (7.4)	1,396 (100)
Japan (JP)	2001	31.0 (7.7)	–	25.3 (6.3)	122.5 (30.4)	403.4 (100)	57.8 (16.6)	–	17.2 (4.9)	63.8 (18.3)	349.3 (100)
	2010	149.5 (19.4)	–	62.4 (8.1)	120.5 (15.6)	769.8 (100)	153.2 (22.1)	–	28.6 (4.1)	69.1 (10.0)	692.6
Korea (KR)	2001	18.1 (12.1)	16.5 (11.0)	–	31.4 (20.8)	150.4 (100)	13.3 (9.4)	26.6 (18.9)	–	22.4 (15.9)	141.1 (100)
	2010	117.2 (25.1)	28.3 (6.0)	–	50.1 (10.7)	467.7 (100)	71.5 (16.8)	64.3 (15.1)	–	40.6 (9.6)	425.1 (100)

Source: United Nations Commodity Trade Statistics Database (comtrade.un.org)

Note: Modified and updated from Wong (2005)

Figures in parenthesis are exports to and imports from foreign countries as the percentage shares of the total exports and imports of each country concerned

same pattern can be observed between Japan and China. For China, the share of trade with Japan and South Korea also substantially increased in terms of total trade, while, percentagewise, remained either fairly stable for Korea (exports, 4.7= > 4.4 %; imports, 9.6= > 9.9 %) or even decreased for Japan (exports, 16.9 = >7.7 %; imports, 17.6 = >12.7 %).

For all these Northeast Asian countries, however, the trade volume in terms of exports to and imports from the USA, at least percentagewise, has sharply decreased during the same period (China 20.4 = >18.0 %, Japan 30.4 = >15.6 %, Korea 20.8 = >10.7 on the export side and China 10.8 = >7.4 %, Japan 18.3 = >10.0 %, Korea 15.9 = >9.6 % on the import side). These data clearly indicate that, despite the fact that Northeast Asian countries still heavily rely on exports to countries outside the region (e.g., the USA), intra-regional trade has played an increasingly important role for these countries' economies. Currently, China is the most important trade partner of Japan and South Korea in terms of both exports and imports.

Size and Growth of Cross-Border Higher Education in Northeast Asia

As was illustrated in the previous section, the interdependence of the Northeast regional economy has grown substantially over the past decade. If we closely examine recent developments of cross-border higher education activities in this region, we can observe a similar trend in the area of higher education as well. This section describes some of the recent developments in cross-border higher education in East Asia, in particular, among the three Northeast Asian countries, following these two categories: (1) intra-regional student and faculty mobility and (2) interuniversity partnership agreements and collaborative degree programs.

Student and Faculty Mobility

Table 7.3 shows the international student flow among East Asian countries over the past 10 years. The data indicate that during this period, most East Asian countries, with few exceptions, experienced growth to varying extents in recruiting international students within their territories, which demonstrates growing student mobility in this region. In particular, since 2000, international student enrollments at higher education institutions (HEIs) in Korea and China have increased at a remarkable pace compared to other countries in East Asia. For instance, the number of international students in Korea increased almost 15-fold, from 3,373 in 2000 to 50,030 in 2009. The growth in international student enrollments at China's HEIs was even more astounding, albeit lower than Korea's growth rate, where 186,034

Table 7.3 Trends in international student flow of East Asian countries: 2000–2009

	Inbound			Outbound		
	2000(A)	2009(B)	B/A	2000(A)	2009(B)	B/A
China[a]	52,150[a]	238,184[a]	4.57	140,501	511,763	3.64
Japan	59,691	131,599	2.20	59,294	45,130	0.76
Korea	3,373	50,030	14.83	70,991	125,725	1.77
C-J-K	115,214	419,813	3.64	270,786	682,618	2.52
Indonesia	n/a	5,388(08)[b]	n/a	32,081	32,402	1.01
Malaysia	18,892	41,310(08)[b]	2.19	40,457	54,253	1.34
Philippines	3,514(99)	2,665[b]	0.76	5,396	9,738	1.80
Singapore	n/a	40,401	n/a	20,570	19,631	0.95
Thailand	1,882(99)	16,361	8.69	19,059	24,803	1.30
Vietnam	622	4,207	6.76	9,144	43,677	4.78
ASEAN	19,514	64,543	3.31	126,707	184,504	1.46
USA	475,169	660,581	1.39	39,822	53,541	1.34

Source: UNESCO Institute for Statistics unless otherwise specified
Note: In calculating the sum of ASEAN countries, only those countries for which both 2000 and 2009 data are available are included
[a]The Educational Statistics Yearbook of China, 2000–2009
[b]Global Education Digest, 2011

additional international students were admitted at Chinese HEIs within a period of 10 years. Similar trends were observed for outbound student mobility. China sent 511,763 students abroad in 2009, representing almost a fourfold increase, despite already having 140,501 students sent abroad in 2000, while Korea sent 54,734 more students abroad than it did in 2000. Such data suggest that, for the most part, international student mobility over the past 10 years has grown faster, in terms of growth rates and absolute numbers, in the Northeast Asian countries than countries in other subregions of East Asia (e.g., Southeast Asia represented by the ASEAN countries).

In addition, it is worth noting that the tremendous growth in East Asian student mobility during the first decade of the twenty-first century was almost exclusively driven by intra-regional student mobility within these three Northeast Asian countries where China, without a doubt, played a critical role. As Table 7.4 shows, although outbound mobility to English-speaking countries, in particular to the USA, is still prevalent for all three countries, the number of international students from the two neighboring countries drastically increased between 2000 and 2009, albeit in varying degrees. Students from the two neighboring countries represent around 80 % of the total international student population in South Korea and Japan, while in China, about one-third (33.5 %) come from the other two countries. Japan and South Korea are the main regional providers, and most of their foreign students are from within the Northeast Asian region, mainly from China. In this respect, South Korea and Japan are competing with each other to recruit Chinese students in their HEIs. Japan's main sources in 2009 are China (79,394), South Korea (24,850), and three Southeast Asian countries (Vietnam 2,895, Malaysia 1,956, and Indonesia 1,143) albeit negligible compared to those from China and South Korea in terms of

Table 7.4 Top 5 feeder/destination countries for Northeast Asian Countries in 2009

	Inbound		Outbound[b]
Country	Top 5 feeder countries		Top 5 destination countries
China (CH)	[2009]	[2000]	[2009]
	① Korea 64,232(27.0 %)[a]	① Korea 16,787(32.2 %)[a]	① USA 124,225(24.3 %)
	② USA 18,650(7.8 %)[a]	② Japan 13,806(26.5 %)[a]	② Japan 79,394(15.6 %)
	③ Japan 15,409(6.5 %)[a]	③ USA 4,280(8.2 %)[a]	③ Australia 70,357 (13.8 %)
	④ Vietnam 12,247(5.2 %)[a]	④ Indonesia 1,947 (3.7 %)[a]	④ UK 47,033(9.2 %)
	⑤ Thailand 11,379(4.8 %)[a]	⑤ Germany 1,270(2.4 %)[a]	⑤ Korea 39,309(7.7 %)
	☞ KR + JP 79,641(33.4 %)	☞ KR + JP 30,593 (58.7 %)	
Japan (JP)	[2009]	[2000]	[2009]
	① China 79,394(60.3 %)	① China 28,076(47.0 %)	① USA 28,783(45.4 %)
	② Korea 24,850(18.9 %)	② Korea 18,237(30.6 %)	② China 18,650(29.4 %)[a]
	③ Vietnam 2,895(2.2 %)	③ Malaysia 1,956(3.3 %)	③ UK 3,871(6.1 %)
	④ Thailand 2,193(1.7 %)	④ Indonesia 1,143(1.9 %)	④ Australia 2,701(4.3 %)
	⑤ Malaysia 2,147(1.6 %)	⑤ USA 1,077(1.8 %)	⑤ France 1,847(2.9 %)
	☞ CH + KR 104,244 (79.2 %)	☞ CH + KR 46,313 (77.6 %)	
Korea (KR)	[2009]	[2000]	[2009]
	① China 39,309(78.6 %)	① China 1,182(35.0 %)	① USA 73,882(39.0 %)
	② Mongolia 1,621(3.2 %)	② Japan 613(18.2 %)	② China 64,232(33.9 %)[a]
	③ Vietnam 1,456(2.9 %)	③ USA 195(5.8 %)	③ Japan 24,850(13.1 %)
	④ Japan 989(2.0 %)	④ Russia 77(2.3 %)	④ Australia 6,796(3.6 %)
	⑤ USA 758(1.5 %)	⑤ Vietnam 62(1.8 %)	⑤ UK 4,277(2.3 %)
	☞ CH + JP 40,298(80.5 %)	☞ CH + JP 1,795(53.2 %)	
USA	[2009]	[2000]	[2009]
	① China 124,225(18.8 %)	① China 50,281(10.6 %)	① China 15,409(22.4 %)[a]
	② India 101,563(15.4 %)	② Japan 43,270(9.1 %)	② UK 14,343(20.9 %)
	③ Korea 73,832(11.2 %)	③ India 39,084(8.2 %)	③ Canada 8,310(12.1 %)
	④ Canada 29,209(4.4 %)	④ Korea 38,026(8.0 %)	④ France 3,544(5.2 %)
	⑤ Japan 28,783(4.4 %)	⑤ Canada 21,735(4.6 %)	⑤ Germany 3,239(4.7 %)

Source: UNESCO Institute for Statistics unless otherwise specified
[a]The Educational Statistics Yearbook of China, 2000–2009
[b]Global Education Digest, 2011

absolute amounts. Korea's main feeder country is definitely China (39,309), while China's are South Korea (64,232), USA (18,650), and Japan (15,409), followed by Indonesia (12,247) and Germany (11.379). Although there were some fluctuations in the composition of the top 5 sending countries for China, Japan, and South Korea between 2000 and 2009, the other two neighboring countries were, without a doubt, main feeder countries for the HEIs in these three countries. This clearly shows the emergence of a triangular pattern of student exchanges among China, Japan, and South Korea during this period. Despite the massive outbound flows of Northeast

Asian countries to the USA, however, relatively few students come from the North America to the Northeast Asian region, particularly to Japan and Korea.

Compared to an astounding increase in the aforementioned student mobility, teacher mobility in South Korea, Japan, and China seems to have shown a rather modest increase over the past decade. Since a complete set of comparative data on this topic is not yet available, one can only grasp some parts of the overall picture by compiling the best available national or institutional statistics, collected separately by individual countries or institutions. In the case of Korea, the number of foreign professors working at HEIs has more than quadrupled over the past 10 years, from 1,387 in 2002 to 5,964 in 2012, as shown in Table 7.5. While a vast majority of the foreign teaching staff was from English-speaking nations, such as the USA and Canada, professors hailing from China and Japan have also increased in number. As of 2012, Chinese and Japanese professors make up 8.8 and 6.9 % of the overall foreign teaching staff, respectively, at Korean HEIs. It is worth noting that the number of Chinese professors has jumped more than five times over the past 10 years.

Interuniversity Partnership Agreements and Collaborative Degree Programs

Behind the growing volume and intensity over the past decade of student and teacher mobility in the Northeast Asian countries lies increased interuniversity exchange agreements and cross-border collaborative degree programs among the HEIs in this region (Kuroda and Passarelli 2009). According to Kuroda and Passarelli (2009), based on MEXT (2007), while partner universities of interuniversity agreements signed by Japanese universities were evenly distributed across the region in the early 1990s, they saw a drastic gain in the East Asian region since the mid-1990s. This intra-regional growth is largely attributed to the hike in academic exchange arrangements made between Japanese universities and Korean/Chinese universities. For example, Japanese HEIs' interuniversity agreements with Chinese HEIs accounted for 42.3 % of the total agreements signed in 2006, while Japanese interuniversity agreements with Korean HEIs represented 24.2 % in that same year. Until 2006, Japanese universities have signed 6,058 exchange agreements with universities in the Asian region, in contrast with 2,463 pacts with those in Europe and 2,708 in North America.

A similar trend can be observed among Korean universities. As an example, the number of academic exchange agreements at Korea University (KU), one of the leading universities in Korea, has increased by more than 350 % from 257 in 2005 to 840 in 2012, notably with institutions in English-speaking countries, such as the USA, Australia, and Canada (Table 7.6). Over the same period, however, KU has also drastically increased its agreements with universities in Japan to 62 and has signed 8 more pacts with HEIs in China. These data indicate that, as of 2012, Japan

Table 7.5 Top 5 countries of origin for foreign professors at Korean HEIs

Country of origin	2002	2004	2006	2008	2010	2012	Index of change (2002 = 100)
USA	582 (42.0 %)	786 (45.3 %)	974 (38.3 %)	1,359 (39.6 %)	2,052 (41.4 %)	2,927 (49.1 %)	503
Canada	255 (18.4 %)	293 (16.9 %)	496 (19.5 %)	656 (19.1 %)	834 (16.8 %)	903 (15.1 %)	354
China	99 (7.1 %)	114 (6.6 %)	218 (8.6 %)	331 (9.6 %)	448 (9.0 %)	525 (8.8 %)	530
Japan	166 (12.0 %)	202 (11.6 %)	278 (10.9 %)	316 (9.2 %)	381 (7.7 %)	411 (6.9 %)	248
UK	41 (3.0 %)	48 (2.8 %)	93 (3.7 %)	139 (4.1 %)	243 (4.9 %)	330 (5.5 %)	805
Total	1,387 (100 %)	1,737 (100 %)	2,540 (100 %)	3,432 (100 %)	4,957 (100 %)	5,964 (100 %)	430

Source: Education Statistics Yearbook in Korea, 2002–2012 (http://std.kedi.re.kr/index.jsp)
Note: Foreign faculty members in all Korean HEIs including 2–3-year junior colleges; the numbers include relatives abroad with a foreign nationality

Table 7.6 Interuniversity agreements signed by Korea University by countries of partner institutions: 2005/2012

		2005		2012		Growth	
Rank	Country of partner institutions	No. of agreements	%	No. of agreements	%	No. of agreements increased	Index of change (2005 = 100)
1	USA	56	23.6	264	31.4	208	471
2	Japan	38	16.0	62	7.4	24	163
3	China	33	13.9	41	4.9	8	124
4	Australia	13	5.5	30	3.6	17	231
5	Canada	10	4.2	25	3.0	15	250
Total		257	100	840	100	603	354

Source: Korea University Portal (portal.korea.ac.kr)

and China have joined the USA as countries with the most number of exchange programs with KU.

Collaborative degree programs, though still limited, have also been gradually expanding among universities in the Northeast Asian region since 2000. The latest data on this issue, presented by Yuki et al. (2011), is based on survey data conducted by Japan International Cooperation Agency Research Institute (JICA_RI) on approximately 300 leading universities in the East Asian region and shows that collaborative degree programs[1] offered by Northeast Asian universities are still largely centered around Western universities, including 28.9 % in North America and 25.8 % in Western Europe (Table 7.7).

Collaborative degree programs with schools in Northeast and Southeast Asia is at 19.2 % and 17.9 %, respectively. By country, the USA leads the pack with 82 universities offering collaborative degree programs with schools in Northeast Asia, followed by 29 institutions in France and 25 in England. At the same time, the robust exchange of academic programs by 34 Malaysian universities, 22 Chinese universities, and 16 Korean universities with other schools in the Northeast Asian region may be interpreted as a potential expansion of educational collaboration in the region. In the case of Japanese universities, only six of which offer collaborative degree programs with HEIs in Northeast Asia, while a total of 116 universities offer similar types of degree programs with HEIs in Southeast Asia, signaling a possibility of further expansion in educational cooperation with East Asian institutions outside the Northeast Asian region.

To summarize, the data presented in this section suggest that, since the early 2000s, cross-border higher education activities in Northeast Asia have drastically increased and currently form "a certain degree of de facto integration" of higher

[1] The definition of "cross-border collaborative program" in JICA_RI Survey 2009/2010 is "[i]nstitutionally produced or organized with cross-border university partnership by at least two institutions in two countries or more." This includes, for instance, double/joint, twinning, and sandwich programs and does not include conventional student exchange programs and branch campuses (Yuki et al. 2011).

Table 7.7 Regions and countries of partner universities for cross-border collaborative degree programs operated by 300 leading universities in East Asia

Respondent	Partner region	Partner country
Northeast Asia	North America (28.9 %)	USA 82, Malaysia 34, France 29
	Western Europe (25.8 %)	UK 25, China 22, Korea 16
	Northeast Asia (19.2 %)	Australia 15, Hong Kong 13, Indonesia 12, Canada 9, Germany 9, Singapore 8, Japan 6, Netherlands 5, Others 3
	Southeast Asia (17.9 %)	
	Oceania and Pacific (5.4 %)	
Southeast Asia	Western Europe (34.1 %)	Japan 116, USA 105, Australia 92
	Northeast Asia (22.4 %)	France 73, UK 42, Netherlands 26
	North America (19.6 %)	Germany 21, Belgium 12, Sweden 12, China 10, Malaysia 9, New Zealand 8
	Oceania and Pacific (17.5 %)	Canada 7, Thailand 6, Indonesia 5
	Southeast Asia (4.0 %)	

Modified from Yuki et al. (2011)
Note: Total $N = 1{,}048$; Northeast Asia $n = 318$; Southeast Asia $n = 572$

education in this region. This growing interdependence of higher education systems in Northeast Asia is leading toward the development of a more concrete regional higher education cooperation framework in Northeast Asia. The next section further explores this issue.

Regionalization of Higher Education in Northeast Asia

Emergence of Regional Higher Education Cooperation Framework in Northeast Asia: A Historical Overview

There are currently two different paths leading toward the regionalization of higher education: (1) top-down regional and governmental cooperation frameworks fostered frequently by supranational organizations like the EU or ASEAN, and (2) - bottom-up initiatives through cross-border higher education activities at the institutional and individual level, and through the establishment of voluntary university associations, such as the Association of East Asian Research Universities (AEARU) or the Association of Pacific Rim Universities (APRU) that aim to construct a new regional university collaborative network.

As we have shown in section "Deepening intra-regional dependence among Northeast Asian countries", the bottom-up initiatives at the institutional and individual student levels are already quite widespread in Northeast Asia. In this sense, the regionalization of higher education in Northeast Asia has so far been driven more by market forces rather than by government-led initiatives. The critical issue here is whether these heightened levels of interdependency among HEIs and student mobility in this region can actually lead to more systematic or institutionalized higher education cooperation frameworks that will ultimately contribute to the regionalization of higher education in East Asia (Kuroda and Passarelli 2009).

Contrary to Southeast Asia where ASEAN has played a pivotal role in developing regional identify and systematic higher education cooperation frameworks over the last couple of decades, there is no regional body comparable to ASEAN in Northeast Asia to be able to take a multilateral approach. This is probably due to several intertwined factors having shaped the complex geopolitical situation in Northeast Asia: (1) the political tension among countries in Northeast Asia during and even after the Cold War era, (2) emerging rivalry between Japan and a newly emerging giant China, and (3) the complicated historical legacies between China, South Korea, and Japan, in particular, of the first half of the twentieth century (Chapman et al. 2010; OECD 2004a). For these reasons, in Northeast Asia, discussions on regional higher education integration started only within the last 10 years or so. In particular, to avoid this delicate geopolitical situation in Northeast Asia, at the beginning, these discussions usually took place in a much broader context, such as ASEAN+3 or East Asian Summit (EAS) where ASEAN in most cases played an important mediating role.

The first critical momentum to facilitate close cooperation among these three countries was brought on by the East Asian financial crisis in the late 1990s. The crisis has provided East Asian economies with a new perspective on regional cooperation, which actually introduced several significant government-led regional integration processes in East Asia. For instance, in response to the crisis, the leaders of China, Japan, and South Korea were unofficially invited to the ASEAN's 30th anniversary, which paved a way for forming the ASEAN+3 mechanism. Through this newly created mechanism, all three major Northeast Asian countries participated in the discussions, for the first time, on intra-regional higher education cooperation in a much broader regional context of East Asia. The importance of higher education cooperation in East Asian countries has since then been actively discussed at ASEAN+3 meetings and sometimes in an even broader context, such as EAS that started in 2005 and that expanded its membership further to Australia, New Zealand, and India. Some of the most important recommendations and declarations emphasizing the role of East Asian higher education cooperation from various regional processes involving China, Japan, and South Korea are summarized in Table 7.8.

However, the most dramatic change in the development of higher education cooperation framework in Northeast Asia was brought about by the establishment of the Trilateral Summit meeting among the leaders of China, Japan, and South Korea. Not surprisingly, as was the case with the initiation of discussions on

Table 7.8 Major recommendations and declarations emphasizing the regional integration of East Asian higher education involving China, Japan, and South Korea

Regional process	Attention to higher education
EVAG (East Asia Vision Group) Prospect report in 2001	To work together with cultural and educational institutions to promote a strong sense of identity and an East Asian consciousness and to promote East Asian studies in the region through cooperative programs, teaching or languages, establishment of networks; expanding the ASEAN University Network (AUN) to the rest of East Asia and profiting by existing bilateral initiatives between ASEAN and China, Japan, and South Korea (EVAG recommendations, Section 5 "Social, Cultural, and Education Cooperation" points 98 and 100)
ASEAN+3 leaders' declaration at the 7th ASEAN+3 Summit in 2003	To promote lifelong learning programs; credit transfer systems; scholarships and exchange programs for students, faculty, and staff; research and development cooperation; "centers of excellence," including e-learning; and curricular development as bases for common regional qualification standards among interested centers/institutions (Recommendations adopted in the area of education)
Kuala Lumpur Declaration at the 1st East Asian Summit in 2005	To enhance people-to-people exchange aimed at developing a "we feeling"; to encourage the sharing of ideas through greater interactions between students, academicians, researchers, artists, media, and youths among countries in East Asia; to conduct regular exchange of intellectuals, members of think tanks, religious personalities, and scholars, which will benefit from East Asia and the world through deeper knowledge and understandings so as to fight intolerance and improve understanding among cultures and civilizations (Articles 6, 7, 8)

Sources: Kuroda and Passarelli (2009) and Yepes (2007)
Note: Modified from Yepes (2007)

establishing an East Asian Community at ASEAN+3 a decade ago, the development of a leaders' network among the three Northeast Asian countries was again the most important factor in accelerating recent talks on the regionalization of higher education in Northeast Asia. The Trilateral Summit meeting, involving exclusively China, Japan, and South Korea, first took place in 2008. Since then, these three core countries in Northeast Asia have met annually under the formal institutional framework of the China-Japan-Korea Trilateral Summit (the Trilateral Summit hereafter). This shows that these three countries consider, on top of the greater ASEAN+3 option, the Northeast Asian option as one viable regional scope for more fruitful regional cooperation.

Seen from European experiences, however, the success of regional integration is dependent on the development of a true regional identity. This point was well stressed by then Japanese Prime Minister Hatoyama's proposal of establishing an "East Asian Community" at the 2nd Trilateral Summit meeting held at Beijing in

October 2009 and which was again reflected as a key item in "the Joint Statement on the Tenth Anniversary of Trilateral Cooperation among the People's Republic of China, Japan, the Republic of Korea," adopted by the leaders of the three countries (Yonezawa and Meerman 2010). The Joint Statement says that "we have agree [d]. . .[to] continue to conduct exchanges among all sectors of the three countries, particularly friendly youth exchanges and exchanges among universities. . .. [to] consider establishing a long-term mechanism for youth and media exchanges, encourage academic institutions and local authorities, and promote closer trilateral cooperation in areas such as. . .education. . ." (retrieved 7 Nov. 2011, http://www.mofa.go.jp/region/asia-paci/jck/meet0910/joint-1.pdf).

In the area of higher education, this agreement had an immediate impact on the ongoing movement toward establishing a common regional framework to encourage student exchanges among the Northeast Asian countries. To implement this agreement, the governments of the three countries set up a "Joint Expert Committee for Promoting Exchange and Cooperation (Joint Expert Committee hereafter)" to discuss and develop guidelines to support exchange programs among universities in China, Japan, and South Korea. On May 29, 2010, in Jeju, Korea, the leaders of China, Japan, and South Korea convened again at the 3rd Trilateral Summit Meeting and agreed on the early realization of the CAMPUS ASIA program, the Asian version of European ERASMUS program.

At this Summit, the leaders of the three countries also adopted a "Trilateral Cooperation VISION 2020," articulating "[w]e share the common recognition that by presenting specific goals and visions to be achieved through cooperation by 2020, our future-oriented comprehensive cooperative partnership will be more solid" (retrieved 7 Nov. 2011, http://www.mofa.go.jp/region/asia-paci/jck/summit1005/vision2020.html). Some of the measures proposed in the vision document were:

- To contribute to strengthening the competitiveness of universities and nurturing qualified human resources through exchange programs, such as credit recognition and joint degrees. To this end, the China-Japan-Korea Committee on Promoting Exchange and Cooperation among Universities will continue to be convened.
- To promote cooperation among quality assurance agencies in China, Japan, and South Korea and jointly prepare a guideline in order to enhance exchanges among universities.
- To consider a concrete policy package to facilitate the exchange of prospective students. Meanwhile, to further promote trilateral educational cooperation, we will make full use of meetings to facilitate the establishment of a ministerial meeting mechanism (MEXT 2011).

These two historic documents at the Trilateral Summits have so far been the most high-profile and comprehensive agreements on higher education cooperation among the three Northeast Asian countries, which finally resulted in the CAMPUS ASIA program. It is the first and most concrete multilateral student exchange initiative taken by the Northeast Asian countries, which have high potentials to

be further developed into a more comprehensive regional higher education cooperation framework in this region.

CAMPUS ASIA: New Regional Higher Education Cooperation Framework in Northeast Asia

CAMPUS ASIA is a new multilateral student mobility program initiated by the three Northeast Asian countries. The primary goal of the project is to promote cooperation among HEIs and to develop mutual understandings by institutionalizing various exchange programs (e.g., student exchange program) between universities, which will in the long run contribute to the establishment of a broader East Asian Community (MEXT 2011).

CAMPUS ASIA was first initiated by South Korea and Japan, with China later deciding to join in. On the Korean side, the policy idea of a multilateral student mobility program first appeared in March 2009 in Korean Ministry of Education, Science and Technology (MEST, hereafter) document presented at the National Brand Committee chaired by the President of the Republic. It says, "in order for Asia to be a world leader, it should promote mutual understanding and develop 'we feeling' among Asian countries by implementing an Asian version of the ERASMUS program called 'CAMPUS ASIA' [author' translation – original in Korean]." This idea was adopted by the President and then proposed as an official agenda for the 2nd Trilateral Summit in October 2009. The core element of this idea at this stage was to develop double and joint degree programs with Asian countries as an important means of upgrading Korea's higher education (Moon 2010). On August 2009, MEXT sent a delegation to the Korean Ministry of Education to discuss higher education cooperation between the two countries. Until then, it seemed like a typical bilateral collaboration effort because China did not pay serious attention to the formation of this multilateral cooperation program at the beginning. A critical turning point was, however, made at the 2nd Trilateral Summit Meeting held in Beijing. Then Prime Minister of Japan, Hatoyama, emphasized the importance of a university exchange program among China, Japan, and South Korea and proposed establishing an intergovernmental expert committee to discuss quality-assured student exchange programs (Yonezawa and Meerman 2010).

Based on this proposal and subsequent agreements made by the leaders of the three countries, the intergovernmental expert committee composed of a total of 18 experts (6 per country) was created and gathered several times to discuss and prepare the guidelines for the proposed exchange program, with the help of two working groups (one on a pilot exchange program and the other on quality assurance). The Joint Expert Committee reached a basic agreement on (1) the proposed guidelines for promoting student exchange among the three countries and (2) a pilot implementation plan for CAMPUS ASIA at the 2nd expert committee in Beijing in December 2010 and which finally confirmed its contents at the 3rd committee in Jeju, Korea, on May 2011.

The guidelines clearly articulated the role of such important stakeholders as universities, governments, quality assurance agencies, and industry representatives in order to promote quality-assured cross-border higher education activities, ranging from implementing credit transfer and grade assessment to recognition of academic qualifications among universities in different countries. Some of the important measures recommended in the guidelines include (1) establishment of a comprehensive, coherent, and transparent quality assurance framework and encouragement for relevant universities to participate in the exchange programs (for governments); (2) establishment of an internal quality assurance system, effective implementation of the exchange program, and good services for exchange students (for universities); and (3) maintaining clarification and visibility of procedure and seeking common standards and joint evaluation (for quality assurance agencies) (MEXT 2011). It is worth noting that the guidelines were prepared under the principle of respecting each participating country's unique education system and policies. Therefore, to implement student exchanges among universities in these three countries, participating universities in one country should not be bound to the other countries' policies nor to other participating universities' education style or exchange program content (MEXT 2011).

The CAMPUS ASIA program will be implemented through a small-scale pilot program over the next 3–5 years, starting from 2012. Based on the implementation plan summarized in Table 7.9, a joint call for a pilot program proposal was announced in May 2011, and ten consortiums were selected through a two-stage evaluation process (one by each country and the other by a joint trilateral evaluation).

The final list of ten winning consortiums, which includes a dual degree consortium in international studies and public policies comprising three flagship universities from the three participating countries (Seoul National University in Korea, Peking University in China, Tokyo University in Japan), was made public on 30 October, 2011 in Korea. The three governments hope that, like the ERASMUS program in Europe, these ten consortiums can serve as a channel through which national/regional cultures and values will communicate more effectively with each other. The Korean government will provide a participating Korean university in the selected consortiums with KW 224 million per year. Based on the information accumulated through this pilot stage, the program will be further expanded in terms of scale and coverage of the countries (MEXT 2011).

Issues and Challenges

Will the Northeast Asian region become a more coherent regional bloc of higher education integration in the near future? If so, what implications does this have for the establishment of a broader East Asian higher education area? Many observers (e.g., Kuroda and Passarelli 2009; Mok 2011) have argued that, as opposed to what has happened and is happening in Europe, the developments of regional higher

Table 7.9 Pilot implementation plan of CAMPUS ASIA program

Item	Implementation plan
Target	Both undergraduate and graduate programs
Application unit and process	A consortium made by at least three universities from China, Japan, and South Korea; application will be made at the level of departments or colleges, submitted through the participating universities, and to the Ministry of Education in each participating country
Duration of period	One year as a principle; no less than 3 months in any case during the pilot stage (recommended)
No of exchange students	Built-in mechanism to balance the inflow/outflow of students based on the reciprocity principle; 100 students per year (for a 1-year exchange basis) to and from the other two countries; privately funded or participating university-sponsored students are not included in that number
Language	To be decided by each consortium autonomously
Financial support to students	Students pay tuition to their universities at home, NOT to the institutions to be exchange abroad; support for airfare will be decided autonomously by the home country, while all other costs (e.g., housing) will be covered by the host countries
	The host country will provide a maximum of 100 (on a 1-year basis) inbound students by principle, with the minimum support level on par with its government-funded scholarship students (recommended)

Source: MEXT (2011)

education cooperation and its related institutions in East Asia can only be called nascent at the moment as the majority of these agreements and institutional frameworks are either very shallow or rather subregional. For instance, Evans (2005, as cited in Mok 2011, p. 20) argued that regional agreements for higher education cooperation in East Asia, such as the Kuala Lumpur Declaration, might comprise just "little more than talking and becoming familiar with one another" (p. 211). There is not anything like the European Union or the Bologna process in East Asia. In addition, the government-level efforts in East Asia are currently taking place at a subregional level through agreements between neighboring states rather than as at a pan-regional level as in Europe. For instance, ASEAN countries reached a consensus in 2003 to establish an ASEAN community by 2015, and Southeast Asian Ministers of Education Organization–Regional Center for Higher Education and Development (SEAMEO RIHED) recently began discussing an even more ambitious idea of creating a Southeast Asian Higher Education Area (SEA-HEA) within its own region. In parallel, Northeast Asia has also initiated a CAMPUS ASIA program within its own regional boundary (Aphijanyatham 2010; Kuroda et al 2010).

Why is this the case in East Asia? The underlying reasons behind the present situation need to be understood. First of all, East Asia is complex and diverse.[2]

[2] In relation to cross-border higher education, the East Asian region can be classified as several interlocking subregions with each having certain distinct characteristics, *though some overlap more than one group*: (1) developed nations with a strong domestic capacity but active as importers, particularly of English-language education (Japan and South Korea); (2) developed or intermediate nations with inadequate domestic capacity, active as both importers and exporters

There is less common cultural, linguistic, and religious ground in the East Asian region than in Europe. This extreme diversity poses various challenges in regional integration in East Asia that would be difficult to settle at least in the short time period. In addition, contrary to Europe, there is no powerful supranational body able to accelerate a multilateral approach. ASEAN, EAS, and Asia-Pacific Economic Cooperation (APEC) do not have the capacity enough to forge a strong consensus that cuts across national agendas (OECD 2004a).

For these reasons, any substantiated policy frameworks so far aimed at the integration of higher education systems in East Asia were initiated first at the subregion level on the assumption that (1) higher education cooperation frameworks at the subregional level would create better opportunities for countries in the subregion to take full advantage of geographical proximity and more intimately shared cultural and educational heritage of neighboring countries, and (2) once they matured, these subregional cooperation frameworks would ultimately contribute to the formation of a Pan-East Asian higher education community. It seems this approach is very efficient and somewhat inevitable at least for a while, given the huge diversity and developmental gaps currently existing in various subregions in East Asia. From this viewpoint, the regionalization of higher education in Northeast Asia can also be interpreted as a first step or a building block of forming a greater East Asian higher education area.

Northeast Asian countries share an intimate cultural and educational heritage and historical affinities and developmental experiences (Chapman et al. 2010). In addition, from a more practical perspective, significant complementarities exist between China, Japan, and South Korea. For instance, in the case of South Korea and Japan, they have a strong domestic capacity to provide higher education as domestic enrollment rates in these countries have continued decreasing in recent years due to the decline of college age students. On the contrary, in China, domestic capacity is currently way behind to meet the drastically increased social demands for higher education (OECD 2004a). To redress this imbalance between demand and supply of higher education systems in Northeast Asian countries, closer regional higher education cooperation is inevitable. It can provide both resources and markets to each other.

However, while promoting the regionalization of higher education in Northeast Asia, the governments of the Northeast Asian countries are likely to face some tricky issues at hand, such as a leadership issue over the region, the evolving nature of market-driven cross-border higher education provision in this region, and most importantly the issue of quality assurance and recognition.

First of all, the geopolitical situation in Northeast Asia is much less conducive to the regionalization of higher education than the situation in Europe or in Southeast

(Singapore, Hong Kong, China, and Chinese Taipei and Malaysia); (3) intermediate nations with inadequate domestic capacity active as importers while actively undeveloped as exporters (China, Vietnam, Philippines, Thailand, Indonesia, Malaysia); and (4) relatively undeveloped nations, characterized by both low domestic participation and weak demand for cross-border education (Laos, Cambodia, Myanmar) (OECD 2004a, p. 139).

Asia. Political and territorial conflicts remain unsettled, and regional factors driving regional integration seems far more complicated in Northeast Asia (Seliger, 2009). A rivalry competition between newly emerging China and Japan will continue with neither completely dominating the integration process. South Korea is situated between two world great powers and bordered by the hostile North Korea. A lack of a single clear leadership or coordinated dual leadership might prevent the Northeast Asian region from forming a truly coherent regional bloc in the area of economy as well as higher education. Therefore, in the future, both China and Japan can either attempt to lead the regionalization process or to prevent it, allowing some room for South Korea, situated in the middle, to be able to take some mediating roles to play as a catalyst for accelerating the process of regionalization in Northeast Asia.

Another salient geopolitical feature characterizing Northeast Asia is the strong influence of the USA in this region. The USA is "an indirect political and economic factor in Northeast Asian integration" (Seliger, 2008:4). The area of higher education is not an exception for this US influence. As discussed in section Deepening intra-regional dependence among Northeast Asian countries, the main cross-border dynamics in the Northeast Asian region are not confined to countries within the region but rather are greater between the Northeast Asian countries and their English-language providers, in particular the USA. The absolute majority of Northeast Asian students are still choosing the USA as the most favored study destination due to the ever-growing role of English as well as its superior quality of higher education. In this sense, the pattern and the size of cross-border activities between Northeast Asian countries and the USA will inevitably influence the speed and shape of future regionalization of higher education in Northeast Asia. Yet, until now, no political consensus has yet emerged as to how this strong interdependence between Northeast Asian countries and the USA can properly be taken into account in achieving a higher education integration in Northeast Asia.

Second, the chapter has attempted to capture some of the features in cross-border higher education activities in Northeast Asia, in particular those among South Korea, China, and Japan. An example of these features includes the governments in Northeast Asia, particularly those of South Korea and Japan, and how they currently place much emphasis on the export performance of their HEIs. In fact, both South Korea and Japan export many similar products to China, including "higher education services," thereby engaging in fierce competition with each other in the international (student) market. In addition, as aforementioned, both South Korea and Japan have excessive capacities in their higher education systems, as well as an ambition to become a regional education hub in the future. In many respect, as OECD (2004a) rightly pointed out, Northeast Asia is "the world's laboratory for examining the implications of demand-driven, trade-oriented mobility of people, programs and institutions" (p. 196). In this context, much of the cross-border higher education activities in this region take the form of a full price market exchange. Therefore, a multilateral initiative or framework that emphasizes the development of a mutual understanding among countries in the region may create tensions with a national approach, thereby emphasizing the export function of its

HEIs, which inevitably entails fierce competition between countries. This example clearly demonstrates the possible tensions that exist between cooperation, as the ideal, and competition, as the harsh reality, in the process of regionalization of higher education in Northeast Asia.

Finally, it should also be acknowledged that the growth in cross-border higher education will pose many operational challenges because of different languages, the diversity of institutional governance structures, various quality assurance, and funding arrangements among countries (OECD 2004a). Among these, at the center of the operational challenges lies quality assurance and recognition issue. In implementing the pilot program of CAMPUS ASIA, the Joint Expert Committee developed some internationally agreed-upon principles and procedures for quality assurance and recognition. However, much remains to be done to coordinate various quality assurance arrangements implemented by individual countries. In fact, based on the experiences in Europe (OECD 2004b), to develop a region-wide quality assurance mechanism would be very difficult, if not impossible, as authority and competencies with respect to quality assurance of higher education are firmly rooted at the national level. The guidelines developed by the Joint Expert Committee also made this point clear, by stating that "[s]ince the university system in each country possesses unique attributes and features, the guidelines will be formulated such that no one country is bound to another country's concept of what a university system or university education [should] entail" (retrieved 7 Nov. 2011, http://www.mext.go.jp/english/topics/1306406.htm). Furthermore, actual criteria, methods, and procedures implemented in individual countries in the region are very diverse, while institutional diversity in the higher education system has continued increasing over time (OECD 2004a). The ongoing international efforts, including ones that were discussed in the Joint Expert Committee, have tried to tackle some of these issues. Yet, there seems to be no easy solutions, as quality assurance inevitably has to touch on sensitive issues, such as the autonomy of individual HEIs and the sovereignty of individual nations.

Conclusion: What Next?

In conclusion, the regionalization of higher education in East Asia takes on complex patterns of bilateral and multilateral relationships among China, Japan, and South Korea; Japan and Southeast Asia; China and Southeast Asia, and so on. It has gradually evolved through the so-called multipolar initiatives (Yonezawa and Meerman 2010), which reveal that the regional higher education cooperation and exchange in East Asia are unfolding simultaneously in several interlocking subregions rather than in a single large region. Within this broader regional context, the regionalization of higher education in Northeast Asia has also continuously evolved over the past decade.

In relation to the regionalization of higher education, East Asia's extreme diversity and uneven level of economic and higher education development has

made it difficult to achieve a region-wide approach. Therefore, in the near future, neighboring countries in East Asia are likely to continue focusing their efforts on establishing a more solid higher education cooperation framework at a subregional level rather than at a pan-regional level, in the hope that it could contribute to achieving a broader East Asian higher education community in the long run. Broader regional cooperation frameworks, such as ASEAN+3, can in the meantime only serve as a kind of platform to facilitate joint initiatives, for instance, between Southeast and Northeast Asia.

However, to more effectively promote the regionalization of higher education in Northeast Asia, the governments in this region should first properly deal with some tricky issues at hand, particularly political and territorial conflicts stemming from the complicated historical legacies between China, Japan, and South Korea. During the last year, territorial conflicts in South Korea-Japan and China-Japan rekindled chronic political tensions between these countries and froze all their diplomatic relations. Official visits were cancelled, and ongoing government-backed collaborative efforts were and still are affected heavily by this chilling political atmosphere. One of its such victims includes the CAMPUS ASIA program: as it was initiated and driven mainly by political motivation at the national level, the program's implementation and progress received an inevitable blow as the political drive of participating countries waned. Domestic politics, backed by a growing undercurrent of nationalism, only further exacerbates the diplomatic tensions among the three countries. Particularly during major election seasons, politicians often manipulate national sentiment in order to strengthen their political position at home. Thus, they cite territorial conflicts to serve their own needs, rather than to resolve cross-border disputes. It is against such a backdrop that the future of the regionalization of Northeast Asia will take place.

Within the past year, all three countries have undergone leadership transitions, and thus, we can naturally assume that we are facing a new turning point in Northeast Asian politics. It remains to be seen whether this power transition will prove to be an opportunity or a threat to the current political tensions among the three countries. In this sense, future developments for the regionalization of higher education in Northeast Asia are yet rife with uncertainty. The only thing that can be said for certain is that politicians of the three countries must change their approach toward historical and territorial disputes, if they truly wish to achieve regionalization in Northeast Asia, including the domain of higher education. Collaborative efforts to ease age-old tensions rather than aggravate them will be crucial. In this respect, CAMPUS ASIA, as a softer form of collaboration effort, will be able to serve as a catalyst to rebuild political and diplomatic relationships among the three countries, particularly in situations where political channels of communication in the region are very weak.

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Chapter 8
Subregional Collaboration in Higher Education: Harmonization and Networking in the Greater Mekong Subregion (GMS)

Yasushi Hirosato

Introduction

Southeast Asia is being rapidly integrated through market-driven trade and foreign direct investment activities toward the Association of Southeast Asian Nations (ASEAN) Community starting from 2015. In this process, the region is also witnessing greater mobility of the people within ASEAN and between ASEAN and other regions. This emerging context places higher education in a pivotal role in developing human resources capable of creating and sustaining globalized and knowledge-based societies and promoting "brain circulation" in and outside Southeast Asia. In particular, in order to facilitate student and academic mobility, the region's diverse higher education systems and institutions need to share more harmonized frameworks, standards, and mechanisms by developing and introducing a permeable and transparent quality assurance (QA) and credit transfer system (CTS) in Southeast Asia.[1]

Encouraging and supporting students to study abroad is arguably the best way to foster the development of a well-trained international workforce, which can improve the quality and quantity of human resources in the economy as well as the national education sector (OECD/World Bank 2007). This is also true for academic staff, who would be able to access international academic networks, in which many developing countries have little involvement. When Europe was

The author is a former principal education specialist of the Asian Development Bank (ADB). The views expressed in this chapter are those of the author and do not necessarily reflect the views and policies of (1) the ADB or its Board of Governors or the governments they represent, (2) the ASEAN University Network (AUN), and (3) the Southeast Asian Ministers of Education Organization-Regional Center for Higher Education and Development (SEAMEO-RIHED).

[1] For an overview and recent trends in cross-border collaboration in higher education across Asia, see, for example, ADB (2012a), JICA (2012), Aphijanyatham (2010), and Hirosato (2011, 2012).

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integrated, the European Union created a European Higher Education Area (EHAE) by adopting a program called "Erasmus" as part of the Bologna process to facilitate the mobility of university students and academic staff.[2] Should ASEAN be more integrated as one ASEAN Community, it is necessary for Southeast Asia to have a similar vision and program but adapted to much more diverse contexts and unique regional characteristics, as well as supported by acceptable standards among universities in Southeast Asia. Such a harmonization process can be facilitated by building upon and strengthening the existing higher education forums, institutions, and networks. There also are increasing interests with the harmonization process among regional organizations and higher education institutions and at emerging regional economic architectures comprising ASEAN, ASEAN+3, and/or East Asia Summit (EAS) countries (ADB 2010).[3] These increasing interests offer the Asian Development Bank (ADB) a potentially unique opportunity, as a regional development bank, to contribute to promote such harmonization process and university networking by collaborating with government ministries and agencies, regional organizations, and higher education institutions and networks in Southeast Asia under a broader umbrella of ADB's support to the GMS program (ADB 2013a).[4]

This chapter discusses the GMS program in higher education, by highlighting the ADB's unique role in supporting higher education harmonization and networking. Following the Introduction (section "Introduction"), section "ASEAN's common challenge and the GMS program" outlines challenges faced by ASEAN and highlights salient contributions by the GMS program toward an integrated ASEAN Community starting from 2015. Section "Higher education harmonization in the GMS" discusses the importance and need of higher education harmonization to pave the way for greater student and academic mobility in the GMS in light of linkages with ASEAN. Section "ADB's support for higher education harmonization" introduces ADB's support for GMS higher education harmonization, and section "Higher education networking in the GMS" discusses GMS university networking. Section "A Proposal for the Greater Mekong Regional University"

[2] For more details on the EHEA and the Bologna process, see, for example, Tomusk (2005), Kehm, et al. (2009), Dhirathiti and Yavaprabhas (2008), and the website of EHEA (http://www.ehea.info). The "Erasmus" program is a student exchange program inside Europe, while "Erasmus Mundus" is a student exchange and academic cooperation program between Europe and other regions of the world.

[3] Kuroda et al. (2013) provide an excellent empirical analysis for cross-border higher education in the context of East Asian regional and ASEAN integration.

[4] ADB sponsored and the Government of the Republic of the Union of Myanmar (Myanmar) hosted the 11th Working Group Meeting on Human Resource Development (WGHRD-11) on 1–2 November 2012 in Yangon, Myanmar, which endorsed a draft GMS Human Resource Development Strategic Framework and Action Plan (GMS HRD SFAP) (2013–2017). The GMS HRD SFAP (2013–2017) was formally endorsed at the GMS Ministerial Conference held in Nanning, People's Republic of China, on 11–12 December 2012, and published by ADB (ADB 2013a). Key activities of the GMS HRD SFAP (2013–2017) will be supported by ADB's technical assistance (TA): Implementing the GMS HRD SFAP (Phase 2), which was approvad in December 2013 for $1.75 million (ADB 2013b).

presents a proposal for establishing a "Greater Mekong Regional University" as a regional platform, which would help GMS countries to improve quality and relevance of their universities and accelerate the process of higher education harmonization and networking in the GMS and beyond. Finally, section "Concluding Remarks" provides concluding remarks.

ASEAN's Common Challenge and the GMS Program

ASEAN leaders have set a vision to build an integrated ASEAN Community starting from 2015.[5] The ASEAN Community comprises the ASEAN Economic Community (AEC), the ASEAN Socio-Cultural Community (ASCC), and the ASEAN Political-Security Community (APSC), and each Community has its own Blueprint as an action plan (ASEAN 2008, 2009a, b). These are three equally important, independent, and interrelated pillars of the ASEAN Community, of which the primary goal of the ASCC is to contributing to realizing an ASEAN Community that is people centered and socially responsible (ASEAN 2009a). On the other hand, ASEAN leaders have also launched the Initiative for ASEAN Integration (IAI) since 2000 to narrow the development divide and enhance ASEAN's competitiveness. To accelerate the progress made so far, ASEAN leaders adopted the Master Plan on ASEAN Connectivity (MPAC) in October 2010 (ASEAN 2010), which is envisaged to connect ASEAN through enhanced physical infrastructure development (physical connectivity), effective institutional arrangements (institutional connectivity), and empowered people (people-to-people connectivity). The MPAC, whose primary aim is to increase connectivity, also seeks to help narrow development gaps in ASEAN especially by implementing capacity building cooperation arrangements which seek to help Cambodia, Lao Peoples' Democratic Republic (PDR), Myanmar, and Vietnam (CLMV) meet ASEAN-wide commitment in building the ASEAN Community. Another common challenge that the ASEAN region faces is to align its education, science, and technology policies to build capable human resources toward an integrated ASEAN Community and better link their education and skills development with the ASEAN-wide labor market demand.

For ASEAN to be a more integrated community, the biggest challenge is to narrow development gaps between original ASEAN member countries which have become high- or middle-income countries (Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore, and Thailand) and relatively new ASEAN member countries (CLMV). In order to realize a bigger market, greater economic scale, and more effective division of labor, ASEAN leaders took a subregional approach in addressing development gaps by launching the GMS economic cooperation program in 1992

[5] See "Cebu Declaration on the Acceleration of the Establishment of an ASEAN Community by 2015" at the 12th ASEAN Summit held in Cebu, Philippines, in January 2007. It should be noted that references to ASEAN and Southeast Asia in this chapter refers to 10 out of 11 Southeast Asian countries excluding Timor-Leste which is not yet an ASEAN member country and has not been part of higher education harmonization and networking process, while Timor-Leste is geographically included in Southeast Asia.

with the ADB as a coordinator.[6] The GMS program is a foremost example and a unique attempt in Southeast Asia and has become a model of subregional cooperation in Southeast Asia.[7] The GMS program encompasses CLMV, Thailand, and the People's Republic of China (Yunnan Province and Guangxi Zhuang Autonomous Region), constituting an economic bloc of some 250 million people that has a huge capacity for potential growth. The GMS program, which has been implemented over two decades since its launch in 1992, comprises nine priority sectors relating to (1) agriculture, (2) energy, (3) environment, (4) investment, (5) telecommunication, (6) tourism, (7) transport infrastructure, (8) transport and trade facilitation, and (9) human resources development (HRD).

Education is treated as one of the subsectors of HRD (health, labor migration, and social development, among others) (ADB 2013a). A little over half the population of GMS is regarded as potential labor, but a large part of it is currently idle, and there is a shortage in all sectors of human resources that can keep up with the scale and speed of growth. In addition, the low level of literacy among the youth, the inadequate provision of primary and secondary education, and poor health mean that labor productivity cannot be high. CLMV has not yet achieved universal completion of primary and lower secondary education, which is one of the reasons for low employment. To provide people with actual employment, more advanced technical education and vocational training are needed at secondary and tertiary education levels. Education and HRD are and will continue to be the core component of the GMS program (ADB 2012b) and are expected to contribute to narrow development gaps within GMS countries and between GMS countries and the rest of ASEAN, by producing capable human resources on a sustainable basis (ADB 2013a).

Higher Education Harmonization in the GMS

As emerging priorities in the GMS program, ADB and Education Subgroup in the GMS Working Group in HRD (WGHRD) comprising senior officials of GMS countries agreed to support higher education harmonization and networking in the GMS as part of a new program in 2012.[8] The WGHRD recognized that more

[6] The goal of the GMS program remains as sustained economic growth, reduced poverty, and social development in GMS countries, while so-called middle-income traps have been recognized as a serious constraint for furthering growth in middle-income countries in ASEAN.

[7] Other subregional cooperation programs in Southeast Asia are Brunei Darussalam, Indonesia, Malaysia, Philippines-East ASEAN Growth Area (BIMP-EAGA), and Indonesia-Malaysia- Thailand Growth Triangle (IMT-GT).

[8] This agreement was reached at the 10th GMS Working Group in HRD (WGHRD) held in Vientiane, Lao PDR, in May 2011, and this activity has been included in an ADB funded regional TA project as "GMS Higher Education and Networking (Phase 1)" by a procedure called "changing the TA scope during implementation" (ADB 2009).

harmonized higher education systems and deeper networking among universities will help GMS countries to achieve more mobility of students and academic staff and hence promote knowledge sharing and dissemination.[9] This activity has to be expedited in view of upcoming ASEAN Community starting from 2015, by supporting a process that builds country and stakeholder engagement in building the capacity in university QA system and building a common CTS across universities in GMS countries. More concretely, this activity is divided into two components:

1. Strengthen the capacity of university QA system and personnel in less developed GMS countries such as CLMV, in collaboration with the ASEAN University Network (AUN)[10]
2. Provide GMS counties with options for harmonizing existing credit transfer arrangements in higher education initially in a few selected fields to ensure applicability across Southeast Asia, in collaboration with the Southeast Ministers of Education Organization-Regional Center for Higher Education and Development (SEAMEO-RIHED).[11]

AUN and SEAMEO-RIHED are expected to play complementary roles in (1) harmonizing higher education systems by developing and implementing a common platform for university QA framework and CTS in the GMS, which can be linked with ASEAN and other regions and (2) strengthening regional higher education networks in GMS, Southeast Asia, and beyond the region. An assumption is that more harmonized higher education systems and strengthened higher education networks will help narrow development gaps and contribute to shape the ASEAN Community from 2015 and beyond.

[9] "Harmonization" is usually grouped into four aspects: degree systems, quality assurance (QA) systems, credit (transfer) systems, and academic calendar systems. This chapter is concerned with university QA and credit (transfer) systems. For more detailed discussions on definition and rationale of "harmonization," see Yavaprabhas (2014). Hotta et al. (2010) also compared credit systems, grading policies, and their actual implementation among 13 East and Southeast Asian countries. Furthermore, Knight (2012) provided a conceptual framework for the regionalization of higher education in Asia, according to functional, organizational, and political (will) approaches.

[10] The AUN was formed in 1995 and is coordinated through a Board of Trustees representing member institutions and its secretariat is located at the campus of Chulalongkorn University, Bangkok, Thailand. The AUN facilitates close interactions between its member universities including through students exchange and scholarship scheme. For more details on the AUN, see AUN website (http://www.aun-sec.org/) and Yavaprabhas (2014).

[11] SEAMEO-RIHED was established in 1993, as one of Regional Centers of SEAMEO, to foster efficiency, effectiveness, and harmonization of higher education in Southeast Asia through system research, empowerment, and development of mechanisms to facilitate sharing and collaborations in higher education. See SEAMEO-RIHED website for more details (http://www.rihed.seameo.org/).

Table 8.1 Member institutions of ASEAN University Network (AUN) and ASEAN+3 University Network (UNet) (as of February 2014)

Country	No. of institutions	Member institutions	[a]
AUN			
Brunei	(1)	University of Brunei Darussalam	
Cambodia	(2)	Royal University of Phnom Penh	
		Royal University of Law and Economics	
Indonesia	(4)	University of Indonesia	a
		Gadjah Mada University	a
		Bandung Institute of Technology	
		University of Airlangga	
Lao PDR	(1)	National University of Laos	
Malaysia	(2)	Universiti Malaya	a
		Universiti Sains Malaysia	a
		Universiti Kebangsaan Malaysia	a
		Universiti Putra Malaysia	a
		Universiti Utara Malaysia**	
Myanmar	(2)	University of Yangon	
		Institute of Economics	
		University of Mandalay**	
Philippines	(3)	University of the Philippines	
		Ateneo de Manila University	
		De La Salle University	
Singapore	(3)	Singapore National University	
		Nanyang Technological University	
		Singapore Management University	
Thailand	(4)	Chulalongkorn University	a
		Mahidol University	a
		Burapha University	
		Chiang Mai University	
		Prince of Songkla University**	
Vietnam		Vietnam National University, Hanoi	
		Vietnam National University, Ho Chi Minh City	
		Canthu University**	
Total	*(26)*		
ASEAN+3 UNet			
People's Republic of China	(5)	Guangxi University	
		Guizhou University	
		Peking University	
		Xiamen University	
		Yunnan University	
Japan	(3)	Kyoto University	
		Keio University	
		Tokyo Institution of Technology	
Republic of Korea	(2)	Seoul National University	
		Daejeon University	
Total	*(10)*		

Source: Author

[a]Member institutions of ASEAN International Mobility of Student (AIMS) Program

**New member institutions which joined the AUN in 2013.

Harmonization in Quality Assurance System

ASEAN University Network for Harmonization in Higher Education

The AUN is composed of 30 leading or major universities from 10 ASEAN countries that have worked closely to achieve the higher education development toward the ASEAN community building. On November 1, 2012, AUN signed the Memorandum of Understanding at Peking University, People's Republic of China (PRC), for establishing ASEAN Plus Three University Network (ASEAN+3 UNet) by extending its network initially with five universities in PRC, two universities in the Republic of Korea, and three universities in Japan. Member institutions of AUN and ASEAN+3 UNet are in Table 8.1.

University QA is an internal mechanism for ASEAN to ensure quality education toward achieving a harmonization in higher education.[12] The AUN realizes that QA is the bedrock for maintaining, improving, and enhancing teaching, research, and the overall academic standards. To strengthen quality higher education in ASEAN countries, AUN has established the AUN Quality Assurance Network (AUN-QA) since 2000 that successfully developed AUN-QA system including the preparation of AUN-QA Guidelines and Manual for the Implementation of the Guidelines (AUN 2007). Since 2007, the AUN-Assessor teams have conducted the actual quality assessment at program level for 26 undergraduate programs of 7 AUN member universities (AUN, 2011). This quality assessment is one of important activities under AUN-QA for ensuring the quality of program at regional recognition level as well as benchmarking among the universities in ASEAN.

The Need for Strengthening University Quality Assurance System in Cambodia, Lao PDR, and Myanmar

University QA in CLMV is still a new development in terms of both QA system and QA professional competencies due to the varied background and development stage of QA in each country. AUN member institutions from CLMV (namely, Royal University of Phnom Penh, Royal University of Law and Economics, National

[12] It should be noted that there are internal and external QA systems to ensure quality of higher education institutions. QA agencies are in charge of external QA system development at the country level, while universities are in charge of internal QA system development. This chapter is concerned with internal QA system. External QA is also promoted and strengthened by regional networks of QA agencies such as the ASEAN Quality Assurance Network (AQAN) with its secretariat located at Malaysian Qualifications Agency (http://www.mqa.gov.my) and the Asia Pacific Quality Network (APQN) with its current secretariat located at Shanghai Education Evaluation Institute in the People's Republic of China (http://www.apqn.org). See Aphijanyatham (2010) for definition and comparison of internal and external QA frameworks and systems in Southeast Asia and Vroeijenstijn, Ton. "Internal and external quality assurance: why are they two sides of the same coin?" (www.eahep.org/web/ images/Bangkok/28 _panel_ton.pdf).

University of Laos, University of Yangon, Yangon Institute of Economics, Vietnam National University of Hanoi, and Vietnam National University of Ho Chi Minh City) have been involved in AUN-QA activities, but some universities still need more training and assistance to set up their QA leadership and professionals for the establishment of QA system at their universities. A brief description of the status of university QA system of each country is provided as follows[13]:

Cambodia. A law on accreditation has been established in Cambodia, and the establishment of Accreditation Committee of Cambodia in March 2003 has formulated a set of criteria to regulate legally on the quality of higher education institutions. However, it is still difficult for the universities to develop the QA system because of the lack of QA personnel. Therefore, to assist and prepare the universities to be recognized among ASEAN leading universities, there is a clear need to support QA personnel development.

Lao PDR. Implementing university QA in Lao PDR faces problems. There is no independent quality assurance agency, and instead, the Ministry of Education and Sports has set up "Educational Standard and Quality Assurance Center" to tackle QA issues. The National University of Lao has established a "QA Office" to promote and regulate quality of education; however, they face several obstacles due to the lack of resources, lack of understanding of QA concept, motivation, and quality culture. It is clear that for QA implementation to be effective, Lao PDR needs not only capacity building of QA personnel but also both policy support and resource.

Myanmar. Like Lao PDR, there is no independent quality assurance agency to regulate and ensure the quality of higher education institutions. Myanmar Maritime University considers the QA system to be a very important step toward recognition at national, regional, and international level. Myanmar Maritime University is the only university that has established the quality management system and certified to ISO 9001 standard in 2007–2010. The university also aims to develop further alignment of its QA system with AUN-QA System. Other universities are also interested in establishing QA system at their universities. It is essential to equip their personnel with the capacity for establishing their QA systems in the near future.

On the other hand, universities in Vietnam have QA personnel that are more knowledgeable and experience in QA issues. QA at higher education institutions in Vietnam is well supported by some development partners such as the World Bank. Vietnam established the General Department of Education Testing and Accreditation under the Ministry of Education and Training and has developed a national policy on QA implementation at university level.[14]

[13] The description draws on a proposal by AUN submitted to ADB, which has been supported under the "GMS Higher Education and Networking (Phase 1)" the ADB funded regional TA project (ADB 2009).

[14] It was decided that Vietnam will be excluded from "GMS Higher Education Harmonization and Networking (Phase 1)" of the ADB funded regional TA project (ADB 2009).

Harmonization in Credit Transfer System

Credit transfer is the process of evaluating the components of one qualification for the purpose of determining the equivalence with the components of another qualification to establish credits for individuals. This may take place whether during a course or when enrolling for a new course at a different institution. Credit transfer avoids duplication of studies and saves time and money. An appropriate CTS is a key facilitator of student mobility and cooperation among higher education institutions.

The Need for a Common Credit Transfer System

Harmonization of higher education and increasing transnational student mobility require a common CTS as an enabling mechanism to create so-called higher education "common space." An effective system of academic credit transfer has long been recognized as a key element in promoting student mobility and cross-border educational cooperation. Several systems of credit transfer are operating among different subgroups of countries and higher education institutions in Southeast Asia. Although the systems have some features in common, differences in their governance, scope and administration mean that, depending on their locations and fields of studies, students and institutions may be required to deal with more than one system. This can end up with consuming scarce resources and become a barrier to student mobility and cross-border cooperation. Although differences in approach to credit transfer are to be expected in a diverse Southeast Asia, there would be much to gain from harmonizing existing systems of credit transfer for greater region-wide applicability.

Examples of Credit Transfer Arrangements

Among several credit transfer arrangements operating the region, the most notable examples are as follows.[15] University Mobility in Asia and Pacific (UMAP) has supported a student exchange scheme within the region since 1993. UMAP is a voluntary association of government and non-government representatives of the higher education sector. At present, UMAP has 31 member countries, including 10 ASEAN member countries, and uses the UMAP Credit Transfer System (UCTS). A pilot project to enhance student mobility between Malaysia, Indonesia, and Thailand (M-I-T pilot program) using the UCTS was initiated in 2009 by SEAMEO-RIHED with support from government ministries and agencies in charge

[15] The description draws on a proposal by SEAMEO-RIHED submitted to ADB, which was supported under the "GMS Higher Education and Networking (Phase 1)" of the ADB funded regional TA project (ADB 2009).

Table 8.2 Member institutions of ASEAN International Mobility for Students (AIMS) Program (as of September 2013)

Country	No. of instuitions	Member institutions	
AIMS program			
Indonesia	(12)	Ahmad Dahlan University	
		BINUS University	
		Bogor Agricultural University	
		Maranatha Christian University	
		Gadjah Mada University	[a]
		University of Indonesia	[a]
		Bandung Institute of Technology	[a]
		ISI Denpasar	
		ISI Surakarta	
		Sebelas Maret University	
		Sriwijaya University	
		Universitas Pendidikan Indonesia	
Malaysia	(7)	Universiti Malaysia	[a]
		Universiti Sains Malaysia	[a]
		Universiti Kebangsaan Malaysia	[a]
		Universiti Putra Malaysia	[a]
		Universiti Teknologi Malaysia	
		Universiti Teknologi MARA	
		Universiti Utara Malaysia	*
Thailand	(7)	Chulalongkorn University	[a]
		Mahidol University	[a]
		Kasetsart University	
		Thammasat University	
		King Mongkut's University of Technology, Thonburi	
		Mae Fah Luang University	
		Prince of Songkla University	*
Vietnam	(9)	Foreign Trade University	
		Nong Lam University	
		Hue University	
		National Economics University	
		Thai Nguyen University of Technology	
		Vietnam Maritime University	
		University of Transport and Communications	
		Water Resource University	
		Hanoi Agricultural University	
Total	*(35)*		

Source: Author

[a]Member institutions of ASEAN University Network

of higher education in three countries. Vietnam joined the "M-I-T" pilot program in November 2012, which was renamed to the "ASEAN International Mobility for Students (AIMS)" Program (SEAMEO-RIHED 2012). The AIMS program also uses the UCTS. Member institutions of the AIMS program are in Table 8.2.[16]

Meanwhile, the AUN implements the ASEAN Credit Transfer System (ACTS) among AUN 30 member institutions and with the extended network of ASEAN+3 (Table 8.1). Based on enrollment in one or two semesters and academic quality recognition, the ACTS ensures that credits and grades offered by the host AUN universities will be recognized by the home university. University of Indonesia hosts the secretariat for the ACTS.[17]

SEAMEO-RIHED has documented a range of credit transfer arrangements in Southeast Asia and concludes that such initiatives tend to proceed independently of each other and do not constitute harmonization as in the European (Bologna process) sense. One of SEAMEO-RIHEDS's key conclusions is that it is vital for governments to agree that the region has much to gain from harmonization process in higher education and to recognize that harmonization does not necessarily imply standardization (Dhirathiti and Yavaprabhas 2008).

ADB's Support for Higher Education Harmonization

In July 2011, ADB hosted an International Conference on Higher Education in Dynamic Asia in Manila, Philippines, which emphasized a neutral role of the ADB in the harmonization process of higher education in Southeast Asia. This neutral role is perceived to avoid competition among higher education institutions and networks and instead to promote collaboration among stakeholders to be facilitated by the ADB. To follow-up with the above International Conference, ADB published a report in which one of the recommendations is to provide a clearinghouse of information on models of regional cooperation and cross-border collaboration in higher education and on regional experience with these models (ADB 2012a).

With this background, ADB has begun to support "GMS Higher Education Harmonization and Networking (Phase 1)" as part of the regional TA project (footnote 8 and ADB 2009). The TA intends to build capacity in university QA system and conduct a policy action research on building a common CTS in Southeast Asia. More specifically, the TA brings together policy makers and experts from all Southeast Asian countries to (1) develop capacity in university QA system in Cambodia, Lao PDR, and Myanmar (CLM) and (2) ensure that a common CTS to be emerged would have GMS and then ASEAN-wide applicability. Methodology and key activities of the TA are as follows:

[16] From 2014, selected 7 Japanese universities will join the AIMS program under the "Re-Inventing Japan Project" sponsored by the Ministry of Education, Culture, Sports, Science, and Technology, Japan.

[17] For more details, see the website of ACTS (http://acts.ui.ac.id/) and Hotta et al. (2010).

Methodology and Key Activities of Technical Assistance

Capacity Building in University QA System

The TA supports a process that builds country and stakeholder engagement and draws on national and international expertise in QA. Specifically, the TA aims to (1) enhance and strengthen the knowledge on QA system and management particularly based on AUN-QA system, (2) build up qualified university QA personnel teams in CLM, (3) establish QA system to leverage the quality of higher education management in CLM, and (4) provide counties with options for harmonizing university QA system in GMS which would have applicability across Southeast Asia.

Capacity building workshops in university QA system is open to CLM participants from both AUN and non-AUN member universities. A maximum of 25 participants attends each workshop and has been trained by AUN-QA experts from AUN member institutions in middle-income ASEAN countries in close cooperation with the AUN secretariat. Participants who already joined and trained at the "Training on Enhancing Quality Assurance in CLMV" in 2010–2011 or the new participants who also have had some experiences on QA is a prerequisite for attending these capacity building workshops. Another requirement is that they have to establish the university QA system in their countries and conduct Self-Assessment Report (SAR) for Internal Quality Assessment (IQA) after the workshop.

Capacity building activities are conducted in the form of "training the trainers of university QA personnel." Both the "AUN-QA Manual" and "AUN Actual Quality Assessment at Program Level" are the main documents that are used during capacity building workshops (ANU 2007, 2010). Participants are expected to obtain adequate knowledge of QA so that they are able to conduct in-house training at their own institution as well as to establish QA system and write SAR for IQA. Some assistance from the AUN secretariat and AUN-QA experts may be provided upon request. It is expected that an AUN-QA network would be established in CLM which will have linkages with the rest of GMS countries and the ASEAN region.

Building a Common Credit Transfer System

A policy action research on a common CTS is conducted by taking four steps as follows: (1) explore, (2) experiment, (3) experience, and (4) expand.[18] The "explore" phase has been implemented in the period of 2012–2013, and other three phases will be implemented under the GMS HRD SFAP (2013–2017) (footnote 54 and ADB 2013b). The policy action research would involve government

[18] This research is entitled "Harmonization and Networking in Higher Education: Building a Common Credit Transfer System for GMS and Beyond." See the website of SEAMEO-RIHED (http://www.rihed.seameo.org/?page_id=353).

ministries and agencies that are responsible for higher education, representatives of higher education institutions in the GMS, and regional organizations and networks currently involved with different aspects of credit transfer. Initial steps are underway for the development of a proposed Academic Credit Transfer Framework for Asia (ACTFA) including a common CTS for higher education institutions in Southeast Asia. SEAMEO-RIHED discussed the proposed ACTFA at the stakeholder meeting which was held in Siem Reap, Cambodia, on 8 April 2013.[19] SEAMO-RIHED plans to conduct a pilot project to implement the proposed ACTFA in the region ("experiment" phase), to evaluate and share lessons learned from the pilot project ("experience" phase), and then to widely disseminate the research results and make them available the ACTFA for adoption by higher education institutions ("expand" phase).

Progress and Future Prospects

In 2012, AUN conducted two workshops in each of CLM on the university QA system. Each workshop was delivered for about 4 days and was led by AUN-QA experts. SEAMEO-RIHED also conducted a series of CTS workshops, a regional conference on CTS in November 2012, and the stakeholder meeting in April 2013. GMS countries endorsed the GMS HRD SFAP (2013-2017) in December 2012, in which "GMS Higher Education Harmonization and Networking (Phase 2)" is included. It is expected that ANU will continue the university QA capacity building in CLM, while SEAMEO-RIHED will conduct remaining phases of the policy action research on building a common CTS by piloting the proposed ACTFA.

It appears that both AUN and SEAMEO-RIHED are the two dominant actors in harmonizing QA and CTS systems in the GMS and Southeast Asia. On the QA system, AUN is playing a significant role in improving the internal QA system at the university level. On the CTS, SEAMEO-RIHED administers the AIMS program involving 35 universities in Indonesia, Malaysia, Thailand, and Vietnam, while AUN is promoting ACTS with leading 30 member universities in ASEAN.[20]

The findings of the policy action research on a common CTS in collaboration with SEAMEO RIHED will include recommendations on how two main CTSs, namely, ACTS and UCTS (being used for the AIMS program), could coexist or merge into a common platform. It is most likely that both ACTS and UCTS could coexist since both systems have mostly different member institutions, and in case there would be overlaps in terms of member institutions, courses offered can be

[19] Prior to the stakeholder meeting in Siem Reap, such common CTS was envisioned as a "Southeast Asia Credit Transfer System (SEA CTS)."

[20] In addition to participation by selected 7 Japanese universities (footnote 16), SEAMEO-RIHED plans to expand its membership from 4 countries and 5 fields in 2013 to 10 countries and 10 fields by 2015, while AUN has expanded its membership up to 30 institutions in 2013.

different (see Tables 8.1 and 8.2). As Yavaprabhas (2014) suggests, AUN and SEAMEO-RIHED could cooperate to ensure strong commitment from politicians, education ministers, and high-level policy makers, in light of key characteristics of the European harmonization process, which started from shared vision by politicians and high-level policy makers on harmonization. "GMS Higher Education Harmonization and Networking (Phase 2)" could offer such opportunities for cooperation between AUN and SEAMEO-RIHED (ADB 2013b).

Meanwhile, SEAMEO, with funding support from ADB, established and is implementing the SEAMEO College[21] for education ministers, high-level policy makers, and education and youth leaders to regularly convene policy and strategic dialogues on ASEAN-wide issues on education and HRD. It is expected that the SEAMEO College would consider, among others, higher education harmonization as a priority agenda of the SEAMEO College (ADB 2013c), and as an outcome of the SEAMEO College, education ministers and high-level policy makers would agree to develop regional policies on higher education harmonization with regard to QA and credit transfer systems in the context of preparing for the ASEAN Community from 2015.

Higher Education Networking in the GMS

Rationale

University networking not only promotes academic and student mobility among universities but also contributes to building a sense of community by forming university association or league including activities on sports, culture, and music. Asia is arguably leading the world in university partnership activity including university networking (Kuroda et al. 2013). University networking is perceived as a mechanism for strengthening participating universities (ADB 2012a). In the GMS and ASEAN, there are a number of university networks in various fields of expertise or disciplines. ASEAN envisions the formation of ASEAN University as a long-term goal, and the AUN is expected to pave the way toward the establishment of ASEAN University in the future. However, in the GMS, university networking is still its early stage, and should there be a solid university network, it can benefit faculty members, academic staff, and students by enhancing their mobility and helping them to build their sense of a common GMS. This would in turn help universities in the GMS to extend their networks with universities in

[21] The SEAMEO College was launched at the 47th SEAMEO Council Meeting held in Hanoi, Vietnam, on 20 March 2013. The SEAMEO College does not involve "physical" campus. A "college" is a company, group, or society, specifically an organized body of persons engaged in a common pursuit or having common interests or duties (Merriam-Webster Dictionary). The term "college" also connotes a collegial body and not always an institution with a physical structure.

ASEAN including AUN member institutions. Such university networking in the GMS can be facilitated by establishing a "GMS University Consortium."

Objectives

The objectives of the "GMS University Consortium" are to (1) help strengthen and accelerate cross-border collaboration among universities in the GMS, especially universities located along the economic corridors (i.e., the North-South, East-West, and Southern corridors) and (2) promote student and faculty exchange, credit transfer, and research capacity building and collaboration, among universities in the GMS. The "GMS University Consortium" will also strengthen university governance and management, improve quality and excellence of universities in the GMS, and help universities in the GMS to reach ASEAN/Southeast Asian regional standards. The "GMS University Consortium" involves first tiered universities in the GMS (which are often located in national capital cities) by linking their academic and staff resources with second tiered universities in the GMS (which are mostly located in provincial capital cities). The proposed member institutions can initially include 3–4 institutions from each of six GMS countries, totaling to 18–24 institutions. It is proposed that SEAMEO-RIHED offers a secretariat or incubator function of the "GMS University Consortium" in view of its relationships with government ministries and agencies in charge of higher education and representatives of higher education institutions in the GMS.

A Proposal for the Greater Mekong Regional University (GMRU)

Key Concepts and Principles

In further pursuing higher education harmonization and networking in the GMS and elsewhere, the following five key concepts and principles need to be emphasized (Table 8.3): First is to adopt permeability – from "rigid" standard or platform to "acceptable" standard or platform among key stakeholders (e.g., QA and credit transfer systems, and school calendars). Second is to promote transparency – from "invisible" systems (e.g., QA, credit transfer, and grading systems) to "visible" systems and educational contents.[22] Third is to maintain neutrality – from "competition" among networks, institutions, and universities to "cooperation/collaboration" to be facilitated by a neural entity. Fourth is to enhance mobility – from

[22] The first two concepts and principles of permeability and transparency are advocated by Hotta et al. (2010), which conducted surveys and hearings in 13 countries in East and Southeast Asia.

Table 8.3 Key concepts and principles in higher education harmonization and networking

	Principles	
Key concepts	From	To
Permeability	"Rigid" standard or platform (e.g., QA and credit transfer systems and school calendars)	"Acceptable" standard or platform among key stakeholders
Transparency	"Invisible" systems (e.g., QA, credit transfer, and grading systems) and educational contents	"Visible" systems and educational contents
Neutrality	"Competition" among networks, institutions, and universities	"Cooperation" or "collaboration" to be facilitated by a neutral entity
Mobility	"Waiting for others' actions" or "too busy to take actions	"Proactive" drive for change
Continuity	"Ad hoc" forum, conferences, or meetings	"Regular" actions to ensure the results

Source: Author

"waiting for others' actions" or "too busy to take actions" to "proactive" drive for change. Fifth is to ensure continuity – from "ad hoc" forum, conferences, or meetings to "regular" actions to bring about the results.

ADB is expected to play a neural role to facilitate higher education harmonization and networking in the GMS. However, ADB's headquarters is not located in "Bangkok hub" or "Chiang Mai-Vientiane hub" in higher education where several key regional agencies on higher education and higher education institutions are located,[23] which makes ADB difficult to be a facilitator for higher education harmonization and networking beyond its role as a funding agency. This may call for creating a regional platform as another neutral entity to be located in higher education "hub(s)" in the GMS, which can be a genuine facilitator of higher education harmonization and networking.

[23] Knight (2010) defines the concept of regional education hubs and analyses cases of regional education hubs. Bangkok, Thailand, hosts the AUN secretariat and the AUN/Southeast Asia Engineering Education Development Network (AUN/SEED-Net) at Chulalongkorn University; SEAMEO secretariat, SEAMEO-RIHED at the Office of Higher Education Commission, UNESCO Asia and Pacific Regional Bureau for Education (UNESCO, Bangkok), etc., and it can be considered as "Bangkok hub." Chiang Mai, Thailand, hosts Chiang Mai University having close relationships with Mae Fah Luang University and National University of Laos, which can be considered as "Chiang Mai-Vientiane hub." Appendix 1 provides a landscape of main regional, intraregional, and subregional forums/institutions and higher education networks in East and Southeast Asia.

Mission, Main Activities, Location, Funding, and Timeframe

Such a regional platform can be tentatively called "Greater Mekong Regional University (GMRU)." Like the "SEAMEO College," the GMRU would not have a physical structure. The "GMS University Consortium" could be evolved into the GMRU in the future. The GMRU should be based on five key concepts and principles in pursuing higher education harmonization and networking. For example, it could continue to offer a forum for dialogue among key stakeholders such as AUN, SEAMEO-RIHED, and QA agencies at the country level, on internal and external QA systems, a common CTS, and university networking in the GMS and beyond. The GMRU can be considered as an equivalent regional platform such as the European University Institute in Europe and the East Asian University Institute (EAUI).[24] Mission and mandate, main activities, location, funding, and timeframe are summarized in Table 8.4 and presented as follows:

Mission and Mandate: to (1) help improve the quality of universities in the GMS by linking with existing/new higher education institutions and networks and (2) help harmonize higher education in the GMS by facilitating development an acceptable platform in areas such as QA, credit transfer, student exchange, research collaboration, etc.

Main Activities[25]: include university president/rector forum; leadership development programs in higher education; high-level dialogue on strengthening internal and external QA systems; building a common CTS; teaching support, research capacity building, faculty development (on-site and distance learning mode); support for cross-border delivery of instruction; and information clearing house (date base, matching university partners, etc.).

Location: The GMRU can be located in "Bangkok hub" and mainly liaises with regional university networks and regional higher education agencies and institutions based in Bangkok. It also can have a satellite office in "Chiang Mai-Vientiane hub" (footnote 23).

Funding: The GMRU can be established as an international NGO with funding from donor agencies, philanthropic foundations, and/or research grants and with staffing by like-minded international and national experts. The GMRU should be able to charge fees from the users of its services such as leadership development programs, teaching support, faculty development, and cross-border distance learning, to increase financial sustainability.

[24] For more details, see the websites of the EUI (http://www.eui.eu/Home.aspx) and the EAUI (http://www.waseda.jp/gsaps/eaui/introduction/greeting_en.html).

[25] The secretariat function of the "GMS University Consortium" would remain at SEAMEO-RIHED as an incubator for the medium term, depending on the actual funding situation of the GMRU.

Table 8.4 Greater Mekong Regional University (GMRU): a proposal

Items	Descriptions
Mission and mandate	To help improve the quality of universities in GMS by linking with existing and new higher education networks and foreign universities
	To help harmonize higher education in GMS by facilitating development of an acceptable platform in areas such as quality assurance, student exchange, credit transfer, research collaboration, etc.
Main activities	University president/rector forum
	Leadership development programs in higher education
	High-level dialogue on strengthening internal and external QA systems
	Building a common credit transfer system
	Teaching support, research capacity building, and faculty development (on-site and distance learning mode)
	Support for cross-border delivery of instruction
	Information clearing house (database, matching partners, etc.)
Funding and staffing	*International NGO* with funding from donor agencies, philanthropic foundations, and/or research grants and with staffing by like-minded international and national experts
Location	*Main office*: Bangkok ("Bangkok hub")
	Satellite office: Chiang Mai ("Chiang Mai-Vientiane hub")
Timeframe (Indicative)	2012: GMS HRD Strategic Framework and Action Plan (2009–2012) including "GMS Higher Education Harmonization and Networking (Phase 1)"
	2013: GMS HRD Strategic Framework and Action Plan (2013–2017) including "GMS Higher Education Harmonization and Networking (Phase 2)"
	2014: Launch of GMS University Consortium
	2017: Launch of Greater Mekong Regional University
	2020: Linkage with ASEAN University

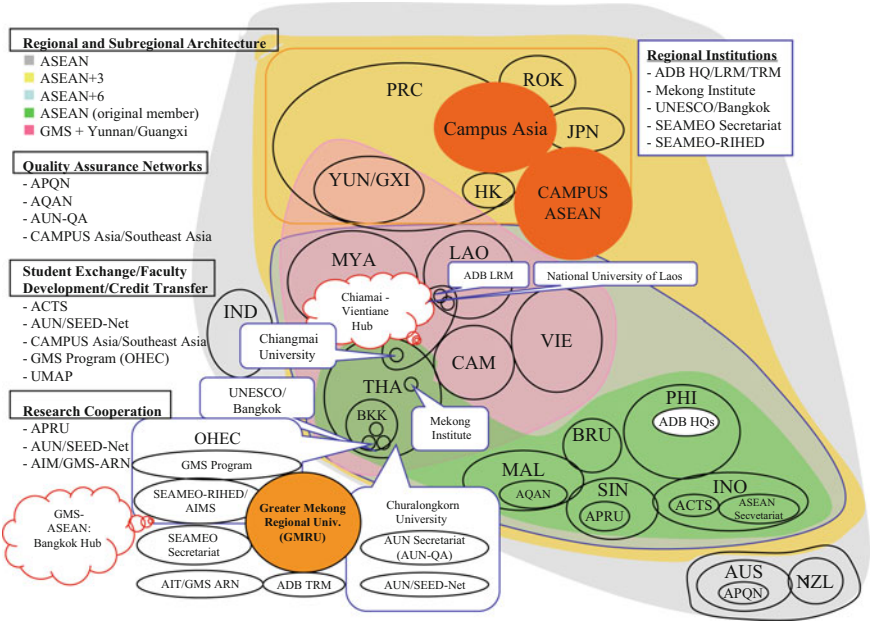
Source: Author

Concluding Remarks

Higher education harmonization and networking in the GMS is a necessary step to harmonize between higher education in East and Southeast Asia. Most universities in GMS countries, especially CLM, need to upgrade their standards and hence to narrow gaps with universities in East Asian and middle-income ASEAN countries. Without strengthening capacity in the QA system in CLM and building a common CTS among universities in the GMS, any further harmonization with universities in East Asian and middle-income ASEAN countries would not be realistic. It is important to implement "GMS Higher Education and Networking (Phase 2)" which is approved by ADB, in collaboration with AUN, SEAMEO-RIHED, other regional agencies, and higher education institutions. Harmonization and university networking in the GMS would be complemented and reinforced by the functions of the proposed GMRU. The SEAMEO College would also contribute to regional policy making including higher education harmonization. These efforts will

accelerate the process of building the ASEAN Community from 2015, by narrowing development gaps within the GMS and between the GMS and the rest of ASEAN.

Appendix 1: Main Regional, Intraregional, and Subregional Forums/Institutions and Higher Education Networks in East and Southeast Asia



Source: Author (with assistance from Minori Yamada)

Abbreviations

A. Higher education harmonization and networking (institutions and networks)

ACTS = ASEAN Credit Transfer System, ADB HQs = Asian Development Bank Headquarters, ADB LRM = ADB Lao Resident Mission, ADB TRM = ADB Thai Resident Mission, AIT/GMS ARN = Asian Institute of Technology/ GMS Academic and Research Network, APQN = Asia Pacific Quality Network, AQAN = ASEAN Quality Assurance Network, APRU = Association of Pacific Rim Universities, AUN-QA = ASEAN University Network-Quality Assurance, AUN/SEED-Net = AUN/Southeast Asia Engineering Education Development Network, CAMPUS Asia/ASEAN = Collective Action for Mobility Program of University Students in Asia, and ASEAN, OHEC = Office of Higher Education

Commission, UMAP = University Mobility in Asia and the Pacific, UNESCO = United Nations Educational, Scientific and Cultural Organization, SEAMEO secretariat = Southeast Asian Ministers of Education Organizations Secretariat, SEAMEO RIHED = SEAMEO Regional Center for Higher Education and Development

B. Regional and subregional frameworks, countries, and locations

ASEAN = Association of Southeast Asian Nations, BKK = Bangkok, BRU = Brunei Darussalam, GMS = Greater Mekong Subregion, CAM = Cambodia, HK = Hong Kong, IND = India, INO = Indonesia, JPN = Japan, MYA = Myanmar, LAO = Lao People's Democratic Republic, PHI = Philippines, PRC = People's Republic of China, ROK = Republic of Korea, SIN = Singapore, THA = Thailand, VIE = Vietnam, YUN/GXI = Yunnan Province and Guangxi Zhuang Autonomous Region

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Chapter 9
The Impact of Interuniversity Exchange and Cooperation on Doctoral Programs in Southeast Asia

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Background and Objectives of the Study

In the quest to attain a knowledge-based society, an emphasis on the importance of capabilities in technical knowledge, analysis, and decision making toward individual countries' economic development was already evident by the end of twentieth century (OECD 2000; World Bank 1999). Huge demands on the role of higher education toward socioeconomic development have risen alongside the social change from a capitalist society to the knowledge-based society of the twenty-first century. The status and enhancement of research capability, education outcome, and social responsibility of higher education in developing countries has

With deepest sympathy, we extend our sincere condolences for the loss of Dr. Kazuo Tsutsumi, emeritus professor at Toyohashi University of Technology and former Chief Advisor of JICA Project for AUN/SEED-Net (2003–2011). Dr. Kazuo Tsutsumi made extensive contributions to the development of human resources, the economy, and society on the whole. In recognition of his particular devotion and effort in international cooperation initiatives, he was awarded the JICA President's Award in 2007. His distinguished service will serve as a lasting inspiration for the further development of cooperation between countries and Higher Education in Southeast Asia.

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been particularly emphasized: this is simultaneous with an enormous effort to improve the education and research capabilities in those developing countries.

In response to recent trends of drastic social change toward achieving a knowledge-based society, universities in Asia, led by those in the East, have been extensively discussing "world-class" and "international standard" of their top universities (Altbach and Balán 2007; Liu and Cheng 2011). With past observations on the Asian university, it has been observed from the world-systems theory perspective that although the current discussion has evolved from that of independence in educational institutions to working toward an international standard institution, the Asian university is also in the process of transcending from that of a subordinated institution to an independent institution (Altbach 2006; Altbach and Umakoshi 2004).

There has been drastic increase in both the quantitative and qualitative expansion of higher education and its improvement in Southeast Asia. For instance, in Thailand, the enrollment rate in tertiary education has risen to 46 %, in Malaysia to 42 %, and Indonesia 23 % in 2010. Especially in emerging countries, intensive effort has been focused on enhancing PhD programs. In the beginning of the 2000s, the Malaysian government had already declared its "Research University Development" policy, which emphasized increasing the proportion of highly qualified foreign students by up to 30 % at Malaysian universities (Sugimoto 2004).

It is thought that these policies are formulated on the recognition that the establishment and enhancement of domestic higher education is indispensable to promoting the development of advanced researchers and engineers who can correspond to a knowledge-based society. The goal is to establish "Scientific Self-Reliance" (Task Force on Higher Education and Society 2000, p. 79) by producing domestic human power with researchers and engineers who have the capability of contributing to the country's development. However, there is not enough research on the impact and evaluation of the policy and implementation of enhancing domestic higher education as an independent institution, developing the curriculum, and autonomously producing next-generation researchers and specialists, especially in graduate schools.

On the other hand, the progress toward globalization activates a dynamic exchange of information, knowledge, and human resources beyond the border in the region and country in the higher education sector. More frequent exchange between the countries has been occurring on a bilateral, multinational, and multidimensional level. The ASEAN University Network/Southeast Asia Engineering Education Development Network (AUN/SEED-Net, henceforth SEED-Net) was established in order to attain sustainable socioeconomic development of the ASEAN region through high-ranked engineering universities as a core member of the network. The purpose of SEED-Net is to encourage and enhance the development of human resources by exchanging education and research capability, research collaboration, high-level degree acquisition, open seminars on topics of specific interest, etc., within the region (AUN/SEED-Net 2011).

In order to analyze the results of internationalization, interuniversity exchange, cooperation, and globalization, this study investigated the influence of the

reforming process of engineering universities that are members of SEED-Net. Each emerging country where the selected engineering university (as a sample for this comparative case study) was located experienced an independent period after WWII—until the recent trends for globalization and particularly after the end of the Cold War. The advantage of this study is in comparing the engineering, science, and technology education, which has a similar education language both within and outside of the country. This is in comparison to the social sciences, which are complex to categorize because of their diversity; for instance, socioeconomic background, language, culture, and locality as social factors are not easily summarized into a common standard.

The goal of this study is to investigate how the Southeast Asian engineering universities have developed their education and formulated their doctoral programs. The authors will subsequently examine higher education institutions since higher education is stated as providing the final education degree. The sample universities were selected from SEED-Net member universities. The impacts of the exchanges and cooperation were investigated between Japan, the USA, and EU universities through an interview of each sample university. Six universities were selected for the case study. These included Universitas Gadjah Mada (UGM, Indonesia), Institut Teknologi Bandung (ITB, Indonesia), University of the Philippines Diliman (UPD, Philippines), De La Salle University (DLSU, Philippines), Universiti Malaya (UM, Malaysia), and the Universiti Sains Malaysia (USM, Malaysia).

Overview of SEED-Net

SEED-Net

Receiving its main support from Japan, in 2001, ASEAN countries established SEED-Net to enhance education and research capabilities in engineering after the 1997 Asian Economic Crisis, believing that it was indispensible to develop engineering human resources that could respond to globalization of economy in order to survive in the more and more competitive world. SEED-Net is an interuniversity network composed of 19 universities, which represent each country chosen by the Ministry of Education from 10 countries in the region, and 11 Japanese supporting universities. From 2013, the project will implement Phase III, further expanding collaboration among members of leading Japanese universities.

The core program of SEED-Net is to support academic staff of the member universities to obtain higher degrees by studying abroad in the region. Academic staff or academic staff-to-be receives opportunities to study abroad with recommendation from the member universities, with the objective to improve the education and research competency of the member university through improvement of the educational qualifications of the academic staff. The major destination of international students from the ASEAN region has been developed countries such

Table 9.1 The number of international students by country (2001–2009)

Country	Master	PhD
Malaysia	70	24
Thailand	147	39
Indonesia	75	19
Philippine	74	14
Total	366	96

AUN/SEED-Net Secretariat

as the USA, Europe, or Japan. SEED-Net, however, recognized eight universities within the region, which had English courses, as world-class graduate schools, and they were all selected to serve as a "Host Institution." Each host university was appointed to provide the program in one fundamental engineering field (one out of nine) and receive international students from other member countries. The number of international students that each country accepted from 2001 to 2009 is shown in Table 9.1. At the end of 2009, the number of master's degree holders reached 366 and the number of PhD holders was 96.

To enhance the educational attainment of the international students, the system was constructed using a multi-supervising system. A supervisor from a Host Institution is allocated for a student, but there is also a Japanese supervisor who will give joint supervision to the student. Students are able to obtain the requisite research capabilities through collaborative research with their supervisors and thus are able to obtain education from various professors throughout the network. The themes of the joint research was decided at a field-wise regional academic seminar, which was held once or twice a year. A total of 92 seminars were held for the 5 years after March 2003 in the ASEAN region. Over 2,000 researchers, including participants in the field-wise seminars, visit other member universities in the region.

Role of AUN/SEED-Net in Higher Education Sector of ASEAN

Higher education in the ASEAN region has achieved remarkable quantitative development in recent years, especially in the original members of ASEAN. Many scholars have argued that higher education in ASEAN region faces a quality problem, while it has attained quantitative growth for the past years. Enhancing the quality of higher education is one of these countries' top policy priorities of education. Consequently, each government and university intends to install a quality assurance or accreditation system. Nonetheless, quality of education has remained a significant issue, as the increase of facility, teachers, etc. is not catching up with the rapid expansion of enrollment. Historically, higher education in developing countries has either formulated or transplanted the higher education system of the USA or a specific country in Europe as a model. However, the higher education in developing countries of colonial times was established to develop

human resources to serve as bureaucrats and specialists for the colonial government and not to enhance research capabilities. This had a strong influence on the development processes of higher education in most developing countries. Many higher education institutions in developing countries, even after attaining independence from their colonial countries, have not been able to fulfill their important role to create knowledge through research activities (Kim 2007).

This is also applicable to selected sample universities and countries in this study: Malaysia, the Philippines, and Indonesia. In order to enhance research activities, it is necessary to construct an effective system for development of researchers who can verify latest research by researchers in other countries and set and verify their own research questions by improving graduate programs, especially PhD programs. However, the establishment of a doctoral program to develop researchers even at these top engineering universities in the region is a comparatively recent phenomenon. For instance, a doctoral program was established in 1992 at the University of the Philippines, Diliman, and in 1985 at the Universiti Sains Malaysia. It is imperative to improve PhD programs in order to develop the researchers, knowledge base, and technologies that support advanced industry and increased productivity.

Both the countries in the Southeast Asia region and ASEAN have launched different initiatives to address these issues that the higher education sector of the region faces. SEED-Net is one of these initiatives. The countries have been taking measures to establish their own PhD programs not just by copying any model from Europe or the USA but also by selectively applying a model among various alternatives based on their own needs. It is important to internationalize education programs and increase the number of international students in this process. In addition, interaction with researchers from other countries is an effective measure to improve the quality of research activities against international standards. Activities of SEED-Net, such as the graduate degree program, the collaborative research program, and staff exchange programs, are designed and implemented based on these needs of the countries in the region.

Case Studies

The actual situation of the impact of interuniversity exchange and cooperation under regional cooperation frameworks including SEED-Net on internationalization and independence in higher education has not been adequately shared. This study focuses on revealing the reality of the interuniversity exchange and cooperation effects. The study focuses on the on-going establishment of PhD programs in selected countries in the region, a symbolic phenomenon that shows that the higher education sector in the region is moving toward independence. Higher education in Singapore has achieved equable educational standards to US/EU standards with its long history of PhD programs since, for example, the Faculty of Engineering at the National University of Singapore established its first doctoral program in 1977.

On the other hand, PhD programs in South East Asian countries, such as the Philippines, Indonesia, and Malaysia, have been expanding rapidly in the recent years.

The study selected six universities from these three SEED-Net host countries as cases. The study data is verified by document analysis, interviews to the dean of each engineering faculty. This study investigates (1) the reforming process of doctoral programs, (2) the results of the reform of doctoral programs, and (3) the impacts of SEED-Net on them. The selected universities are within the three top universities in each of the countries according to the QS University Ranking: Asia 2012.

Because Thailand implemented its own reform efforts after the Asian Economic Crisis of 1997, it is difficult to abstract the impacts of SEED-Net; thus, the study excluded Thailand, which is also a SEED-Net host country.

The interview raised the following questions to the Dean with regard to the reform of PhD programs in recent years:

1. How was the reform of doctoral courses implemented?
2. What kind of human resources do you intend to develop by reforming the doctoral courses?
3. What vision has the university been pursuing to achieve an "international standard" or to develop the "uniqueness (originality)" of the university?
4. Did you have any particular country as a model for designing and reforming the doctoral course for your university?
5. How do you compare your doctoral course with those at universities in other countries?
6. What is the impact of SEED-Net on the reform of your doctoral course?

Universitas Gadjah Mada (UGM, Indonesia)

The Universitas Gadjah Mada (UGM, Indonesia) is a SEED-Net host university in the field of Geological Engineering. UGM had already established its doctoral program at the time when SEED-Net was established. However, the program was only for domestic needs, and UGM restructured the program to be an international program in English to receive the first SEED-Net scholars in 2003. Since then, it has received six scholars within 4 years (2004–2008).

The interview with the Dean produced the following findings. As part of the reform of the doctoral program after 2003, the University redesigned the doctoral program in a more systematic manner so that students can complete the program in 3 years. Previously, the course requirements for the doctoral and master program were formulated in much the same way with subject credits for class attendance and paper writing for each subject. However, after the reform, classes were abolished and students now submit three papers for each subject under supervision of an academic supervisor for credits. In addition, higher English requirements were

established for admission in order to promote students' gaining knowledge from books and journals written in English. Students are given the opportunity to explain his/her interest at the time of entrance to the research group to which he/she hopes to belong. Based on his/her interests, the supervisor constructs an instructional "road map" for research, thereby presenting clear guidance and direction to students. The future direction of the program is identified: simultaneously attempting to pursue uniqueness and meet international standards. For uniqueness, the program was designed to support the social development of Indonesia and develop the university's uniqueness as an innovator of appropriate technology rather than the most advanced technology.

These reforms have been implemented based upon a review of the doctoral curricula at several universities in the USA, the UK, and Japan. Alumni members who were working in national and international companies advised the reform design effort. Institutional reform was achieved at a certain stage on the one hand; but on the other hand, it is also still necessary to further develop even the most advanced facilities.

As to the role of SEED-Net in the abovementioned process of the doctoral program reform, it has improved the quality of the doctoral program by the inflow of continuous international students, financial support, the installation of new equipment, and supervision on research by Japanese professors. While the university itself initiated institutional reform, the enhancement of quality was necessary in order to shorten the program duration and achieve efficiency, which was substantially supported by SEED-Net.

Institut Teknologi Bandung (ITB, Indonesia)

The Institut Teknologi Bandung (ITB, Indonesia) is the SEED-Net host university in the field of Mechanical and Aeronautical Engineering. ITB already had an established doctoral program in the fields of Mechanical and Aeronautical, Civil, Electric, and Electronic Engineering; however, these were all for national education. With SEED-Net, it upgraded the program in Mechanical and Aeronautical Engineering to become an international doctoral program, which received the first SEED-Net scholar in 2004. Between 2006 and 2008, it received another four students.

The Dean of ITB informed us that in 2003, the University launched a doctoral program reform for the entire university. Five years were set as a limit by the reform for the registration period of doctoral programs, which had been indefinite in the past. Under the new education system, it has been structured such that a student is assigned with a supervisor and research group and then has to enroll in coursework and develop a research plan in the first year, the progress of which will be monitored periodically by a supervisor and his/her research group. Additionally, the requirements for the doctoral degree were restructured to include publication of manuscript in one refereed international journal in addition to one refereed paper in one domestic journal in order to enhance the international reputation of the University.

The goal of the doctoral program is to produce independent researchers who have the capability of making research proposals, obtaining research grants, and individually conducting research. The future direction is to pursue international standards and at the same time uniqueness by conducting research and development activities which enhance the competitiveness of Indonesia. As part of the efforts in this direction, ITB has started to give credits to students for internship in the private sector.

In the beginning, the program was constructed using the model of the Netherlands as a basis. It was then redesigned to be a unique program by integrating different systems of different countries based on input from teaching staff who obtained their degrees in different developed countries. The admission system was modeled on that of the UK, coursework was from the USA, and some systems of Japan and other EU countries were also integrated. At ITB, the characteristics of foreign university PhD holders are diverse: 25 % from the USA, 16 % from France, and 11 % from Japan, with others from Australia, the Netherlands, and other countries. The teaching staff who return from developed countries play a special role in the development of different systems at the doctoral level.

When compared with their counterpart programs in Thailand and Malaysia, ITB considers that it has a disadvantage in facilities and equipment. However, in terms of the number of students and faculty involved with the teaching profession, there is a comparative advantage. Japan and Western countries conduct comparatively more strategic research activities. ITB aims to develop a "Research Road Map," through which research activities will be conducted, leading to more research grants.

Since the reform had already been initiated when SEED-Net was established, SEED-Net was not a direct factor for ITB to start the reform. However, assistance from SEED-Net accelerated the reform and enhanced its quality by starting its programs at the very time when ITB started the reform. SEED-Net promoted collaborative activities with other ASEAN countries, internationalized teaching staff, and as a result, enhanced quality of education and stimulated domestic students. ITB has been developing the monitoring and evaluation system with advice from Japanese academic faculty members.

University of the Philippines Diliman (UPD, Philippines)

The University of the Philippines Diliman (UPD, Philippine) is the SEED-Net host university in the field of Environmental Engineering. UPD developed the first doctoral program in Material Engineering in 1992 and then in 1994, Chemical Engineering; 1999, Electric and Electronic Engineering; and 2005, Civil Engineering. Each program was established for national students. Although there was no doctoral program in the field of Environmental Engineering, when UPD was appointed as the SEED-Net host university in the field of Environmental Engineering in 2004, it newly built a doctoral program getting support from several

departments across the faculty of Engineering, which received its first students in one and half year time. In 2006, six national and three international students enrolled. In 2007, nine national and two international students enrolled. Another 11 students, including two international students, and nine students, including four international students, enrolled in 2007 and 2008, respectively.

The results of the interview with the Dean indicated that there was no special arrangement in the design of the program. It applied the same program structure as with other programs. The basic philosophy of the program is to put more emphasis on practical aspects than theoretical aspects considering the nature of the field, which deals with practical environmental issues. The program aims to develop human resources of engineers who are capable of solving environmental issues in the ASEAN region. The program was designed to develop its originality as reflected in the diversification of environmental issues in the ASEAN region, which differ from those of the USA or EU. UPD does not aim to develop an international standard program that is simply equivalent to those in developed countries, but to develop a program characterized by its originality.

During the process of program development, UPD did not apply any specific foreign model, but it referred to its energy engineering program, which was also a cross-departmental program. The distribution of the teaching staff with PhD in terms of the country where the degree was obtained was diverse. There were nine teaching staff with degrees from the USA, nine from Japan, five from the Philippines, two from the Netherlands, and two from Australia. The program was designed by mixing different ideas from those teaching staff with different backgrounds. It should also be highlighted that there are five teaching staff that graduated from UPD. This indicates that UPD has produced the human resources from its own program, who now are involved in the reforming process of its program. The proportion is good and they have had a positive impact on the reforming process.

UPD considers that their programs are sufficiently appealing to attract international students from within the region, when compared to their counterpart programs in other countries in the region. When compared to programs in Japan and Western countries, it considers that their program is unique in that it is a cross-departmental one.

The influence of SEED-Net has been significant when we look at the fact that the program was newly developed in a relatively short period with the strong initiative of the university and faculty management because UPD became the host university in Environmental Engineering under SEED-Net. In addition, Japanese academics have contributed to the quality enhancement of research activities through guidance in the research of doctoral students.

De La Salle University (DLSU, Philippines)

De La Salle University (DLSU, Philippines) is a SEED-Net host university in the field of Chemical Engineering. In 1995, DLSU established its first doctoral programs in Chemical Engineering and Electric and Electronic Engineering. It

established Mechanical and Industrial Engineering courses. These courses are formulated for domestic students. When DLSU became a SEED-Net member and was appointed as the host university in Chemical Engineering, there was a transformation from a domestic program to an international program. In 2004, DLSU received its first three international students. Between 2005 and 2007, it received two international students each year and one student in 2008.

Results of the interview with the DLSU Dean revealed that the only change in the design of the doctoral program after 2003 was a change in the English requirement for admission, which was not only a reform for the Faculty of Engineering but also for the entire University. On the other hand, effort has been paid to make the program more systematic. All students have to prepare a "Program of Study" and "Plan of Study" under the supervision of a supervisor, which is periodically reviewed to support students to implement and complete research within the predetermined period. The Program of Study is prepared even before admission, so that the university can know the interest of students in advance. The goal of the program is to develop researchers who can conduct research independently. The future direction is to achieve international standard. It aims to fulfill requirements from different accreditation bodies and actively promotes collaboration with international organizations.

DLSU applied several models from around the world in establishing its doctoral program and its reforming process. For instance, it applied "Laboratory-Based Education" from Japan and Direct Research-Based PhD Program from the UK and invites external dissertation examiners from Australia. Teaching staff of DLSU who graduated from these countries played a significant role in adopting these systems.

Compared with counterpart programs at other ASEAN universities, Japan, and Western countries, because English is the primary language, it has provided high-quality education. However, DLSU has a disadvantage in the quantity and quality of facilities and equipment.

DLSU established its PhD program in the late 1990s, with subsequent reforms not having originated directly with SEED-Net. Nonetheless, participation in SEED-Net helped DLSU improve the quality of its doctoral program in accordance with the strategy of the university by increasing the number of research projects and papers through promotion of collaborative activities with Japan and other ASEAN countries and by getting advice from Japanese professors on direction of the program. It has also been pointed out that local students were stimulated by international students.

University of Malaya (UM, Malaysia)

The University of Malaya (UM, Malaysia) is the SEED-Net host university in the field of Manufacturing Engineering. UM had already established its doctoral program and was already receiving some international students when SEED-Net

started its programs. SEED-Net, however, increased the number of international students from the ASEAN region, which had not previously been great. UM received the first SEED-Net students in 2004, and it received nine students in total from 2004 to 2008.

Results of an interview with the former Dean revealed that prior to 2007, PhD degrees had only been granted through completion of a research program, whereas the reform introduced the granting of PhD following the completion of both a research program *and* coursework. In addition, a supervisor or faculty member can make it compulsory for a student under PhD by Research program to take coursework if they think it is necessary. The reason behind the reform is that UM now considers that not only research skills but also academic knowledge are required for the development of competitive human resources in the global market as the needs from industry and academic have changed along with globalization of the economy particularly after the 1997 Asian Economic Crisis. The Faculty pursues international standards based on this principle.

The program at UM had received significant influence historically from UK, which is the former suzerain and has the strong academic linkage with UM. The PhD by Research program, which was the main program in the past, was applied from the model of UK. However, newly introduced "PhD by Coursework and Research" under the reform modeled US system. While most eternal examiners on doctoral dissertation examination panels were from the UK in the past, recently they are selected based on field and theme of research, thus they are not only from the UK but also from other countries including the USA and Japan. UM considers that they have achieved the equivalent level of education with counterpart programs in ASEAN countries, the USA, EU, and Japan.

As mentioned above, the reform was not initiated by SEED-Net. However, UM considers that SEED-Net strengthened the reform process. For example, the program has been redesigned with more emphasis on the needs and cutting edge technology of industry, with the influence of Japanese professors who have stronger linkages with industry. In addition, the increase of the number of international students from within the region diversifies the composition of international students in terms of countries of origin and strengthens networks with researchers and universities in the region.

Universiti Sains Malaysia (USM, Malaysia)

In 1985, the Universiti Sains Malaysia (USM, Malaysia) established its PhD program in the fields of Material Engineering and Mineral Resources as its first doctoral programs. The second was later established in the field of Civil Engineering and Polymer. While those programs were already receiving international students when SEED-Net started, becoming a host university of SEED-Net increased the number of international students from within the region as

UM. USM received its first SEED-Net scholars in 2004. Between 2004 and 2008, it received ten new students in total.

Although USM has not recently conducted any significant reform, the Malaysian Ministry of Higher Education selected USM as the university with the highest international competitiveness in Malaysia and decided to allocate a significant amount of funding under the Accelerated Program for Excellence (APEX) in 2008. USM is attempting to achieve a place within the top 100 in World Rankings by 2013. To achieve this goal, the following reforms are scheduled to be implemented: (1) enhance research capability, (2) strengthen linkage with industry, (3) increase the number of research papers, (4) increase the number of international students, (5) hire foreign teaching professionals, and set the doctoral program as a foundation for achieving these objectives. Specifically, the doctoral programs will take the measures such as to implement more research activities and to strengthen English requirement at admission to assure the language ability of students. Research activities are emphasized more than ever after being selected as the APEX University in addition to being one of four Research Universities in Malaysia.

As at UM, the design of doctoral programs at USM received significant influence from the UK. Even at present, all doctoral programs are PhD by Research programs because of that. On the other hand, after independence, the University implemented reforms modeling different systems of other countries, resulting in the establishment of its original program, which aims to respond to both academic needs and the needs of industry and community.

USM considers that it has achieved a certain standard compared with counterpart programs in other ASEAN countries, while it is still necessary to improve facility and equipment in comparison with those in Japan and Western countries. It considers that SEED-Net is the most successful platform for international collaboration, which has had a significant impact on USM. It has contributed to the enhancement of the quality of the doctoral program through networking with other universities in the region, sharing of knowledge and skills, and enhancement of quality of research activities.

Findings of the Study

The Reform Process and Its Results

The findings from the above case studies can be summarized as follows. First, doctoral programs in ASEAN countries were commonly established modeling a program in a certain Western country, a suzerain country in most cases. However, after independence, all the universities have redesigned and established their own doctoral programs by selectively adopting different elements of different systems from several other countries. However, this does not mean the doctoral programs in

each country have originality. For example, ITB, which originally modeled the system of the Netherlands, introduced coursework from the USA while adopting some other systems from the UK and Japan. On the other hand, UM, which had implemented "PhD by Research" only for long time based on strong relationship with the UK, added American "PhD by Coursework and Research" to their programs in 2007. These reforms can be seen as part of the international standardization movement toward the American system with a focus on coursework, which we see in Japan, China, South Korea, or other European countries. As a result, more coursework is required for graduation at host universities. For example, graduation requirements at DLSU are now 18 credits from coursework and 12 credits for the dissertation. At ITB, 6–8 credits of coursework are necessary for graduation out of 54 credits.

Second, teaching staff with degrees from abroad played an important role in the reforming process. They have made inputs based on their experiences. On the other hand, there are universities such as UPD which have many teaching staff who were educated in their own country. There is a possibility that this can lead to the autonomous development of a university in the future. Moreover, there are universities such as UGM, which tried to reform the program based on the needs of industry by gaining inputs from their alumni members who are now working at national or international enterprises.

Third, the study found several similarities in the reforming structure of doctoral programs across universities included in the case studies. In most of the universities, reform was undertaken to systematically develop an education program with an aim to shorten the program period. Several universities have students prepare a plan for coursework and research under supervision of a supervisor at the time of entrance, based on which a research group of several teaching staff review progress of research for students to complete their program within the set term (e.g., DLSU, ITB and UGM). One university tries to know the interests of students at an early stage by having them prepare their plan for coursework before entrance (DLSU). This is a response to international trends, whereby universities design their programs for 2 years for a master's degree and 3 years for a doctoral degree. This trend has been established because particularly in the Engineering field, technological innovations take place at a more rapid pace than ever, and therefore, it is no longer effective to pursue a higher degree by conducting research on one particular theme for long time. As a result, many international students who graduated from host universities in the region before the end of year 2008 completed their programs within 3 years or 4 years with a 1-year extension. For example, a Vietnamese student whom UPD received as the first doctoral SEED-Net scholar in 2004 completed her program in two and half years, which is shorter than the regular, 3-year period. This is much shorter compared to 6.7 years, which is the average duration of study of the 10 students who graduated with a doctoral degree between 2000 and 2005. The shortest among these 10 students was 4 years. The reform has shortened the duration of the programs and redesigned the programs to be more systematic, which we can call efforts for international standardization.

Fourth, the entrance requirements for English have been redesigned (e.g., DLSU, UGM, and USM). In the process of attaining international standards, research output, and outcomes, it is essential to be able to access international journals, research papers, and other resources, which are predominately in English. Therefore, competence in English is mandatory for the students; some universities also have an international publication included as part of their PhD graduation requirements to enhance international reputation of the university (ITB). This is a response to the social and economic need to develop global human resources as the globalization advances.

Fifth, a dilemma has been found in the future direction of the universities, between the pursuit of uniqueness and the pursuit of international standards. Many universities have set their goals as to be able to educate "self-reliant researchers," who have the capability to conduct research individually (e.g., DLSU, ITB, and USM). However, it is interesting to see that UPD sets its goal clearly as to develop human resources who can address the issues of the region, which are different from those in the USA or Europe, although it may be partly because of the uniqueness of the field of environment, whose issues differ across regions. On the other hand, answers vary to the question "What do you aim to pursue – 'international standards' or 'uniqueness (originality)' of the university?" The two universities in Indonesia (UGM and ITB) responded that they are pursuing both, while USM, UM, and DLSU responded that they are pursuing international standards and recognition as a world-class university.

Last, many universities consider that they are equivalent to their counterpart universities in the region when compared in quality, while they consider they are disadvantaged in facility/equipment and research funds in comparison with their counterparts in Western countries and Japan.

Impacts of SEED-Net

This section discusses what role SEED-Net has played in the reform process. First of all, all universities mentioned that reform was not initiated as a result of the initiation of SEED-Net. Most of the universities had started making reforms before SEED-Net started in 2001. However, they all pointed out that SEED-Net accelerated the reform and enhanced its quality. UGM said, "While the institutional reform itself was the initiative of UGM, inputs from SEED-Net supported UGM reforms in a substantial manner, with a continuous flow of international students, financial support, provision of equipment and research guidance from Japanese professors."

To be more specific, first, SEED-Net increased the flow of international students, which promoted the reform of the doctoral programs. Except for Malaysia, the study found that the flow of international students in PhD programs had not been occurring and that programs were for local students only. However, SEED-Net

started to send international students to these universities, which then established international programs for these students. This happened only with SEED-Net host departments at each university, which have a significantly higher number of international students than other departments. It has been necessary for the universities to shorten the program period to the international standard of 3 years in order to continuously attract these international students, which has been a strong push factor for reform.

Second, SEED-Net has spurred the internationalization of university teaching staff by promoting exchanges and collaboration in research with researchers in other countries in the region and Japan, which further resulted in the quality enhancement of the educational programs that they offer.

From 2003 to 2008, there were 92 field-wise seminars held within the ASEAN region. Approximately 2,000 researchers visited their counterpart universities in the region. While the framework of the doctoral program now responds to international standards because of the reform, it is inevitable to strengthen educational capability of teaching staff in order to produce quality graduates within the set period under the new framework. Teaching staff have been strengthening such capabilities through participation in regional exchanges and collaboration in research.

Last, interuniversity exchanges have provided a valuable opportunity to exchange information and knowledge about systems among the members. SEED-Net organizes Steering Committee meetings once or twice a year with a vice-president or dean of the engineering faculty of the member universities to discuss the direction of the network. In January 2007, the committee exchanged information about the composition and requirements of their doctoral programs and decided that the regular study period of doctoral programs at SEED-Net host universities was 3 years. The member universities have promoted their own reforms with information about systems, and reforms of their counterpart universities gained through this kind of information exchanges.

Conclusion

We have discussed the reforms of the doctoral programs in the advanced ASEAN countries and the role of interuniversity exchanges under SEED-net in the process so far. The result of analysis can be summarized as follows.

First, the Southeast Asia region has been seeing multilayered and multilateral cross-border exchanges and collaboration among universities within and outside the region, in today's world where mobility of information, knowledge, and people is more and more active along with globalization. ASEAN countries have been utilizing SEED-Net as a network for such exchanges and collaboration. One output from such effort is the internationalization of host universities. The universities have internationalized their education programs by having more international students from within the region under SEED-Net. At the same time, they have

internationalized their research activities by collaborative research activities with researchers in other countries in the region.

The universities consider that this internationalization of their education and research programs have led to the enhanced quality of doctoral programs. It also accelerated and improved reforms of doctoral programs originally initiated by themselves. Each university has been transforming the design of their programs to have more coursework, to have higher quality, and to be more systematic, so that students can graduate within the international standard period of 3 years, with the aim to enhance international competitiveness. They have improved the international competitiveness in their research activities through the implementation of collaborative research projects with researchers outside the country. With these improvements, they have developed themselves in a more independent and self-sustainable manner.

We can conclude that interuniversity collaboration within the region through a university network of SEED-Net has contributed to independent and sustainable development of the region's higher education sector by enhancing the quality of doctoral program reform among member universities.

It should be noted that reforms are still in progress. The universities have reformed their programs in a relatively short period and increased the number of international students. However, they should continue to advance their reform efforts and improve the quality of their programs, in order to continuously attract students from inside and outside the country in the coming years.

This paper discusses only one facet of SEED-Net, with a focus on host universities that have started to accept and exchange international students. Remaining research questions include (1) how SEED-Net can be compared with other various types of interuniversity collaboration activities in the world and (2) how we can discuss reforms in Singapore or other countries who have not started to receive international students at the doctoral level.

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Chapter 10
Tied to the Family and Bound to the Labor Market: Understanding Chinese Student Mobility in Japan

Gracia Liu-Farrer

Introduction

The globalization of higher education is accompanied by global student mobility. According to the UNESCO Institute for Statistics (2012),[1] in 2010, 3.6 million students were studying at higher educational institutions abroad, an 80 % increase from the previous decade. Not only are the numbers of students on the move increasing, but destinations are also becoming more diverse. While North America, Western Europe, and Oceana remain attractive destinations, since the mid-1980s, Japan has become a major study abroad destination for students in East Asia and the Pacific, attracting 12 % of the students from this region in 2010 (UNESCO Institute for Statistics 2012). Meanwhile, while aspiring to improve their own higher education institutions and global competitiveness, many traditional student-sending countries such as China, Korea, and Malaysia have also become education exporting countries, actively recruiting students from abroad. These emergent trends give rise to the intra-regional mobility of students.

For most countries, international education is tied to the development of their knowledge economies. International students are considered an important source of skilled labor for the host society. Both individual students and the states recognize that international education is an important channel of labor migration (Liu-Farrer 2009). In fact, the OECD (2001) treats student mobility as "a potential flow of qualified workers, either in the course of their studies or through subsequent recruitment. . .." (p. 93). The Australian immigration law explicitly links international student mobility with skilled migration and encourages students to stay in

[1] See "Global Flow of Tertiary-Level Students," UNESCO Institute for Statistics, http://www.uis.unesco.org/education/Pages/international-student-flow-viz.aspx, last accessed on August 11, 2013.

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Australia by giving them qualification points for permanent residency (Ziguras and Law 2006). The Japanese government has also stepped up efforts to recruit international students for its labor force. In 2008, the Fukuda cabinet proposed a plan to accept 300,000 international students. One of the five cores explicitly states that the purpose of this aggressive recruitment plan is to retain these international students in Japan's work force.

With heightened interest in attracting and retaining international students, many education exporting countries are eager to know why students choose or do not choose to study in their higher educational institutions. A growing body of research, therefore, has been devoted to investigating the motivations and decision-making processes of international students. Theories such as linkages through previous colonial ties (Madge et al. 2009), strategies for positional goods (Marginson 2006, 2008), and social network influences (Brooks and Waters 2010; Cubillo et al. 2006; Pimpa 2005) found their evidence in many case studies. A more policy- and management-oriented "push" and "pull" framework is sometimes used to catalogue the range of factors that affect students' decision making in terms of school and country (Mazzarol and Soutar 2002).

Since most studies of student mobility situate themselves within the confines of international education, such studies focus more on entry than on the processes and outcomes of mobility. In other words, more attention is paid to how and why students choose a particular country or a specific institution than to how students experience their international mobility and where and how they enter the labor market afterward. However, as many countries' immigration policies indicate, the outcomes of mobility matter immensely not only for individual students who move but also for the institutional stakeholders who make efforts to attract them.

This chapter aims to provide a more comprehensive understanding of the mechanisms that affect the whole process of student mobility. Because China sends out the largest number of international students and Japan is one of the main destinations for these students, this case study of Chinese students currently studying at a second-tier private university in Japan sheds light on the mechanisms that facilitate student mobility and create diverse outcomes of international education. Based on student narratives, this study points out that labor market conditions, educational brokers, and the support from as well as the duty toward the family are particularly important factors that shape students' mobility. International education has become an integral part of life's course for many young people in China. Their educational choices and mobility outcomes are necessarily complex, often going beyond being a form of strategy out of utilitarian concerns.

International Student Mobility: Motivations, Choices, and Outcomes

Sociological research on international education frequently adopts an instrumental approach, considering such education a means to obtain human and cultural capital for labor market competition. With shifting world rankings and uneven development of educational institutions around the world, a global educational hierarchy has taken shape in people's imaginations (Marginson 2004). International education has become both a form of status or positional goods for garnering social distinction and a strategy for alternative educational opportunity. Waters (2008) observes that Hong Kong Chinese students and their families use international education as a form of transnational capital accumulation. The instrumentality of international education also has other applications. Liu-Farrer (2009, 2011a) and Wakabayashi (1990) have shown that some of the Chinese student migrants in the 1980s and 1990s used studying in Japan as a channel for entering Japan's low-wage labor market. A large number came primarily for the purpose of working to accumulate cash. Among the early cohorts of Chinese migrants entering with language student visas, a large number never went to language schools or considered higher education (Liu-Farrer 2011a).

However, motivations for studying abroad are inevitably complex. Most studies highlighting the instrumentality of education focus on students from relatively less developed countries who migrate to more developed countries. Some recent studies have shown that different stocks of students might have different motivations. Waters and Brooks' (2010) study of UK students who planned to study abroad and those who had overseas education experience shows that international education might not be a conscious strategy for advancing career interests but an end in itself. Studying abroad is considered by these UK students a personal adventure and valued for its excitement. In some cases, studying abroad is used by the students as a way to avoid facing career choices immediately and to delay the participation in the labor market.

Diverse motivations for studying abroad are also manifested among international students in Japan. In a recent study, Tsuchida and Takenaka (2012) investigated international students enrolled at a Japanese national university in the Northeast and found out that many European and North American students arrived in Japan primarily out of an interest in Japanese culture and the desire to have more exposure to it. They regard the educational experience in Japan to be an enrichment of their cultural and social life instead of an integral part of their career design. However, the study also points out that the Chinese and Korean students arrive in Japan with a clearer career design which is based on the plan to have "Japanese credentials+career experience" (Tsuchida and Takenaka 2012).

In explaining the choice of destination and the process of deciding on specific institutions, researchers observe that social networks play a dominant role. For students who are contemplating studying abroad, friends and family may serve as important sources of information and advice on their migration decisions. Whether

there are family members or friends present in a particular country matters in the students' ultimate selection of that country. Support and affirmation from friends and family as well as positive experiences overseas often encourage students to study abroad (Brooks and Waters 2010; Cubillo et al. 2006; Mazzarol and Soutar 2002). Pimpa's (2005) study on Thai students stresses the influence of family, and especially parents, on student decisions to study abroad and their choices of country, university, and academic program.

Social networks and labor market conditions also help shape student mobility outcomes. Liu-Farrer (2008) showed that up to the early 2000s, Fujian Chinese students had a much higher tendency to become undocumented migrant workers in Japan because of high financial costs incurred in initial entry through migration networks and limited resources within ethnic networks that are conducive to educational upward mobility.

Despite the Japanese government's intention to retain international students in its labor market, only a small number of international students eventually stay in Japan (Oishi 2012). Oishi (2012) argues that an important reason for that is the lack of labor market demand for international students. A survey among 351 Japanese firms done by the HITO Research Institute shows that nearly half of Japanese companies have never hired highly skilled migrants and have no plans to hire them in the near future (Oishi 2012). A closer examination of the survey result indicates that over half of small- and medium-sized companies—those who employ fewer than 300 employees—have no intention to hire foreign employees (HITO Research Institute 2011). However, Liu-Farrer (2011a, b) argues that because of the flourishing transnational economy between China and Japan, Chinese students enjoy positive job market prospects, occupying positions that deal with business with China. The majority of them, however, are employed in small- and medium-sized Japanese firms lacking job security as well as a meaningful career mobility channel.

The organizational characteristics and workplace culture are also named as reasons that make Japanese firms unattractive to highly skilled workers. Oishi (2012) argues that because of language barriers and cultural characteristics of Japanese firms, foreign employees see Japanese firms as unaccommodating and often feel isolated and sometimes discriminated against. Furthermore, employees who are on an internal corporate track do not perceive working in Japan as conducive to future career development. International students in Japan might not experience the severity of linguistic barrier as those directly employed by Japanese firms from overseas. However, Liu-Farrer (2011b) points out that Chinese students who have been employed in Japan also view the Japanese workplace culture as stressful. Although able to find employment in Japan, many complain about blocked upward mobility and ultimately seek to return to China.

In summary, student mobility is a process continuously influenced by a complex set of social, economic, and institutional conditions. Depending on where the students come from and what their circumstances are, career concerns, the labor market, personal networks, and cultural and social expectations shape the trajectories of their mobility. In engaging the question of student mobility, this study uses

the narratives of Chinese students from a "typical" private university in Japan to take a close look at international students' decision-making and migration process.

Data and Methods

The analysis in this paper is mostly, but not exclusively, based on the narrative data of 25 qualitative interviews with Chinese students from Taiyo University.[2] These interviews were conducted by myself and three Chinese research assistants who are graduate students at that university between June 2011 and February 2012.

Chinese students at Taiyo University are representative of average Chinese students throughout Japan. As I have argued elsewhere (see Liu-Farrer 2011a, b), the majority of Chinese students in Japan are enrolled in humanities or the social sciences in a second- or third-tier private university. In previous studies of Chinese students, this university had been mentioned as a popular destination; thus it was not surprising to learn that the international student population at this university is predominantly Chinese. Ninety percent of the total of nearly 600 international students studying at Taiyo's undergraduate and graduate programs came from China. I therefore regard Taiyo University as a typical host Japanese university for Chinese students, expecting my observations at this university to describe the experiences of many Chinese students throughout Japan.

The interviews are semi-structured. Research assistants were provided with interview guides comprising clusters of questions organized diachronically according to migration process. However, interviews were conducted with an interviewee-centered approach, following the conversational direction of the interviewees without sticking to the questions. Research assistants were trained to do the same. Each of these 25 interviews lasted between one and one and a half hours. Interviews were recorded and fully transcribed upon the interviewees' permission. The grounded theory approach was taken in data analysis. I read through the narratives and created open codes along the way. Matrices of codes for each phase in the mobility trajectory were created and organized into thematic categories.

Although the data presented in the paper is primarily from the 25 interviews, my understanding of the data and my analysis are informed by continuous fieldwork among Chinese students in Japan spanning over a decade. I had previously conducted several waves of interviews with over 100 former Chinese students who arrived in Japan at different times over the last three decades. My regular interaction with Chinese graduate students at Waseda University, a prestigious private university in Japan, also helps me compare and gain perspectives when analyzing Taiyo University students' narratives.

[2] Taiyo University is not the real name of the university. The pseudonym is used in order to protect the identities of the informants.

Because the three research assistants were all graduate students at Taiyo themselves, the sample interviewees also included a considerable number of graduate students. In fact, nearly half of the interviewees were graduate students, with three PhD students majoring in economics. This sampling bias might affect the representation of undergraduates in the study. However, it also provides opportunity for the understanding of graduate students at a second-tier university. On the one hand, the majority of these graduate students also went to Japanese universities for their undergraduate education, with many having been at the same school. Therefore their narratives included information about their undergraduate experience. On the other hand, as JASSO data shows, more international students continued in education than those who entered the labor market. Therefore, graduate school is seen as one step in student mobility. Understanding the decision-making processes and the conditions leading to this educational outcome helps us have a more complete understanding about Chinese students' mobility in Japan.

Changing Context of Student Mobility from China to Japan

It has been nearly 30 years since the influx of student migrants from China to Japan of the mid-1980s. Since then, situations in both the student-sending country (i.e., China) and the student-receiving country (i.e., Japan) have changed dramatically. The economic context in which students migrate has changed. From being a much poorer country that had just started economic reform 30 years ago, China has developed rapidly and become the world's second largest economy. In the meantime, economic globalization has accelerated. The economies of Japan and China have become closely linked. Capital and labor first flew from Japan to China and have increasingly come to run both ways. Despite the financial crisis of 2008, small and large enterprises in both China and Japan now see global trading and transnational production as necessary means for survival and growth. Since 2004, China has been Japan's largest trading partner. On the other hand, China has been witnessing the polarization of its society (Li 2005). Official figures show that rural incomes are less than one-third of those in cities, with the top 10 % of urban Chinese earning about 23 times that of the poorest 10 % (Roberts 2011). In particular, the regional economic gap has been widened. While the economy on the east coast thrives with foreign direct investment and private entrepreneurship, the vast inland stagnates as a consequence of natural resource depletion, environmental destruction, and the disappearance of state-owned industry.

Meanwhile, the sociocultural context has also changed. Because of the implementation of a one-child policy in China since the late 1970s, most student migrants to Japan who were born in the 1980s and even 1990s are singletons. Growing up in relative material comfort, the post-1980s generation is usually showered in parental and grandparental attention. They are a privileged group but at the same time burdened with family expectations (Fong 2004). As a consequence, many middle-class singleton children aspire to go abroad to study, seeing it as an attractive

alternative to earning a prestigious college education in China (Fong 2011). Many studies have also shown that, despite economic development and urbanization in contemporary China, the traditional notion of filial piety and a reciprocal relationship between parents and children continue to persist in this generation (Liu 2008). On one hand, the family invests heavily in their children during important stages of their life course. On the other hand, the children are expected to provide physical, financial, and emotional support for their aging parents (Ikels 2004).

Moreover, this generation of student migrants is frequently the second generation of migrants to Japan in their extended family. In addition, these young students have grown up with the Internet. They therefore have many more resource channels and are much more informed about life beyond Chinese borders.

Finally, migration itself has become more routine and institutionalized. Since the early 2000s, Japanese universities and language schools' recruitment in China has become much more institutionalized. Hundreds of study abroad service centers (*liuxue fuwu zhongxin*), commonly called "brokers" (*zhongjie*), have been established in major cities and provincial towns. Reputations as well as prices of these agencies vary greatly. Some are affiliated with government organizations or local universities, others are affiliated with language schools or universities in Japan, and still others are privately owned. Although the degree of institutionalization and the dependence on such services vary among different regions, the existence of hundreds of such agencies makes information about studying in Japan more public. Migration channels have thus become more open to those who do not have personal ties to Japan.

All these developments and changes have created new contexts within which students make decisions about their future. However, different conditions have a different impact on individual students at different stages of their mobility process. In the following sections, I trace Chinese students' mobility trajectory and examine how the interaction between students' individual characteristics and the contexts shapes different patterns of practice.

Coming to Japan

The aforementioned contextual conditions—the improved economic situation in China, regional economic disparity, increasing polarization within society, and the one-child policy—have produced distinct patterns of motivations and entry processes among contemporary student migrants from China. In particular, we can see the role of the family and the omnipresence of study abroad service brokers in facilitating student migration after the 2000s.

Reason to Migrate: The Shadow of the Labor Market

People's motivations to migrate to a foreign country are always complex. Young people in the current study mentioned varied reasons for coming to Japan. Some came to Japan merely because it was an opportunity placed in front of them. Some wanted to experience studying abroad to broaden their perspectives. Others came to Japan to "have some fun" (*wan yi xia*) and accumulate experience (*jianshi yi xia*). Still others came to Japan because their parents wanted them to come or because many people in their social networks had come to Japan. However, one way or another, the labor market is something on every interviewee's mind. To go to Japan to improve one's career prospects and career situation was mentioned by most Taiyo students.

Most of the students who chose to come to Japan for career betterment tended to be college students or college graduates in China already. Because of a lack of interest in their occupation or the major they were already in or because their education was not sufficient to allow them to locate a desirable job, they decided to look for alternative career opportunities in Japan.

Several students left China in the middle of college. Bai Yun, from the Northeast, quit school during her sophomore year. She explains:

> In the second year of college... I lost interest in my major... At that time, I was studying fashion design. There were many reasons... In any case, I did not want to tread that path any more... Even if I had graduated from college, the competition would have been really great. In other words, there wouldn't be a good employment prospect. So, I lost interest in what I was studying. Because my family has some kin in Italy, and because my family had the funds to support me to go abroad to study, I made the decision (to quit school). (Interview, December 11, 2012)

In the end, she failed to get a visa to Italy. Because she was already using a broker (*zhongjie*) and had quit school, she entered Japan instead.

Some students arrived in Japan to look for more educational credentials to achieve a higher entry point into the labor market. For example, Xi Ning studied accounting in college upon the decision of her parents. She hoped to broaden her employment opportunities to avoid having to use a computer all day. She added that (i)*n China, it is difficult to enter the accounting profession. (You) have to pass a lot of examinations to get certificates. The higher the level (of certificate), the higher the salary. Initially the salary is not high* (Interview, December 6, 2011).

There are also students who feel inadequate in their job and coming to Japan provides an opportunity to alter their life chances. Li Si is such a case. From Shanghai, he worked for a couple of years at a company after graduating from a 2-year college. The job required some knowledge of both English and Japanese, and he understood neither. He felt inadequate at his job and was stressed-out after a year. The pay was not very good, so he wanted a change. His aunt was in Japan, so his mother helped him apply and obtain entrance to a Japanese language school through a broker.

The difficult labor market for college graduates in China as a strong "push" factor is saliently manifested in the case of two graduate students at Taiyo University who come from Inner Mongolia. Such difficulty reflects regional disparity in development and the difficult economic situation facing many people living in inland areas. Both of these two Mongolian students had never been regularly employed after college. Lalongdi grew up in a nomadic family with four siblings. Their nomadic life became impossible when desertification made living off cattle impossible. According to official regulations, they had to abandon their original means of production and partially lived off government subsidies. He entered a 2-year college because of a government policy for educating minority students. However, he explained that unless one could enter the University of Inner Mongolia or had family connections that allowed easier access to jobs, students after college in his region had little opportunity to find regular employment. He was not able to find a stable job in the 4 years after graduating from a 2-year college in 1997. The following is an excerpt from our conversation:

Author (A): What did you do?
Lalongdi (L): Part-time jobs.
A: Really? Was it so hard to find a job?
L: Very difficult, and the wages are low, too.
A: What kinds of part-time jobs?
L: Heavy labor at construction sites, like carrying cement... making about 25 kuai (RMB) a day.
A: You have to do such jobs with a college education?
L: Other jobs were hard to find, (only) short-term jobs, and then, (I) did sales too, selling yogurt for a joint-venture between Japan and a local enterprise. And then, I was a welder at a construction site.
A: Were there many people in a situation similar to yours?
L: A lot. Many students could not hold out and returned (to their hometown) after a year. (Interview, June 11, 2011)

For the students who arrive in Japan with the hope to better their career situation and to experience the world, Japan is often an accidental choice and in many cases not their first choice. Only one student mentioned in passing that he consciously chose Japan, for reasons—aside from the convenience of access and his social relations in Japan—that some aspect of Japanese culture "such as animation" had some influence on his decision. There were also other considerations. When one student first applied to go to Europe, his father discouraged him:

(My) father says your face is not the same (as theirs). Your figure is small. If you go there, living alone and not having any friends, you will have a lot of difficulties. And (you) will be so far away from us. I thought about it, and chose Japan. After all, Japan is a big economic power, a civilized and advanced country. It might not be lesser than Europe and the US, so I came to Japan to take a look. (Interview, February 11, 2012)

However, one important reason that students ended up in Japan is family support and developed institutional channels. Three decades of economic reform have significantly improved Chinese families' economic situations, allowing many to finance their children's mobility. Nearly three decades of student migration from China to Japan has expanded social networks, linking many Chinese families with

Japanese society. These institutionalized study abroad channels also provide prospective migrants with easy access to Japan.

Family Support and the Institutionalized Migration Process

Family support is key in allowing students to migrate from China to Japan. Educational brokers, more often than not, facilitate such mobility. Family support is first manifested in the form of financial assistance. As is well established in international migration literature, those who manage to migrate abroad are never the poorest of society because the migration process incurs large costs. Student migration demands even more initial investment. Although a vast majority of student migrants to Japan have always relied on part-time jobs to finance their education and living in Japan and early cohorts often reported having several thousand yen in their pockets when arriving at Narita Airport (Liu-Farrer 2011a), most of the post-1980s generation, usually singletons, arrive with their first year of tuition and often several months of living expenses paid for by their parents. Very few Taiyo University students we interviewed remit money to their parents. On the contrary, their families often continue to pay for their tuition, if only partially.

Several student participants in this study came from families that could be considered "wealthy" and therefore able to provide for the financial needs of their children. However, the majority of student parents were "ordinary" people, e.g., schoolteachers, doctors, or state employees. Some might have earned above-average incomes in their own country, but not when converted to Japanese standards. The reason parents were willing to pay for their children was parental devotion.

Bao Lin, from Inner Mongolia, mentioned that his father encouraged him to study abroad to develop himself:

> It wasn't cheap to study abroad. We spent a lot, nearly… My parents are state employees. My father is the principle of a high school. My mother is the director of a government bureau office. Both of them are cadres. At home they saved money all their life. My coming to Japan, the processing fees and one year of living expenses, made them invest in me the entirety of almost 40 years of savings. (Interview, January 17, 2012).

Family support is also shown in the availability of relatives or family members that provide young Chinese students with tangible ties to Japanese society. Since the onset of migration from China to Japan in the mid-1980s, within Japanese borders, there are over 700,000 Chinese nationals or ethnic Chinese.[3] Several students had parents or kin in Japan. Most knew someone from their own country who was in Japan. One student moved to Japan because her father was an international student in Japan himself and found a job to move back to China when his

[3] This number includes the 100,000 Chinese migrants who have obtained Japanese citizenship since the late 1970s.

daughter was graduating from high school. One student whose parents divorced when he was a small child grew up with his father and grandparents. But when he decided to go abroad, his mother, who was married with a Japanese man, helped him find a language school and settle in Japan. Many students had an aunt or uncle or a more distant relative living in Japan who helped in the process.

Family support makes it possible for Chinese students to study in Japan. Mostly singletons, the young generation Chinese students receive parents' and grandparents' total devotion. Yet, as in Bao Lin's narrative, such devotion is also an investment, both economically and emotionally. The expectation for return, in both a figurative and physical sense, has to be taken into consideration when students make decisions about their future.

However, many students would not be able to come to Japan if it were not for the omnipresent brokers. With a few exceptions, the majority of students we have interviewed arrived in Japan through the arrangement of brokers. Students at Taiyo reported to have paid an average of 10,000 RMB (around 1,500 USD or 130,000 JPY) in broker fees to gain entry to a language school, with students from Fujian Province paying much more. Two hundred thousand RMB (30,000 USD or 2.6 million yen) was a number quoted by several Fujian students. This money usually included their first year of tuition and room at the language school. The brokers are often under contract with specific language schools.

Education Mobility

Undoubtedly, studying in Japan provides an opportunity for upward educational mobility for most Chinese students. However, in previous studies, I have observed that most Chinese students enter second- or third-tier educational institutions. I have argued that on the one hand, such choices were conditioned by students' academic aptitude, perception of the job market, and self-evaluation of their academic potential. On the other hand, decisions are often made as a result of visa constraints and unpreparedness for academic advancement. With no financial aid, most Chinese students have to work to pay for language school tuitions and living expenses and, in many cases, also the debts they incur to finance the trip. Furthermore, part-time work takes up most time out of the classroom, making them unable to prepare for entrance exams (Liu-Farrer 2011a).

Focusing on students at Taiyo University, a second-tier private institution, one of the purposes for this study is to find out whether or not the aforementioned conditions apply to the younger generation of students who grew up in relative affluence compared with the previous generation. I ask what kinds of student arrive at Taiyo University and through what types of processes. In this Section I present the reasons that Chinese students gave for choosing to study at Taiyo. Again, there is no single mechanism that leads a student to a particular destination. The following causalities exist simultaneously and to differing degrees in students' decision-making process.

Academic Aptitude and Lack of Language Preparation

One reason that many Chinese students enrolled at Taiyo University was their self-evaluation of their academic aptitude and linguistic preparedness. None of the students we interviewed went to elite universities in China. Many of them graduated from vocational schools (*zhongzhuan*) or 2-year colleges (*dazhuan*). Some came to Japan because they aspired to obtain a college degree. One student moved with her parents to Japan immediately after completing high school because in China she had no hope to enter a national or provincial 4-year university (*yiben* or *erben*).

Moreover, most Chinese students enrolled at Taiyo University had no Japanese language training in China, and 1 or 2 years of language school was not enough to prepare them linguistically to compete in high-stake tests.[4] Meanwhile, even though their financial situation was much improved from the previous generation and their parents paid for their tuition in most cases, they still worked on average 25–30 h a week in order to pay for their own living expenses. As a result, many went through specialist Japanese training schools (*senmon gakko*) before entering university. Lin Yuqin, a 26-year-old woman from Fujian, a third-year university student majored in Japanese, told us her story:

> In China my education level was at the vocational school (*zhongzhuan*) level. And then, I myself, I was not particularly into studying, but I longed for a higher education credential (*gao xueli*). Because I had given up education at home—after school I waited over a year to come to Japan—I had then made up my mind that if I came to Japan, if possible, I would like to go to university. Because I had friends who had come to Japan and gone to university, I was pretty envious. (Interview, November 22, 2011)

Lin Yun went to a language school for 2 years, studying Japanese while working part-time jobs. She evaluated her own language ability when she graduated from language school and decided to enroll at a vocational school before applying for college. She applied for Taiyo because she heard about this university while in language school. She chose to major in Japanese language because, in her words, *I am not the kind that can be called particularly bright. I wasn't particularly good at subjects in science, or technical kinds such as those related to computer. So I thought it suited me better if I studied language* (Interview, November 22, 2011).

There were also students who quit university to come to Japan. The universities at which they had enrolled in China were comparable to Taiyo in terms of academic standing. They might have hoped to enter a higher-ranking university. After failing the first attempt, considering their age, they stopped trying. Xiao Qing, a 28-year-old man from Beijing and a second-year graduate student at the time of interview, had been a student in international economics at a provincial university in China. He quit school to come to Japan partly because he did not feel that the Chinese

[4] There are studies in the USA showing that immigrant children lag behind in their academic performance having a lot to do with their lack of academic language proficiency. It takes 4–7 years to develop academic proficiency in English (Hakuta et al. 2000, Suárez-Orozco et al. 2011).

university could fulfill his ideals. He ultimately found himself studying international economics at Taiyo University. I inquired about the reason that he chose to come to Taiyo. He said:

> I also applied for Nihon University, and I took the exam. But I didn't get in, probably because too many people were applying... I considered staying for one more year to enter a better university. But I thought about my age, because I had delayed quite a bit, so I thought to speed up a bit. So I chose Taiyo. (Interview, July 3, 2011)

Social Networks as Information Channel

Most Chinese students had little knowledge of Japanese higher educational institutions. As a result, their choice was very much influenced by their immediate social networks, their language school teachers, their friends, and their coworkers at part-time jobs. As the student from Shanghai, Fang Yuan, explained,

> I only knew those famous universities. But I was working part-time, at night too. So I didn't have time to review my academic subjects. And my Japanese wasn't good enough to go to those prestigious schools. So I asked my Japanese teacher... and the teacher introduced the school. I happened to have a friend who was working together with a student from Taiyo at his part-time job. He asked him, and he said the school was not bad... and it was close to where I worked... pretty convenient. (Interview, November 24, 2011)

More than one student chose Taiyo because they knew somebody who was already studying there. Failing to enter a public school of his choice the first time, Lalongdi, the graduate student from Inner Mongolia, enrolled in specialist training school in order to stay in Japan legally. Having no interest in the school he chose and seeing no future in that education, he spent all his time laboring on part-time jobs, working 70 h a week. When he was pondering on what to do next, he met a Japanese man who was a Taiyo student. He reflected on his experience as follows:

> (I was thinking) I would just go to a university, get the visa, and work a couple of more years, making some money to go back. In the end, there was a young Japanese man at my part-time job. During chats I asked which university he was from, and what major he was in. He said he was at Taiyo and majored in environmental studies. Hearing that, I felt very interested, so I applied for Taiyo. If it were not for him, it is possible that I would not have gone on to university. Because it was about the environment, I thought there was a future in that. So I chose to go to university. (Interview, June 11, 2011)

Social networks can sometimes constrain a student's choice. One woman from Hunan, Dan Zhou, wanted to study law at Hosei University. However, her roommate and best friend in Japan could not find anything at Hosei that she was interested in studying. She recommended Taiyo to Dan Zhou, saying that she could study law at Taiyo too so they could stay together. Dan Zhou gave in and went to Taiyo.

Institutional Channels

As interviews with Chinese students studying in Japan progressed, we gained a distinct sense of private universities' efforts in recruiting international students. Taiyo University set up a liaison office in Beijing next door to Beijing University of Foreign Studies. Li Zhongping, who was in his second year in a university in China, studied Japanese in college. He passed by Taiyo's Beijing office one day, decided to enter, took an entrance examination in their office, and arranged to come to the university directly.

Taiyo University also had a nondegree language program that recruited Chinese students in China through study abroad services. Students who were enrolled into the program were expected to go to Taiyo University's degree program. Yang Ming, from Xi'an, reported that all the students in his cohort ended up in Taiyo's degree programs. He explained:

> After entering the Language Course (*bekka*), the teachers hardly gave us any information about college admissions, such as the Entrance Examination for International students (*ryuugakusei shikken*). They did not provide us any documents about the requirements for different universities. They only gave us a piece of paper, asking us to write down what majors we wanted to study the next year. Teachers taught us Japanese only. It was different from regular Japanese language schools. There they would prepare you for the Japanese proficiency test. Here we were taught textbook contents only. (Interview July 29, 2011)

Taiyo, as a second-tier school, was not as aggressive as some third-tier private universities for whom international students were their main source of prospective students. From the case of Ye Caixia, we have a glimpse of some private universities' recruitment strategies. Ye entered a now defunct language program opened by a specialist training college (*kousen*). Her classmates were all Chinese. It was supposed to be a 1-year language course. A year later, she became a student of Seiyin University.[5] Asking her how she chose this university, she answered:

> I didn't choose. I came to Japan in April, and had to take the (college entrance exam) in October. So I had only 6 months. I had no time to prepare. Because when I came in April, I had to find part-time jobs first. After that, I had to get used to the life here. For me, everything was new. It took another 3 or 4 months. So I had no time to prepare for college. When the university sent the offer to our school, the school teachers wrote recommendation letters for all of us. So the school wanted us to go. We all went. We didn't prepare at all. (I) hardly had any time to think about it. (Interview, June 20, 2011)

After having taken a paper-based examination and attended an interview, Caixia was accepted by the university along with all her classmates. According to Caixia, in 2002, the year she entered the university, there were over 500 international students enrolled in the university, making up for over half of the entire student population. In order to make it convenient for the international students to work part time outside the campus, the university moved their campus for international students to downtown Tokyo. The aggressive recruitment strategy does not

[5] Pseudonym.

necessarily mean that the university was laid back in terms of the rigors of students' education. Caixia was happy with her college education. She ended up choosing to go to graduate school at Taiyo University because it offered programs that suited her needs better.

In summary, entering Taiyo University was considered an opportunity for upward educational mobility by most students in our sample. There might be students who, given more time to hone their language skills, could have entered a higher-ranking university. But students' choice of university and their subsequent educational mobility have a lot to do with their assessment of their own academic aptitude, language proficiency, and their attraction toward certain majors. Much of the decision making was influenced by their immediate social circle. The university's active recruitment and availability of institutionalized channels also brought in some students.

My earlier concerns with the negative effects on educational attainment due to excessive part-time work seem to have been exaggerated. On one hand, several people mentioned their part-time work engagement took up their study time and rendered them less prepared for university admissions. On the other hand, it is also obvious that students regard part-time work (*dagong*) as an inseparable part of the "studying in Japan" experience. They also learn the Japanese language as well as the workings of Japanese society through such employment. This generation of Chinese students is under much less financial pressure than their predecessors. Several students said they did not need to work to support themselves, yet they did. They felt that in terms of personal growth, part-time work experience was as important as formal education. One young woman told the interviewer that she wanted to study abroad in order to "become independent." And she did.

It is also to be noted that with the exception of two students, interviewees were satisfied with their education and found the academic work challenging and fulfilling. They accepted their education with appreciation.

To Stay or Not to Stay

Our interviews with undergraduate and graduate students at Taiyo University show a diverse and uncertain picture of students' future orientation in Japan. Out of the 25 students, only one young woman entertained the possibility of going to a third country and talked about enrolling in a hotel management school in Switzerland. The rest were divided between staying on in Japan and returning to China. However, in either case, I perceived a strong sense of uncertainty and reluctance. Students are trying to have a control over their future by making what they see as necessary effort. Yet, their dreams are subject to the tyranny of the labor market. Moreover, I sense a certain conflict between their aspirations and those of their parents. In a way, these students' future orientation is very much contingent upon the labor market situation, their family's attitude, as well as the existence and strength of social connections.

To Stay: The Tyranny of Labor Market

Nearly half of the Chinese students we interviewed expressed a desire to stay in Japan. Such a desire is shaped by several considerations, all of them having to do with concerns about the labor market and career prospects. The most stated reason has to do with students' estimation of their own labor market competitiveness. The job market situation in China renders their educational credentials insufficient for a good career. In particular, the students at Taiyo are aware that their university is not prestigious enough to allow them access to good career positions. As some students explained, in China, employers might have heard of Waseda, but they do not know Taiyo University. To increase their competitiveness in the job market in China in the long run, accumulating work experience in Japan becomes a necessity. Yu Wen, from Liaoning, said:

> In fact many people decide to work in Japan only to accumulate experience. After 5 years they can change to a company (in China). In China, for those who have 0 experience the salary is about the same as those who freshly graduate from domestic universities. And even if you graduate (from a Japanese university), you have to see if your university is recognized in China. Yes, they need to see if your university is good enough. If you have work experience, you are not... not completely inexperienced...You can bring back overseas work experience. Japan is after all more developed than China. (Interview December 8, 2011)

Some students were attracted to the Japanese culture and lifestyle. Several women particularly mentioned that they felt comfortable living in Japan and hoped to continue living in Japan. Most students who expressed a desire to stay in Japan had very little knowledge about and lacked real connections to the Chinese labor market. They felt distant or unprepared for the job market in China. Staying in Japan, in a way, was a more obvious option than going back to the unfamiliar Chinese market. Wang Lixin, from a small town in Fujian, wanted to look for jobs in Japan first. She said, *If I go back... I don't know what I can do back there... in China. I have been here for so many years that I am not clear about the job market in China* (Interview, November 10, 2011). Moreover, these students tend to have come from small towns in China where there are few opportunities to work at foreign firms or large companies. They had to go to prominent coastal cities in order to find what they considered to be decent employment. However, Shanghai and Beijing, even though in China, are equally distant from home and are in a sense more unfamiliar culturally than Tokyo. Another student from Fujian, Yuan Ling, explained:

> If I went back to China, I would have to go to work in big cities such as Beijing, Shanghai or Dalian. That would not be so different from staying abroad. If I returned, my family would definitely want me to stay with them. But if I went back, I would have to go to the North. China is so big. It would be the same as going abroad. (Interview October 31, 2011)

Whether or not these Chinese students can manage to stay in Japan very much depends on their labor market outcomes. The interviews were conducted after the March 11 Great East Japan Earthquake. Students were somewhat pessimistic about

Japanese economy and their labor market prospect in Japan. The aforementioned Wang Lixin, a third-year college student, said,

> Before, I wanted to find employment here. At present, the situation is... I feel it must be hard to find a job here. I feel it is hard for the Japanese themselves, and it must be harder for international students. So I am thinking of going on to graduate school..... But I will see if I can find a job here first. (Interview, November 10, 2011)

In summary, considerations related to the labor market very much condition Chinese students' decision to stay or to leave. However, two points need to be emphasized. The first is that students at Taiyo's graduate school will not be satisfied with any job they can find. They mentioned "a job that I like" or "a decent job" as a condition to stay in Japan. Some specifically pointed out that they would not consider taking up certain jobs, such as those in the restaurant industry. Also, they would only continue to stay in Japan if they still "liked it in the future." This shows that young students nowadays are less likely to compromise in order to stay in Japan. This is different from previous observations that some students were willing to take up any job in order to stay in Japan (Liu-Farrer 2011a).

Second, Oishi (2012) argues that Japanese firms do not attract highly skilled foreign workers partly because of its organizational characteristics and work culture. Some Chinese students mentioned that rigid Japanese corporate culture and excessive work hours turn them away from Japanese labor market. It is one reason that those who aspired to work in Japan for several years upon graduation would do so solely to accumulate work experience in order to be more Marketable. It is also one reason that made some Chinese students want to go back to China immediately. However, among the Chinese students at Taiyo, for those who have decided to return to China upon graduation, family situations matter significantly.

To Go Home: The "Ties" of Family

The expression "ties of family" has two meanings. One refers to emotional connections. As previously mentioned, two conditions have changed since the onset of student migration from China to Japan. One is that most of post-1980s Chinese students are singletons. Contrary to the common discourse about spoiled "little emperors," there is an increasing discourse of filial piety among the post-1980s generation. The other condition is that China's economy has developed significantly since the mid-1980s. Earlier Chinese student migrants felt a great deal of pressure to contribute to the financial well-being of the family back home. The students we interviewed in 2011 and 2012 mostly do not consider financial contribution a goal. Except for one student from Inner Mongolia whose parents needed financial support, most had not remitted money. Many still relied on their parents for tuition. Yet, the parents of these students often hoped that they would return home. The March 11 earthquake concerned many parents. Some called their

children back immediately after the earthquake or wanted their children to go back to China immediately after graduation.

Fu Jun, from Liaoning and a first-year graduate student in Japanese, said she was confused about her future. She wanted to try to work in Japan for several years, but her family wanted her to go back immediately upon graduation:

> My family says I must go back. My mom and dad ask me to go back. It is mainly because I am the only child and has been let loose so far away and for so long. I have to consider my parents. They are older year by year. I haven't been around them to take care of them, I feel... So I think I will go back to look after them after graduation. (Interview, October 13, 2011)

In Dan Zhou's case, her family pressured her to change her academic major because in their opinion, studying law in Japan, a major she chose, would make it difficult for her to find a job in China. Not liking economics or management, she chose to study Japanese. She described her family pressure as follows:

> I wanted to study law, all the way up till PhD level. If I could settle in Japan, I could open a law office in Japan, like a window giving the foreigners here a voice. That would be a meaningful (career).... But my father is against it, saying that I can't stay in Japan forever... When I was changing majors, my law professors tried to keep me, saying few foreign students could keep up with the curriculum as I did... But I didn't get the permission from my family. They said that my making such a decision by myself... was like...marrying out a daughter at the age of 19 when I came abroad and never to return. My mother was crying at home... so I agreed. (Interview November 7, 2011)

Another meaning of "ties of family" refers to the social connections (or power) the family possesses in China that can help students with their employment. Even though they might have considered looking for opportunities in Japan, after evaluating their competitiveness in the Japanese market and particularly with the threat of an earthquake, these more privileged students did not hesitate to return to China. Wang Sheng, from Xi'an, a second-year MA student in economics, liked the lifestyle in Japan and had originally planned to stay in Japan to develop his career. But after the earthquake, his fiancé went back to China. He also felt that a Taiyo degree would not allow him to compete with first-tier university graduates, and therefore he had no hope to enter first-class firms in Japan. He decided to go back to China. As he put it, *China is developing. I can first enter the place my father is working at. I can close my eyes (meaning: easily) and get in there to work... And the company will definitely grow in 10 years. Also they will let me be a branch head or department head* (Interview July 29, 2011).

Graduate School as a Waiting Room

According to JASSO (2012), 22.6 % of university graduates and 22.7 % of students who obtained a master's degree in the 2010 academic year (from April 2010 to March, 2011) continued to pursue a higher degree. Graduate education, for some

Chinese students that we interviewed, was a necessary means to increase one's market position.

Li Zhongping was a third-year undergraduate in management from Shandong, a coastal province and a former Japanese colony that has attracted a large amount of Japanese investment. He saw many large Japanese firms and big-name banks opening branches in his hometown. He saw his future in the Chinese side of the business, to be employed in Japan and sent back to work in Chinese branches. However, he felt an undergraduate degree was not sufficiently competitive, so he decided to go on to a master's program. However, he felt that Taiyo University's graduate school might not be prestigious enough. He was looking to apply for a program at a national university.

While Li Zhongping believed a graduate degree would allow him to get ahead in the future labor market, many Chinese students enroll in graduate schools because they fail to find desirable employment upon graduating from the undergraduate program. Graduate school therefore becomes a "waiting room" of sorts; students are there to wait for opportunities to come or to prolong their stay in Japan even though they know their destiny is in China. Many of them, especially those in PhD programs, do not see their career future in Japan. They chose to advance to the doctoral program at Taiyo partly because they have given up on the Japanese labor market and have made up their mind to go back to China, if possible, to teach or do research. As a result, according to the interviewees, Taiyo's graduate programs have more Chinese students than Japanese students.

Many Chinese chose to continue education at Taiyo partly out of consideration for scholarships as well as established academic relationships. As Lalongdi, a first-year PhD student in economics, explained:

> Continuing on with economics, honestly, I am not feeling too comfortable. I am putting up with it at this university for scholarship. Otherwise I am going for humanities. I like cultural anthropology. But if you go to other universities, you compete with other (students) from zero again. At my own university, you have build the foundation, and academic records, and also interpersonal relationship that can be used sometimes. Professors who recommend you know what kind of person you are, and when they recommend you, they have more confidence. You have to start all over from zero again. So (I) have stayed on at Taiyo. In terms of money it has been a big help. In terms of academics, I have suffered. The future is not bright. (Interview June 11, 2011)

Conclusion: Understanding Student Mobility Through Taiyo Students

This paper set out to understand the mechanisms that initiate as well as affect international student mobility. Students at Taiyo University, a second-tier private university and a popular destination for Chinese students, provided their mobility histories and thoughts on their education experience as well as future outlooks. Through understanding student mobility at such an average and typical university,

this study aimed to understand the situation of average and typical Chinese students in Japan.

Consistent with several studies on international student destination choices, this study indicated that Chinese students and their families see studying in Japan primarily as an opportunity for upward mobility, educationally and career-wise. Even though China's higher education opportunities have greatly expanded since the 1980s, when first generations of Chinese students went abroad (Shao 1995), in some areas entrance into university remains competitive. Some students migrate to Japan in order to regain educational opportunities or improve their educational prospects. Some use studying abroad to break away from their previous trajectory and seek to start anew. Even though academic unpreparedness and linguistic inadequacy might have dampened their chance to enter first-tier institutions and some had to go through specialist training school before reaching Taiyo, the reality is that all students have achieved educational upward mobility. Where they are now is higher than where they stood when they left China.

Compared to previous generations of students, what has changed is the fact that studying abroad has become a household strategy and practice. What this means is twofold. On one hand, with rapid economic development and the institutionalization of study abroad services, international education, especially studying in Japan, has become an affordable household choice and routine practice. Some early students who came to Japan in the mid-to-late 1980s arrived with several thousand yen in their pocket. The Chinese students in this sample all entered Japan with several months' living expenses in hand. Even though most students in this study are from middle-class families, their parents continually paid their school tuitions. It is important to note that parental devotion and financial support are seen by the students as an emotional, rather than a financial, investment. Students feel obligated to their parents and grandparents, and when they face the choice of staying or returning home, their parents' opinions and their feeling of filial obligation weigh heavily in their decision making. In one student's metaphor, she was a kite and was allowed to fly far away and for a long while. But in the end, she was to be pulled back by her family.

One important facilitator of international education that shows itself prominently in this case study is the educational broker. International education has become an increasingly lucrative business. In China, the government issues annual licenses to several hundreds of agencies that are dealing with international education. Every province has at least several official agencies, with Beijing alone having 78 certified brokers.[6] These brokers are channeling students to different destinations and educational institutions. Many schools recruit students through these brokers. Meanwhile, most individual students in our study relied on brokers for choosing

[6] A list of about 450 agencies are licensed in 2012 by Chinese Ministry of Education. The list is available at http://www.jsj.edu.cn/index.php/default/intermediary/lists/北京, last accessed on February 28, 2014.

both the destination country and particular institution. The qualifications of the brokers, therefore, need more careful scrutiny in future research.

Finally, most Chinese students' mobility is determined by where the jobs, especially the more desirable jobs, are. For those from smaller towns with little foreign direct investment and without family connections in China, staying in Japan promises a more predictable future. However, whether or not students can stay depends entirely on whether they succeed in the Japanese labor market. For those whose families are well-situated in their locality, job prospects are more certain in China than in Japan. Some of them might make an attempt to enter the Japanese labor market but would not settle on a less desirable job for the sake of settling down in Japan.

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Chapter 11
Education for Sustainable Development at Universities in Japan

Yuto Kitamura and Naoko Hoshii

Introduction

With the adoption of "Agenda 21" at the United Nations Conference on Environment and Development (UNCED) held in 1992 in Rio de Janeiro, Brazil, various institutions of higher education all over the world inaugurated activities that resonate with the principles and goals of "Education for Sustainable Development (ESD)," which were later advocated worldwide. In Japan, however, a clear attitude of addressing environmental and development issues from multiple perspectives did not emerge immediately from the country's higher education institutions, against the backdrop of university education reforms that had taken place in 1991. The reforms concerned educational standards and gave universities greater discretion in designing their own curricula. As a result, many Japanese universities opted for abolishing liberal arts departments, focusing their somewhat ill-balanced attention and energy on structural reorganization intended to reinforce specialized education (Kaneko 2004; Newby et al. 2009; Yamamoto 2009).

In 1998, all this changed. The University Council's 1998 report, "A Vision for Universities in the 21st Century and Reform Measures," pointed out that a deeper understanding of Nature is necessary for humanity to realize a closer symbiosis with Nature and that global-scale endeavors are increasingly required to resolve problems that directly challenge human survival, such as those relating to the global environment, energy, and population. The report then emphasized the importance

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of contemplating universities' contributions to the international community, specifying that the entire system of higher education is required to fulfill its important and broad-ranging roles more adequately than ever before, developing and maintaining excellent human resources that propel progress in not only Japan but the whole world, preserving humanity's intellectual assets and creating new ones that lead humanity's future, participating actively in society's evolution and cultural life, and engaging in international collaboration on the foundation of intellectual resources.

In 2005, the Central Council for Education published the report, "A Future Vision for Higher Education in Japan," which acknowledged that "Japan's higher education is in danger" and recognized anew that general education is as important as specialized education for the country's universities to be up to international standards. The report also clarified that the common goal of undergraduate education is training "twenty-first-century-type citizens" capable of supporting and improving society.

Discussions triggered by the report culminated in 2006 in the adoption of the Japanese Action Plan on the United Nations Decade of Education for Sustainable Development (2005–2014) (UNDESD). The Plan contains as its priority activity the promotion of ESD in institutions of higher education. Accordingly, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) has since been providing support for ESD by universities. For example, the MEXT 2004 Contemporary Education Needs Initiative Support Program (academic year 2004–2007) adopted university educational programs on the theme of promotion of environmental education leading to sustainable society. As another example, the MEXT Program for Promoting High-Quality University Education (academic year 2008) adopted Iwate University's program of integration of ESD into all general education courses.

In June 2008, in time for the 34th G8 Hokkaido Toyako Summit (held in July 2008), the G8 University Summit was held in Sapporo, Hokkaido, on the theme of "Global Sustainability and the Role of Universities." At this event, members of academia expressed their determination to contribute to the international community in the face of global environmental problems, represented by climate change and other global-scale issues that concern humanity's survival, working toward the realization of sustainability in interactions between the earth and societal systems and promoting ESD. At the University Summit, participants reached agreement that an international interuniversity network would be established to promote ESD.[1]

As described above, the promotion of ESD in Japan's higher education is becoming more active, partly thanks to governmental policy support. In 2010, a review of ESD activities conducted thus far commenced in liaison meetings of ministries concerned with the UNDESD as well as roundtable meetings of experts in their respective fields. Further discussions and studies were also conducted to

[1] For more on the discussions at the G8 University Summit, refer to the Summit website: http://g8u-summit.jp/english/ [Accessed 1 December 2011].

revise the abovementioned Action Plan on the United Nations Decade of Education for Sustainable Development, incorporating feedback from the public. The revised Plan states reinforced assistance to universities' and graduate schools' endeavor to integrate ESD into programs designed to train specialists in respective domains, as well as support through collaboration of industrial, academic, governmental, and private sectors for development in and introduction into higher education institutions of programs for training future leaders who will undertake reforms in socio-economic systems to realize a sustainable society.

The principal concern of this chapter is what activities Japanese universities have conducted in the process of promoting ESD in higher education. To answer this question, a number of universities with active educational programs in areas related to ESD were selected to participate in a questionnaire survey. Also, it should be noted that educational programs examined in this chapter are basically open for both Japanese students and foreign students who have been enrolled in each university.

The Concept of ESD

The concept of "Education for Sustainable Development (ESD)" was discussed at the World Summit on Sustainable Development held in Johannesburg, South Africa, in August–September 2002, and in December 2002, the UN General Assembly adopted a resolution proclaiming the period of 2005–2014 to be the United Nations (UN) Decade of ESD (United Nations 2002). ESD aims at changing the approach to education by integrating the principles, values, and practices of sustainable development and needs to be incorporated into all forms of learning and education. ESD can assist individuals to change their behavior so that environmental, economic, social, and cultural sustainability can be realized in their respective societies (Matsuura 2004).

ESD consists of the following five elements (UNESCO 2005, p. 9): (1) education that allows learners to acquire the skills, capacities, values, and knowledge required to ensure sustainable development; (2) education dispensed at all levels and in all social contexts [family, school, workplace, community]; (3) education that fosters responsible citizens and promotes democracy by allowing individuals and communities to enjoy their rights and fulfill their responsibilities; (4) education based on the principle of lifelong learning; and (5) education that fosters the individual's balanced development. ESD integrates various components of sustainable development into the curricula at all levels of education and in all sectors of the society.

Through ESD, we try to nurture the abilities of young people (1) to think in a holistic and systematic manner so they are able to grasp the diverse nature of social issues and phenomena; (2) to understand the values relating to sustainable development, which include human dignity, diversity, inclusiveness, equity, etc.; (3) to think critically and explore alternatives; (4) to collect information and analyze it; and (5) to communicate well with others (UNU 2009, p. 6).

Among various stakeholders promoting ESD at different levels of education, higher education institutions can contribute to disseminating the concept of ESD among teachers and train facilitators in ESD-related fields. Through university education, it is also possible to raise awareness to students about sustainability. For instance, Sterling and Thomas (2006) discuss how the idea of ESD can be reflected in university curricula, embedding sustainability concepts, values, and skills into the student learning experience.

Moreover, it is important to recognize that higher education institutions often play significant roles in establishing networks with different stakeholders, such as the Regional Centers of Expertise (RCE) on ESD which have been established by local stakeholders and supported by the United Nations University (UNU). Articles in the special issue of the *International Journal of Sustainability in Higher Education* (Volume 9, Number 4, 2008) show how universities collaborate with local stakeholders through RCE in Europe, North America, and Asia.

In Japan's case, Japan's Action Plan for the United Nations Decade of Education for Sustainable Development (UNDESD) was issued in March 2006 as a blueprint for the implementation of measures to promote ESD in Japan. Emphasizing the roles of higher education institutions at the start of the decade, the Action Plan outlined how Japan intended to assist the establishment of programs to support the introduction of ESD in order to foster the development of professionals in each field and support the major roles played by higher education institutions, such as conducting research to create a sustainable society and promoting ESD at the local level. With regard to human resources development, it also stated that teacher training programs provided by higher education institutions should include ESD so that students could acquire practical teaching skills (Interministerial Meeting on the UNDESD 2005).

In line with the Action Plan, various initiatives to promote ESD in higher education have been introduced, mainly by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and the Ministry of the Environment (MOE). The Institute of Advanced Studies of the United Nations University (UNU-IAS) has also introduced the Education for Sustainable Development Program which includes strengthening ESD at higher education institutions and the promotion of RCE. Under these initiatives, many higher education institutions have attempted to improve their educational programs, research, and outreach activities involving ESD. These activities can be categorized into several areas, as follows:

1. Undergraduate education to develop human resources that can contribute to the realization of a more sustainable society in each professional field
2. Teacher training and the development of teaching materials for ESD in school education
3. Postgraduate education and research in environmental science to foster the development of leaders in the environmental field
4. Postgraduate education and research in sustainability science to contribute to the creation of a sustainable society

5. Outreach activities to promote ESD at the local level and international cooperation on ESD

Focusing on these categories, this chapter reviews the way in which ESD has developed higher education institutions in Japan under the various initiatives. It also examines major patterns of education and research related to ESD at Japanese universities, based on the results of a questionnaire survey which was conducted in 2008–2009.

Overview of the Development of ESD at Higher Education Institutions in Japan

Undergraduate Education

The higher education system in Japan has been deregulated since the amendment of the Standards for the Establishment of Universities in 1991. Each higher education institution has now taken on the responsibility of developing its own distinctive educational programs. Consequently, many institutions have experimented with restructuring liberal arts education and linking liberal arts education with professional education. Therefore, the introduction of ESD into higher education should be positioned in accordance with this process of educational reform.

MEXT has implemented several programs to support initiatives for education reform at higher education institutions. The objective of one of these programs, the Support Program for Contemporary Education Needs, is to support outstanding efforts at higher education institutions. In accordance with Japan's Action Plan, MEXT set "promoting environmental education for a sustainable society" as one of the themes of this program and called for applications in 2006 and 2007. As a result, 30 proposals (including 25 proposals on undergraduate education) were selected (MEXT 2006, 2007).

In many of the selected programs, environmental education for a sustainable society is provided through interfaculty collaboration and integration between the humanities and sciences to ensure an interdisciplinary approach. In addition, practical learning opportunities such as action research, fieldwork, internships, and volunteer activities have been included in the curricula. Some institutions have combined environmental issues with existing professional education, for example, the rehabilitation of mountainous areas by utilizing agricultural knowledge and the product design by utilizing recycled materials. From the viewpoint of local relevancy, many such cases have selected local characteristics and local environmental issues as themes, and the projects have been conducted in collaboration with local stakeholders.

Teacher Training and the Development of Teaching Materials

School education in Japan used to include environmental education and international understanding education within existing subjects and the Integrated Study Periods used for cross-curricular learning. However, there was no effective linkage between subjects from an ESD perspective.

Recently, ESD has been incorporated more clearly in Japan's school education system. In 2008, the Basic Plan for the Promotion of Education was formulated, and ESD was positioned as one of the measures in line with essential teaching directions (MEXT 2008a). Based on the Basic Plan, the Guidelines for the Course of Study were also revised. In these guidelines, ESD was clearly introduced into some subjects such as science, social studies, and moral education at the primary and lower secondary levels (MEXT 2008b, c).

In response to this change, teacher training universities are now required to promote further practical teacher training and research for ESD. Some teacher training universities have already made efforts to incorporate ESD into their educational programs, research, and outreach activities. For example, the Nara University of Education has used the World Heritage Site in the prefecture as a tool for ESD and has developed World Heritage Education, including fieldwork at the site and activities making teaching materials on the topic of World Heritage, in the undergraduate education program. In cooperation with the Nara City Board of Education, the university has also promoted World Heritage Education at primary schools. As a result, World Heritage Education has been introduced on an experimental basis in the Integrated Study Periods of all the primary schools in Nara City (UNESCO and Japanese National Commission for UNESCO 2008a).

In addition, some academic associations related to school education (with members in academia, higher education institutions, and school teaching) have also contributed to the development of ESD in school education. For example, the Japan Society of Environmental Education has conducted a flagship project on ESD, and the Japan Association for International Education and the Japan Society for Science Education have both adopted ESD as a theme for presentations at their annual meetings held in 2008. The Japanese Society for Geographical Sciences also has a working group on ESD.

Postgraduate Education and Research in Environmental Science

In June 2007, the Japanese government made a cabinet decision approving the country's strategy titled "Becoming a Leading Environmental Nation Strategy in the 21st Century: Japan's Strategy for a Sustainable Society" (Government of Japan 2007). It addressed the need for environmental leadership training in order to create a sustainable society and outlined a plan for implementing environmental

leadership initiatives in Asia. In response, the MOE formulated the vision of university-led Environmental Leadership Initiatives for Asian Sustainability (ELIAS) in 2008, which support the university-level training of human resources who proactively engage in the greening of Asia's society and economy, and launched three projects.

One of these three ELIAS projects involves the development of higher education model programs. Six proposals, including five postgraduate education schemes, were selected as model programs in 2008. They emphasize collaboration with private enterprise, administrative organizations, nongovernmental organizations (NGOs), and universities throughout Asia in order to provide students with practical and participatory learning opportunities. In the same year, MOE also started to prepare for the establishment of industry-academia-government consortiums to foster the development of environmental leaders as part of ELIAS.

A network of higher education institutions known as the Promotion of Sustainability in Postgraduate Education and Research Network (ProSPER.Net) was also established on the initiative of UNU-IAS and supported by MOE as part of ELIAS. ProSPER.Net serves as a platform for collaboration between member institutions in order to conduct postgraduate education and research related to the environment. The founding member institutions of ProSPER.Net comprise 18 institutions in Asia and the Pacific, including 8 universities in Japan. To date, ProSPER.NET has conducted three joint projects, namely, integrating sustainable development in a business school curriculum, training of educators and researchers on sustainable development, and establishing a postgraduate program in public policy and sustainable development (UNESCO and Japanese National Commission for UNESCO 2008b).

MEXT has also promoted the development of environmental leaders through the Strategic Training of Environmental Leaders under the Asia/Africa Science and Research Strategic Cooperation Program. In 2008, five proposals were selected. They focus on accepting and supporting overseas students as well as Japanese students and aim to foster the development of overseas leaders who learn about Japanese environmental policies and technology which they can then adapt to their home countries, as well as Japanese leaders who can promote environmental policies and develop environmental technology in order to solve environmental issues in developing countries.

In order to conduct practical environmental leadership programs and to promote the employment of people with environmental skills, it is essential to promote interuniversity networks and industry-academia-government partnerships (Lotz-Sisitka 2004). The networking of universities in Asia and the Pacific region will enable such people to apply their environmental skills to environmental strategies throughout Asia and the Pacific.

Postgraduate Education and Research in Sustainability Science

In the area of sustainability science, an interuniversity network called the Integrated Research System for Sustainability Science (IR3S) was established in 2005 as a collaborative venture involving five participating universities, i.e., the University of Tokyo, Hokkaido University, Ibaraki University, Osaka University, and Kyoto University. MEXT has supported this network through the Special Coordination Funds for Promotion of Science and Technology. Since 2006, six further institutions have joined IR3S as cooperating institutions.

The universities participating in IR3S have collaborated in inaugurating the Integrated Research for Sustainability Science Program – a Master's program that fosters the development of specialists who can contribute to the creation of a sustainable society on the global stage. It also intends to promote credit transfers among universities, issue joint course completion certificates, and provide students with distance-learning facilities linking all the universities involved.

One of the universities participating in IR3S, Hokkaido University, established the Inter-department Graduate Study in Sustainability (HUIGS) in 2008. In addition to the regular subjects on professional education at each graduate school, HUIGS students also take "Sustainability Science I" and "Sustainability Science II" as compulsory subjects, along with two subjects selected from "Sustainability Science III," "Sustainability Science IV," and subjects provided by other graduate schools. These include a core subject of IR3S and other subjects directly applicable to the requirements for IR3S joint course completion certificates (HUIGS 2008). In this way, collaboration between IR3S and each university is expected to enhance the comprehensiveness of the curriculum.

The universities participating in IR3S have also implemented three flagship research projects: "Sustainable Countermeasures for Global Warming," "Development of an Asian Recycling-Oriented Society," and "the Concept and Development of Global Sustainability: Reform of the Socioeconomic System and the Role of Science and Technology." These research themes require a unified response from various academic fields and a transdisciplinary approach utilizing the strengths of each participating university and their accumulated experience in each field of study. IR3S has, in collaboration with a Japanese petroleum company, also established an industrial consortium called the "Energy Sustainability Forum" which employs both theoretical and practical approaches to the issue of stable and safe energy supplies, especially in Asian countries.

Sustainability science focuses on the linkages between global systems, human systems, and social systems. Since this requires a transdisciplinary approach, interuniversity networks and collaboration with industry are effective ways to bring together various fields of expertise in order to improve postgraduate education and research in sustainability science.

Outreach Activities to Promote Local-Based ESD and International Cooperation on ESD

Currently, there are several initiatives in place to facilitate ESD at the local level. UNU-IAS has promoted Regional Centers of Expertise (RCE) on ESD and their networking. Each RCE builds an innovative platform for information sharing, dialogue, and collaboration among local stakeholders in order to promote ESD. Currently, there are six RCEs in Japan, i.e., RCE the Greater Sendai Area, RCE Okayama, RCE Yokohama, RCE Kitakyushu, RCE Chubu, and RCE Hyogo-Kobe.

MOE has also promoted community-based ESD practices. From 2006 to 2007, 14 areas were selected as model areas and they have now been supported for 2 years. In the first year, a model area establishes a local ESD committee and formulates action plans. In the second year, it formulates educational programs in order to foster the development of coordinators able to create sustainable communities and establishes a sustainable system in the community that can continue functioning even after the conclusion of MOE's support.

In almost all these RCEs and model areas of community-based ESD, higher education institutions have participated in the activities and have played pivotal roles (for instance, see Itoh et al. 2008). They have facilitated collaboration between different levels and types of educational institution and between educational institutions and communities. Some higher education institutions have offered advice to help develop ESD curricula at primary and secondary schools and have included ESD in the lifelong learning for communities as a component of their RCE activities.

Some higher education institutions have also implemented international cooperation on ESD. Under the International Cooperation Initiative, MEXT has implemented the Educational Cooperation Hub Formation Project which aims to build effective international cooperation models by the application of Japanese educational experiences. In 2008, MEXT called for project proposals on ESD-related international cooperation from higher education institutions as part of this project and selected six of them for support. These included cooperation projects with African countries for the development of a curriculum and teaching materials on ESD in basic education in sub-Saharan Africa (proposed by Hokkaido University of Education) and for building an ESD model and practice in collaboration between primary and secondary schools in Japan and Africa (proposed by International Christian University).

Major Patterns of ESD Implementation at Higher Education Institutions in Japan: Results of a Questionnaire Survey

Under the various initiatives mentioned in the previous sections, higher education institutions in Japan have developed a variety of ESD-related curricula and programs. In this section, focusing on undergraduate education and postgraduate education carried out using the five types of ESD-related activity described in the previous section, the current status of ESD implementation at higher education institutions, its effectiveness, and the problems encountered are examined, based on the results of a questionnaire survey.

In December 2008, questionnaires were sent out to 50 divisions of 43 universities (including 23 divisions for undergraduate education, 19 divisions for postgraduate education, and 8 divisions for both) which have ESD-related curricula and programs underway as part of the various initiatives described earlier. The ESD-related programs include those in ESD, environmental education, sustainability science, environmental science, and fostering the development of environmental leaders.[2] Answers on 18 undergraduate programs and 14 postgraduate programs, including those planned to start in FY 2009, were finally returned by the end of March 2009.

ESD-Related Curricula in Undergraduate Education

Patterns of ESD-Related Curricula in Undergraduate Education

There are three major patterns of ESD-related curricula at the undergraduate level. The first introduces ESD-related subjects as part of liberal arts subject groups and professional subject groups for students. However, because of the difficulty in clearly distinguishing ESD-related subjects from other subjects, it is difficult to list all ESD-related subjects and assess the curriculum organization as a whole in many cases. The second pattern involves ESD-related minor courses or sub-courses composed of both newly formulated subjects and existing subjects. In some cases, the university certificates students who have earned the required credits as ESD coordinators, facilitators, instructors, and so on. The third pattern involves the establishment of ESD-related departments in the fields of environmental systems engineering, environmental design, sustainability science, and so forth.

[2] The initiatives include "Promoting environmental education for a sustainable society" of the Support Program for Contemporary Education Needs (MEXT), IR3S (MEXT), fostering the development of environmental leaders through the Strategic Training of Environmental Leaders under the Asia/Africa Science and Research Strategic Cooperation Program (MEXT), ProSPER.Net (MOE), development of higher education model programs carried out under ELIAS (MOE), and ESD-related activities carried out under the other initiatives, such as the Program to Accelerate the Internationalization of University Education (MEXT), the Support Program for Improving Graduate School Education (MEXT), and the Open Research Center Program (MEXT).

Implementation Systems and Supporting Systems for ESD

With regard to the ESD implementation systems available at undergraduate level, 10 out of 16 institutions have cross-faculty boards or independent centers to provide the necessary coordination, especially in those cases where ESD-related subjects are common to all students or where cross-faculty courses require such coordination systems. With the exception of single-faculty universities or colleges, the academic fields of faculty staff in charge of ESD-related subjects range across 4–11 fields, mostly including social science (14 out of 18 institutions), environmental science (11 out of 18 institutions), and engineering (10 out of 18 institutions).

With regard to the systems supporting ESD and related research, more than half of the respondent universities have built relationships with local stakeholders and adopted industry-academia-government collaboration in order to provide fieldwork and field research projects for students (14 out of 18 institutions), to conduct training and internship programs for students (13 out of 18 institutions), and to hold joint symposia (9 out of 18 institutions). They have also utilized domestic interuniversity networks to invite lecturers (9 out of 18 institutions) and hold joint symposia (7 out of 18 universities). Some universities have established international interuniversity networks and have utilized them for fieldwork and field research projects (5 out of 18 institutions), joint symposia (4 out of 18 institutions), and joint research projects (3 out of 18 institutions). Therefore, it can be considered that the system supporting ESD implementation in undergraduate education is mainly based on collaboration at the local level, providing students with practical learning opportunities, while activities based on interuniversity collaboration are relatively limited. In particular, examples involving collaboration on academic matters, such as distance education, credits transfers, and joint degree courses, were rarely observed at the undergraduate education level in the respondent institutions.

When supported by such implementation systems and networks, which aspects of ESD have attracted students and have encouraged them to enroll in ESD-related classes and courses? More than half of the respondents considered that the two key aspects of ESD were “participative learning, learning by experience, and practical learning” (13 out of 18 institutions), and “locality, focusing on local issues, and contribution to the community” (12 out of 18 institutions). The respondents also reported that these two aspects had been adequately realized in their classes and courses (rated, on average, as 4.1 and 4.2, respectively, on a scale of 1–5).

Problems of Implementation and the Need for Support

However, some higher education institutions are facing problems with their implementation systems due to a lack of internal consensus on the promotion of ESD and shared recognition for ESD. Some respondents reported that they encountered difficulties in persuading other staff to become involved in ESD and expanding

their efforts to the whole university. Moreover, some respondents pointed out that in the university, an authority to hire personnel is basically with each faculty/school and it is difficult to appoint new staff for the ESD-related program which is a university-wide project and does not belong to any specific faculty/school.

Others pointed out that ESD initiatives were carried out individually and that curriculum development tended to be based on each separate department. As a result, the ESD-related curriculum lacked any effective linking of classes, and only a limited range of subjects were common to the whole faculty. Some respondents considered that activities based on collaboration with local stakeholders were also conducted individually and were not adequately systematized. In addition, the question of how best to position fieldwork in the curriculum and evaluate students' achievement of fieldwork is also one of the challenges facing ESD.

A lack of internal consensus regarding ESD leads to a lack of resources. Although ESD-related programs have, to date, been supported by various ministries, higher education institutions should also secure their own financial and human resources in order to continue their programs after the conclusion of existing financial support by external sponsors. Some respondents noted that the universities did not recognize the need for ESD collaboration with other universities and that they could not, therefore, obtain an adequate budget with which to build interuniversity networks.

Consequently, they still need follow-up support by the relevant ministries after the conclusion of existing support programs. Since exchange activities involving local stakeholders also incur costs, institutions that place emphasis on practical learning pointed out that they also need some form of financial support for such activities. With regard to instruction activities, some respondents expected the relevant ministries to develop e-learning systems for ESD in order to offer information on industries engaged in ESD and to provide information which can be applied to ESD teaching materials. Some respondents even pointed out the needs of new teaching and learning materials focusing on ESD. Faculty staff seminars were also required in order to raise internal awareness of ESD, and some respondents also expected international organizations to offer programs so that students could learn about and discuss environmental issues in various overseas countries, as well as midterm internship programs and opportunities for participative learning. Moreover, some respondents stressed an importance of establishing a system of offering certificates to students who completed the ESD-related courses, which should be authorized by either MEXT or MOE. We summarize these responses in Table 11.1.

ESD-Related Programs in Postgraduate Education

Patterns of ESD-Related Programs in Postgraduate Education

ESD-related programs in postgraduate education can be divided into three major patterns. The first involves establishing one program as a part of specific Master's

Table 11.1 Problems of implementation and the needs for support: undergraduate level

Problems of implementation	Needs for support
Lack of internal consensus on the promotion of ESD	Holding faculty staff seminars to raise internal awareness of ESD
Difficulties in personnel allocation Limited financial resources	Follow-up financial support by the relevant ministries
Lack of effective linking of classes in the curriculum	Developing e-learning systems and new teaching materials on ESD
Lack of systematized collaboration with local stakeholders	Providing students with internship programs and opportunities for participative learning
Difficulties in evaluation of students' achievement of fieldwork	Establishing a system of offering authorized certificates

and Doctoral courses in environmental science. The second involves providing programs which are common to all graduate students or cross-graduate school programs in sustainability science as a part of some Master's courses. In this case, even if most of the target group comprises graduate students in a specific graduate school, students from different backgrounds and from other graduate schools are also accepted. The third pattern involves establishing ESD-related graduate schools in the fields of environmental science and sustainability science.

Since many cases of ESD-related programs are part of Master's and Doctoral courses, degrees are offered by each of the graduate schools to which the respective students belong. In graduate schools in sustainability science and environmental science, degrees in both sustainability science and environmental science are offered. In other graduate schools, degrees such as those in engineering and those in agriculture are offered. In addition, 5 out of 14 ESD-related programs offer certificates or diplomas to students who have completed the required ESD-related studies.

Implementation Systems and Supporting Systems for ESD

With regard to ESD implementation systems, 12 out of 14 respondent institutions have centers for environmental science or sustainability science and boards for curriculum development to promote ESD-related activities. The academic fields of the faculty staff in charge of ESD-related subjects range across 3–12 fields, mainly including environmental science (13 out of 13 institutions), social science (12 out of 13 institutions), engineering (12 out of 13 institutions), and agriculture (11 out of 13 institutions).[3]

Compared with ESD at the undergraduate level, where it tends to be based on collaboration at the local level, ESD in postgraduate education involves a wider

[3] We analyzed responses of 13 institutions out of 14 institutions which returned their responses. Those 13 institutions replied to the questions on implementation systems and supporting systems, but one institution did not provide us answers to these questions.

variety of collaborative relationships supporting ESD and related research. Almost all universities have built up some domestic interuniversity networks, and a half of them utilize these networks to invite lecturers (6 out of 13 institutions) and conduct joint research projects (6 out of 13 institutions). Some universities have also utilized them for joint symposia (4 out of 13 institutions), distance education (3 out of 13 institutions), and credit transfers (3 out of 13 institutions). International interuniversity networks have also been utilized for joint symposia (8 out of 13 institutions), joint research (7 out of 13 institutions), invited lectures (5 out of 13 institutions), fieldwork and field research projects for students (5 out of 13 institutions), researcher exchanges (5 out of 13 institutions), and distance education (4 out of 13 institutions).

While programs in the field of sustainability science have established very strong domestic interuniversity networks, including IR3S, those in the field of environmental science tend to expand more international interuniversity networks. Moreover, collaboration with local stakeholders and industry-academia-government collaboration are also utilized for fieldwork and field research projects for students (13 out of 13 institutions), training and internships for students (11 out of 13 institutions), joint symposia (8 out of 13 institutions), and joint research and researcher exchanges (6 out of 13 institutions).

Respondents considered that students were attracted by aspects of ESD such as "internationality, focusing on global issues, and contribution to international society" (12 out of 13 institutions) and "the cross-disciplinary approach and combination between humanities and sciences" (9 out of 13 institutions). The respondents also considered that these two aspects of ESD had been adequately realized in their programs (rated, on average, as 3.3 and 3.8, respectively, on a scale of 1–5). Compared with ESD at the undergraduate level, where it tends to focus on participative learning and local issues, ESD in postgraduate education tends to be implemented from more international perspectives.

Figure 11.1 summarizes the abovementioned results and shows how implementation systems and supporting systems for ESD differ between the programs at undergraduate level and the ones at postgraduate level.

Problems of Implementation and the Need for Support

What kinds of problem are higher education institutions facing with regard to ESD implementation in postgraduate education? Since almost all faculty staff engaged in ESD-related programs also hold other posts in other divisions/departments/schools, and since the few staff who are exclusively engaged in ESD-related activities are all fixed-term staff, some respondents felt that it was difficult to maintain systems for instruction and research. Some obstacles were also pointed out with regard to domestic interuniversity networks, such as the differences in lecture hours and standards for evaluation between universities, making it difficult to facilitate joint courses with other universities. In addition, drafting and revising regulations for the networks was a difficult task for the limited number of personnel available. In the

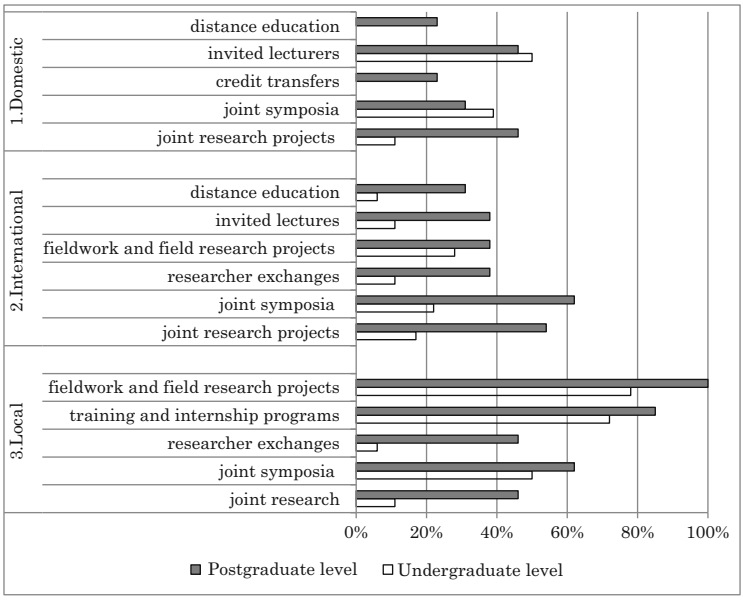

Fig. 11.1 Implementation systems and supporting systems for ESD. Notes: (1) Domestic: Domestic interuniversity networks, (2) International: International interuniversity networks, (3) Local: Relationships with local stakeholders and industry-academia-government collaboration

case of international interuniversity networks, Japanese higher education institutions were often expected to bear the cost of distance education and joint research projects. However, they cannot always respond to such requests from overseas institutions due to their limited financial resources. In the case of industry-academia-government collaboration, the impact of the recent financial crisis means that some industries cannot afford to be engaged in ESD and cannot afford to establish collaborative relationships on ESD with higher education institutions.

For these reasons, the respondents expected the relevant ministries to support financial and human resources, such as international ESD-related programs that cannot be fully covered by grants and subsidies provided by the government, and to build interuniversity networks. Some respondents also expected a funding to create systems for database and information sharing on ESD-related programs at higher education institutions. In addition, some respondents hoped that international organizations would prepare facilities with TV conference systems or video-on-demand systems for distance education at hub universities in developing countries and the branch offices of international organizations so that students in these countries could take courses provided by Japanese universities. We summarize the abovementioned responses in Table 11.2.

Table 11.2 Problems of implementation and the needs for support: postgraduate level

Problems of implementation	Needs for support
Lack of staff who are entirely engaged in ESD	Support of financial and human resources for international programs and interuniversity networks
Increased workloads for drafting and revising regulations for the interuniversity networks	
Limited financial resources to bear the cost of distance education and joint research projects	
Difficulties in facilitating joint courses with other universities due to the differences in lecture hours and standards for evaluation	Preparing facilities with TV conference systems or video-on-demand systems for distance education
Difficulties in establishing collaborative relationships with industries due to the impact of the recent financial crisis	Funding to create systems for database and information sharing on ESD

Conclusions

This chapter presented an overview of how ESD-related programs have been developed at higher education institutions in Japan under the Japan's Action Plan for the UNDESD and various initiatives introduced by the ministries and organizations involved. Through these initiatives, many higher education institutions have begun to participate in ESD-related activities.

This chapter also analyzed major patterns of ESD-related programs at both undergraduate and postgraduate levels, based on the results of the questionnaire survey. The system supporting ESD implementation at the undergraduate level is mainly based on collaboration at the local level, and students have been attracted by participative learning with a particular focus on local issues. However, activities based on interuniversity collaboration are relatively limited. On the other hand, ESD-related programs at the postgraduate level involve a wider variety of interuniversity collaboration supporting ESD-related activities and research. Moreover, collaboration with local stakeholders and industry-academia-government collaboration are also utilized for education and research at the postgraduate level.

This chapter has revealed that higher education institutions in Japan, both at the undergraduate level and at the postgraduate level, are facing difficulties in mobilizing financial and human resources to improve support systems for instruction and research in ESD-related fields and to expand domestic and international interuniversity networks.

Based on these findings, this chapter concludes that ESD at higher education institutions and the building of interuniversity networks for ESD need to be developed further as summarized in following three points. First, promoting ESD requires ESD in higher education to be connected with other education policies and systems. Such coherence between ESD in higher education and other education policies and systems has contributed to the promotion of ESD at all levels in Japan. However, the certification as ESD coordinators, facilitators, and instructors, offered

by universities, has not yet been widely recognized by society in Japan, and an official qualification system for ESD coordinators and the like has not yet been established. Although there are some environment-related qualification systems including the private ones, the establishment of authorized systems connecting ESD with employment, industries, and community development should also be considered. Moreover, it would be more attractive to younger people if such authorized systems can be extended internationally and the certificates gained are recognized and accepted outside Japan. Some international body, such as UNESCO or UNU, may like to consider authorizing this sort of certificate system.

Second, Japan's Action Plan for UNDESD took into account the fact that there were wide-ranging issues to be dealt with under the ESD programs, such as intergenerational equity, regional equity, gender equity, social tolerance, poverty reduction, environmental conservation, preserving natural resources, and the question of how best to achieve a fair and peaceful society. While it also emphasized the integrated development of the environment, economy, and society, Japan's focus was centered on environmental conservation, thereby providing an opening for ESD. Consequently, the initial stages of ESD in Japan have prioritized environmental sustainability and have not yet expanded to include other ESD issues and the correlations among these various issues.

Since higher education institutions are expected to contribute to ESD promotion at the local level, relevance to local issues is an important part of ESD implementation. However, since the various issues threatening sustainability around the world are all interrelated, it is crucial to focus on the correlations between them and address problems comprehensively from a global ESD perspective. Therefore, when building international interuniversity networks for ESD, issues at the local level and the correlations between issues at the global level all need to be addressed in order to develop effective programs.

Third, in many ESD-related programs in Japan, curricula have been developed by reorganizing existing subjects and introducing a limited number of new subjects. Although it would be an effective approach, more drastic curriculum reform for ESD cannot be expected. Consequently, despite the fact that ESD-related programs have provided various subjects ranging from social sciences to natural sciences and have been designed to cultivate both special knowledge and general knowledge, there is still a lack of effective linkage between subjects, as highlighted in this chapter. One of the reasons for this might be the lack of internal consensus to promote ESD and shared recognition, combined with a lack of effective guidance designed to enable students to acquire cross-disciplinary perspectives and integrate their learning by themselves.

In addition, methods for practical learning should also be discussed as part of course design. Many questionnaire respondents recognized the necessity of providing students with opportunities for experimental learning and internship programs. On the other hand, as some respondents pointed out, the question of how best to position fieldwork in the curriculum is one of the challenges still facing ESD.

Considering the problems mentioned above, we recognize that such issues as coherence between education policies and ESD in higher education, relevance to

ESD in designing university curricula, and effectiveness of teaching methods for ESD should be explored more thoroughly. However, since ESD in Japan has only been officially put into practice relatively recently, a detailed study of ESD practices at Japanese universities and their outcomes could not be included in this research. The UNDESD will be ending in 2014; however, efforts to promote ESD at higher education institutions in Japan should continue. We hope such efforts will contribute to the realization of a more sustainable society.

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Chapter 12
Japanese Universities' Strategic Approach to Internationalization: Accomplishments and Challenges

Hiroshi Ota

Background: The Need for Institutionally Organized Internationalization in Universities

The need for the internationalization of universities is a long-standing issue; one even discussed back at a time when traveling overseas was not a common endeavor for most people in Japan. In this age of intensive competition for knowledge worldwide, however, global conditions are changing constantly, and "internationalization" now seems to be assuming a meaning distinct from its traditional roots. This is particularly apparent when considering how to enhance university's performance and function as a core contributor within the global, knowledge-based society.

In Japan, how has the meaning of university internationalization historically changed? It seems that universities and internationalization have been closely intertwined ever since the beginning of the modernization of the country (Meiji period: 1868–1912). The internationalization of universities was virtually a national strategy for Japan, a less developed country in the area of higher education during the Meiji period, and, in that sense, internationalization could be considered a government-led endeavor. "The Japanese government typified the approach of importing knowledge and technology from overseas and modifying them to Japanese usage for the sole purpose of the country's modernization (internationalization for modernization) under the imported models of universities from the West" (Ota 2012, p. 471). In this initiative, not only foreign (Western) professors who were hired by the government and worked for newly established institutions of higher learning but also Japanese students who were sent to study abroad by the government played a major role in developing Japanese universities in the Meiji period. However, after the early stage of Japanese higher education development,

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universities started to localize (*Japanize*) their institutional organizations and structures to fit in traditional Japanese culture, replacing those Western faculty members with Japanese instructors who taught in the Japanese language, featuring the rigid hierarchy and low mobility of students and faculty, although those universities continued to import Western knowledge and technology and translated them for Japanese application. This is a typical case of "Japanese spirits and Western knowledge (*wakon-yosai*)" and prevented Japanese universities from internationalizing their curricula for a long time since the vast majority of course contents originally came from the West.

With the subsequent development of the country and its universities, the Japanese government has made substantial efforts to promote international exchange programs, such as the Japanese Government Scholarship (launched in 1954), the 100,000 International Students Plan (from 1983 to 2003), and the Japan Exchange and Teaching (JET) Programme[1] (started in 1987), and Japanese Fulbright Programs (organized by Japan-United States Educational Commission). As a result of these intentional efforts to internationalize Japanese education, Japan has become one of the most popular destinations for study abroad students in Asia.[2] Nevertheless, it seems that the internationalization of universities ended up becoming dependent primarily on the personal activities of faculty members. For instance, individual researchers collaborated with researchers abroad, participating in international conferences and international research projects; those individual researchers introduce advanced studies in foreign countries to academic circles in Japan or they teach foreign studies courses. Thus, international activities at Japanese universities have relied heavily on the initiative of individual faculty members, and there have been few concerted organizational efforts, apart from International Student Exchange Programs, to garner true support for international education within universities. Representative and common problems with hosting international researchers in Japan include visa application procedures, language, lack of adequate housing, and schools for family members of those international researchers. In most cases, individual host researchers provide solutions to those problems without the systematic support of their university. At the same time, institutional support for Japanese researchers to conduct research abroad has been somewhat limited and so, as mentioned above, the individual-level activities have inadvertently come to play a major part in the ad hoc internationalization of Japanese universities despite a number of funding programs for Japanese and

[1] The Japan Exchange and Teaching Programme is a Japanese government initiative that brings university graduates—mostly native speakers of English—to Japan as Assistant Language Teachers (ALTs) and Sports Education Advisors (SEAs) in Japanese kindergartens, elementary, junior high, and high schools, or as Coordinators for International Relations (CIRs) in local governments and boards of education. See more information at http://www.jetprogramme.org/index.html

[2] According to OECD (Organisation for Economic Co-operation and Development) (2013), in 2011 Japan's share of world's international students was the highest (3.5 %) among Asian countries, followed by China (1.8 %) and Korea (1.5 %).

international researchers provided by JSPS (Japan Society for the Promotion of Science)[3] and JICA (Japan International Cooperation Agency).[4] It is likely that this happened as a result of each faculty or department, or even each professor, having a high degree of academic autonomy especially within national universities. This autonomy meant that the institutionally organized activities of the university were relatively weak, particularly with regard to internationalization, and there was little leadership for exploring comprehensive internationalization strategies for the university as a whole (Ota 2012). However, under recent and rapidly changing circumstances, such as university privatization, the deteriorating demographic climate within many industrialized countries and the increasing competition to recruit international students and researchers, it seems that this ad hoc approach is no longer viable in the global landscape of higher education.

The Japanese higher education system is currently undergoing a comprehensive process of reform, in which internationalization is a major component (Japan Society for the Promotion of Science [JSPS], 2010). This includes the corporatization of national universities launched in 2004. Corporatization has taken place as a part of either national, political, or administrative reforms which have influenced the two aspects of public universities' governance practices: the changing role of government from direct control to supervision at the macrolevel and the delegation of more autonomous powers to individual institutions. In addition, a university's governing body (the executive board of institutional leaders such as a president and vice-president) has been greatly reinforced at the institutional level, with a corresponding reduction in the autonomous rights and decision-making powers residing in faculty meetings, i.e., shifting a decentralized governance model to a centralized one. In other words, at the institutional level, efforts have been made to strengthen the executive power of institutional leadership to adopt functional top management based on private sector models, and to place more emphasis on participation by experts and professionals from outside the university corporation (Ota 2008).

Under the reform agenda and given the low percentages of international faculty and students (both were 3.5 % in 2005), Japan's Third Science and Technology Basic Plan[5] (2006) encourages both Japanese researchers to engage in more international activities and Japanese universities to host more international students and researchers. The Basic Plan also calls for moves to enhance both the diversity and the standard of research conducted in Japan, by recruiting outstanding researchers from other nations and fostering world-class Japanese personnel. Reflecting the Basic Plan, the Ministry of Education, Culture, Sports, Science and Technology

[3] The Japan Society for the Promotion of Science is an independent administrative institution (governmental agency) as well as the funding agency for higher education institutions, researchers, and research projects. See more information at http://www.jsps.go.jp/english/

[4] The Japan International Cooperation Agency is an independent governmental agency that coordinates official development assistance (ODA) for the Japanese government. It is chartered with assisting the economic and social growth in developing countries and the promotion of international cooperation. See more information at http://www.jica.go.jp/english/

[5] The full text of this Plan can be found at http://www8.cao.go.jp/cstp/english/basic/

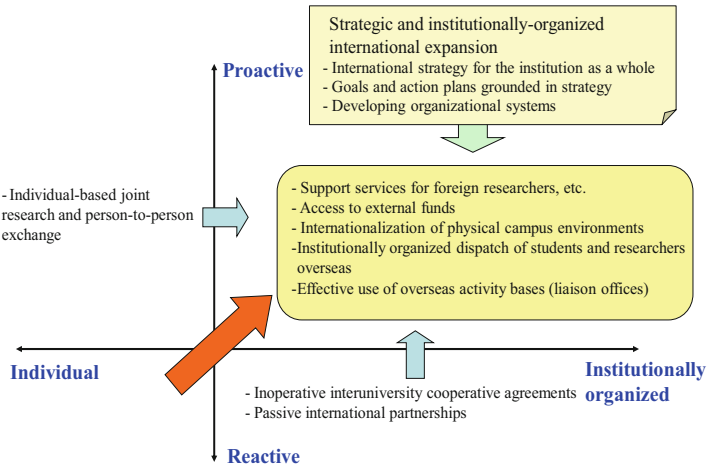

Fig. 12.1 International expansion of university (conceptual diagram) (Source: Kiyoura et al. 2007, p. 3)

(hereafter called "MEXT") has supported Japanese researchers and students' engagement in increased international activities abroad as well as supporting Japanese universities' capacity to host increased numbers of international students (under the 300,000 International Students Plan started in 2008) and researchers. The Ministry also has encouraged universities to increase the number of courses and programs taught in English in order to not only enhance the diversity of the student and faculty population but also to meet the increasing demand for global-minded graduates (workforce) at globalizing Japanese companies (MEXT 2011).

Moreover, the aforementioned Basic Plan underlines the need to support the organizational restructuring of universities to better attune them to these institutional-wide internationalization tasks, and the MEXT has equally recognized the need for an institutionally organized, proactive, and strategic approach to university internationalization. The above figure shows the transition from the international expansion based on the initiative of individual researchers and departments (a decentralized and reactive administration model) to an institutionally organized and proactive approach, i.e., a centralized and strategic administration model (Fig. 12.1).

Outline of the Strategic Fund for Establishing International Headquarters in Universities

Having recognized the need for concerted efforts to internationalize universities, the MEXT inaugurated a funding program, "Strategic Fund for Establishing International Headquarters in Universities" (hereafter called "SIH Project")[6] in 2005

[6] See more information about the SIH Project at http://www.jsps.go.jp/english/e-bilat/e-u-kokusen/

and selected 20 institutions[7] to pilot this Project from 68 institutions through the screening application materials they submitted (JSPS 2005). The MEXT budgeted US$5 million for the SIH Project per year from 2005 to 2009, and each pilot institution was funded by the SIH Project at US$100,000 to 400,000 per year as seed money for their strategic efforts toward internationalization. The MEXT next commissioned the implementation of the SIH Project to the Japan Society for the Promotion of Science (hereafter called "JSPS"). In turn, JSPS then recommissioned specific initiatives to the selected 20 pilot institutions. JSPS functioned as a bridge or liaison between MEXT and those pilot institutions (JSPS 2005).

Incorporating approaches such as those in Ashizawa (2006), the National Agency for Higher Education in Sweden (2005) and NIFU STEP (Norwegian Institute for Studies in Innovation, Research and Education) (2005), JSPS formulated the following nine themes of analysis for extracting examples of good practices from the strategic internationalization efforts of the 20 pilot institutions:

1. Organization and governance for internationalization
2. Goal setting, action plans, and evaluation systems
3. Attracting external funds for international education and research
4. Participating in and utilizing cross-border interuniversity partnerships and consortiums
5. Expansion of international activities based on specific transnational research projects
6. Training and recruiting administrative personnel for international programs
7. Improving services and support for international researchers
8. Expanding overseas study and research opportunities for young Japanese researchers
9. Establishing and operating overseas bases (Kiyoura et al. 2007, p. 7)

In order to both develop models for university internationalization from the pilot universities' efforts and disseminate those successful models to Japanese higher education institutions in general, JSPS performed comprehensive analyses of the internationalization activities of the selected pilot institutions based on the above nine themes throughout the 5-year project period. In summary, rather than being applied to specific international education programs or internationally collaborative research activities, the SIH Project instead focused on the reform of, and support for, university governance and management over international activities in education and research as first initiated by pilot-university presidents to be international

[7] The selected 20 pilot institutions are Hokkaido University, Tohoku University, University of Tokyo, Tokyo University of Foreign Studies, Tokyo Institute of Technology, Hitotsubashi University, Niigata University, Nagoya University, Kyoto University, Osaka University, Kobe University, Tottori University, Hiroshima University, Kyushu University, Nagasaki University, The University of Aizu, Keio University, Tokai University, Waseda University, and National Institutes of Natural Sciences. 16 out of the 20 universities are national; 3 universities are private such as Keio, Tokai, and Waseda; and The University of Aizu is a local public institution.

Fig. 12.2 Strategic Fund for Establishing International Headquarters in Universities (SIH) Project

strategy headquarters, effectively shifting away from an ad hoc management approach to a more strategic oversight and management style (see Fig. 12.2 above).

Achievements of the SIH Project

The SIH Project basically allowed the 20 selected pilot universities to both develop their own international strategies and establish their own international strategy headquarters according to these institutions' diverse characteristics. Neither MEXT nor JSPS provided specific guidelines in this respect for uniform implementation, leaving each pilot institution to develop its own international strategies and establish its own international strategy headquarters at the beginning of the SIH Project. In turn, during the 5-year SIH Project term, they were mandated to advance internationalization over an entire cross section of their specific university's departments and organizations under the international strategy headquarters' initiative, eventually conceptualizing and devising internationalization strategies to amplify their own institution's unique characteristics.

Survey and Interviews

In 2009 (the last year of the 5-year SIH Project), in order to both grasp the general trend and current situation of internationalization in Japanese universities and examine their status in advancing internationalization, particularly in ascertaining the achievements and progress of the 20 pilot universities, a survey (in the form of a questionnaire) of the campus-wide internationalization of Japanese universities was carried out, producing a comparative analysis between these pilot institutions and other non-pilot institutions. This survey was expected to elucidate the overall outcome of the SIH Project.

The survey questionnaire was developed according to the aforementioned nine themes of analysis and then was sent to 234 sampled universities,[8] including the 20 pilot institutions. 192 institutions (72 national, 23 local public, 95 private, and 2 interuniversity research institutes) responded to the questionnaire, for a response rate of 82.1 %. Subsequently, interviews with chief officials working for the international strategy headquarters of the 20 pilot institutions were conducted. The interviews were semi-structured and guided by survey responses as well as SIH Project progress reports, which pilot institutions submitted to JSPS annually, in order to supplement survey and annual report data and corroborate relevant evidence. These results were then examined by a group of researchers, who gauged both pilot universities' progress toward internationalization and the state of internationalization in other sampled universities. In the following sections, SIH Project performances, as achieved by the 20 pilot universities, are analyzed with statistical data derived from the survey and qualitative data summarized from the interviews.

Organization and Governance for Internationalization (President's Leadership)

According to survey results among all respondent universities, 57 % had set up headquarters or some similar organizations for institutionally organized internationalization, revealing systematic internationalization efforts are being made throughout Japan. Just over half of those headquarter-type organizations were headed by the university president or vice-president, whereas at the 20 pilot universities, 90 % of such headquarters' heads were either the university president or vice-president. It can be surmised that Japanese universities, particularly the pilot ones, have made progress toward university-wide internationalization through

[8] 234 institutions were selected from all 756 four-year universities by the ranking charts of the number of awarded JSPS's Grants-in-Aid for Scientific Research per institution and the number of enrolled international students per institution, considering the international dimensions of education and research, i.e., the balance of research universities and universities that are more teaching oriented.

organizational reform under top leadership within their international strategy headquarters or similar organizations (Ota and JSPS 2010).

Ninomiya (2010) argues that by applying the leadership of the president, a university can carry out rapid internationalization reforms and programs with a high degree of flexibility. In the past, for example, implementing one international program would require obtaining the acknowledgment of every related department and a long series of meeting before preparations could get started. Adding a headquarters system makes it possible to expedite decision-making process, including personnel assignments and funding allocations, while carrying out programs more efficiently. The pilot universities, particularly Osaka University and Keio University, have reported that having in place a president-led internationalization headquarters better facilitates the holding of international academic conferences and concluding international cooperative agreements while adding flexibility to their international exchange programs. The pilot institutions, especially National Institutes of Natural Sciences and Keio University, have also initiated the systematized and continued management of information based on both the results of their international researcher exchanges and the state of interuniversity cooperative agreements and programs. Accordingly, it can be posited that the SIH Project has stimulated a wide range of system reforms that contribute to university-wide internationalization (Ninomiya 2010).

Goal Setting, Action Plans, and Evaluation Systems

Of all the universities surveyed, 58 % responded to having a vision, mission, and goals related to their university's campus-wide internationalization, and another 58 % attested to having numerical targets and action plans for achieving them. In contrast, 100 % of the pilot universities responded that they all had a vision, mission, and goal, while 90 % had implemented specific numerical targets and action plans (Ota and JSPS 2010).

Many of the pilot universities depicted their strategic internationalization initiatives in such terms as "We devised a mission and vision and shared them among all the faculties so as to advance internationalization on an institution-wide basis" or "So as to imbue our vision and mission with a strong unifying force, we are considering incorporating them into the university's principles of establishment and charter, imbedding concrete internationalization components extracted from them in its medium- and long-term plans, so as to give them symmetry and linkage throughout the university" (Ota 2010, p. 102). In conducting the interviews, it was found that prioritizing various internationalization strategy items would be effective as would stratifying its strategy by setting visions, goals, and objectives for each item and subsequently devising action plans for meeting them. To ensure the thorough implementation of these action plans, universities should consider the practicality of their funding allocations. Some pilot universities, particularly Hiroshima University and Nagoya University, have included organic structures and

clearly articulated internationalization missions, visions, goals, and objectives in their international strategies. Also, these two universities have established stratified action plans for carrying them out. Moreover, both universities have linked their institution-wide missions, visions, and goals for internationalization to a series of their faculties' and offices' action plans so as to implement their internationalization strategies step by step in such a way that it is understood and shared throughout the university (Ota 2010). It is clear that establishing a campus-wide internationalization headquarters and forming well-stratified, internationalization-related philosophies, visions, goals, objectives, and action plans with numerical targets elevate the degree of internationalization progress achieved.

The results of the questionnaire survey showed that universities having such a systematic and well-articulated approach to headquartered internationalization improved almost all the statistical data (indices) related to internationalization over the period of the SIH Project (Ota and JSPS 2010). Additionally, the survey found, when crafting next-stage internationalization objectives and action plans or revising them, all pilot universities accurately reflected the evaluative results of their internationalization activities. In contrast, only 63 % of the other non-pilot universities did so (Ota and JSPS 2010). In this process, the pilot universities are seen to be making effective use of the PDCA (plan-do-check-act) cycle for developing their international strategies and implementing them.

Attracting External Funds for International Education and Research

Having been affected by the financial crisis in the fall of 2008, Japan has yet to see much light at the end of a bleak economic tunnel. Against the background of Japan being a country highly reliant on government bond issues, the budgets allocated to the national universities are being decreased by 1 % every year. This is the same for the government subsidies provided for the operating costs of Japan's private universities as well. Amidst these circumstances, international programs need to be supported with expanded external funding in addition to further investment from universities' regular budget allocations. Survey results reveal that pilot universities were more successful in acquiring external funding to implement their international activities and programs than the other non-pilot universities. This was the case in both the number and amount of external grants obtained[9] (Ota and JSPS 2010). Underscoring this to some degree was the fact that the pilot universities are all

[9] From 2005 to 2008, the number of external grants obtained by the pilot universities increased to 43.9 %, as compared to 22.3 % of other surveyed universities, and the amount of such grants acquired by the pilot institutions grew to 221.6 %, whereas the other institutions showed a lower increase of 202.9 % (Ota and JSPS 2010).

large-scale, research institutions, which strongly enhance their chances for procuring external funds.

One of the pilot universities, Kyushu University, however, represents a unique case, whereby the university's research support office has been coupled with its international strategy headquarters. Since its start-up to create a centralized body for international collaborative activities, this research support/international strategy headquarters have facilitated the acquisition of external funds for international development assistance projects. Apart from this successful case, similar centralized efforts of other pilot universities, particularly Waseda University and Nagasaki University, show that securing a diversity of funding sources can ensure a type of program sustainability that advances internationalization (Ashizawa 2010).

Participating in and Utilizing Cross-Border Interuniversity Partnerships and Consortiums

There is an increasing trend throughout Japan for universities to enter into cooperative exchange agreements with universities abroad. According to the survey, the 20 pilot universities had many more of these agreements (average 220 agreements per institution) than other non-pilot universities (average 37 agreements per institution) (Ota and JSPS 2010). In a sense, quantitatively, the extent of a university's interuniversity exchange can be measured using the number of such agreements. Though it is not the only criterion, the number of those exchange agreements does give an indication as to how proactive each university is in planning and participating in international collaborations (Akiba and Watanabe 2010). In the results of the survey, looking at the percentage of increase in the number of overseas faculty members and students coming to Japanese universities via interuniversity exchange programs between 2005 and 2008, the pilot universities saw a 65 % increase, while the other non-pilot universities had a 45 % increase (Ota and JSPS 2010). Moreover, in recent years, there has been a particularly marked increase in international university consortiums: 34 % of all the universities surveyed were participating in such consortiums, whereas 75 % of the pilot universities were (Ota and JSPS 2010).

In general, actual bi-institutional collaborations support specific activities, such as research and educational exchanges and staff exchanges, based on the provisions in their cooperative agreements. On the other hand, apart from collaborative activities in education and research, the mere participation in well-known consortiums is often seen to be meaningful for universities from a branding and marketing standpoint, as involvement in those consortiums is arbitrarily and strictly limited to prestigious universities by their member institutions. However, to maximize substantial benefits and outcome from such international collaborations, universities should first examine member institutions' core competencies thoroughly and then make efforts to take advantage of the synergy effects they can potentially offer. To that end, those universities need to have a clear and coherent grasp of both their own

and the consortium's objectives, i.e., whether their participation in a consortium will produce a win-win relationship among member institutions (Akiba and Watanabe 2010). This is yet another point underscored by some pilot universities' achievements: Tohoku University's active participation in TIME (Top Industrial Managers for Europe)[10] consortium and the success of TAIST (Thailand Advance Institute of Science and Technology)—Tokyo Tech Postgraduate Program[11] created by leading Thai universities and Tokyo Institute of Technology (Akiba and Watanabe 2010). In addition, both AC21 (Academic Consortium 21),[12] which was established by Nagoya University, and INU (International Network of Universities),[13] in which Hiroshima University is one of its core member institutions, have achieved remarkable results by working with other members of the consortiums in implementing joint programs that give their staff experience and know-how in carrying out international activities and that create multilateral, international education programs (Akiba and Watanabe 2010).

Expansion of International Activities Based on Specific Transnational Research Projects

In advancing university internationalization, establishing a successful system and organization rests on the twin pillars of providing concrete educational and research content. Only when these two components are carried out in unison under the proactive oversight of a responsible administration can fruitful internationalization results be expected. Centering campus-wide international activities on specific research themes for which each university is competitive is essential in cultivating the university's international presence, and the curriculum-wide application of a university's competitive research outcomes, in turn, can also be expected to develop and diffuse internationalization know-how throughout the university. In setting specific research themes, there are two important points to bear in mind with

[10] Top Industrial Managers for Europe is a network of more than 50 engineering schools and faculties and technical universities. It promotes graduate student exchanges and double degrees throughout Europe. Students achieve a broader high-level scientific engineering education with intercultural experience by attending curricula at two or more leading engineering institutes. See more information at https://www.time-association.org/

[11] TAIST-Tokyo Tech Program is a postgraduate institution created with the aim of fostering advanced human resources and becoming a hub for research and development in science- and technology-related fields throughout Asia. See more information at http://www.titech.ac.jp/english/globalization/featured/taist.html

[12] See more information about Academic Consortium 21 at http://www.ac21.org/english/index

[13] The INU is a member organization which comprises 11 universities from nine different countries spanning five continents. The internationalization of member institutions is advanced through student and staff mobility, research collaboration, and cooperation in university management. See more information at http://www.inunis.net/

regard to selecting a research field: (1) it should be a field in which the university is internationally competitive and (2) it should be an education/research field that the university is organizationally giving priority to advancing (Fujii 2010).

By initiating themes and projects that meet these criteria, some pilot universities, such as Niigata University, Tottori University, and Nagasaki University, have set the thrust of their internationalization efforts through their internationally prioritized collaborative research projects (Niigata University's research on GIS (Geographic Information System), Tottori University's desertification prevention project, and Nagasaki University's research on tropical and infectious diseases). In particular, Nagasaki University established a new international master's program, Master of Public Health,[14] derived from its prioritized research project above, and the university's international strategy headquarters have contributed to the program's implementation by taking charge of their administration, promoting linkage between educational and research entities on campus as well as off campus, and facilitating the admission of overseas students and researchers. Furthermore, Nagasaki University's case has shown that advancing such internationalization can also contribute to strengthening cooperation and linkage between education and research in a way that crosses academic domains. In other words, because the project is dealing with important, transnational issues and is already well recognized due to Nagasaki University's strong international competitiveness and past research achievements in the field, this kind of prioritized international project can make it smoother to obtain the university-wide cooperation of their various departments and researchers. Finally, by implementing campus-wide internationalization activities based on the said internationally collaborative research activities, the achieved, overall effect can be said to invigorate interdisciplinary research that overarches departments and research centers within the campus (Fujii 2010).

Training and Recruiting Administrative Personnel for International Programs

Many university internationalization activities entail complicated tasks carried out by university staff. These include sending and receiving exchange students, creating English-instructed courses and programs, implementing large-scale international research exchanges and collaborations, administering research projects commissioned by overseas corporations or international agencies, and completing internal procedures and international contracting related to internationalizing the university's operations. The SIH Project has revealed the need for several essential upgrades of personnel-related functions, including identifying personnel types and capabilities oriented to the direction of internationalization sought by the

[14] See more information about this master's program at http://www.tm.nagasaki-u.ac.jp/mph/english/index.html

university, hiring mid-career, specialized staff along with creating proper career paths for them, carrying out an effective division of labor between faculty and administration, securing the sustained employment of staff for international programs, and reinforcing professional development programs customized to upgrade administrative staff's knowledge and skills needed for the better management of international activities (Osanai 2010).

In the results of the survey, the increase in the number of staff dispatched overseas for training was greater with the pilot universities than other non-pilot universities, with an 11 % increase by the former and 2 % increase by the latter during the period from 2005 to 2008 (Ota and JSPS 2010). Moreover, the pilot universities made specific progress in terms of (1) having a system for supporting the overseas training opportunities for administrative staff, (2) implementing such training programs regularly, and (3) having a system within the university for those trained staff to make use of the experience they gained abroad. Regarding these three items in the survey, the pilot universities' affirmative responses were a full 25 percentage points higher than the other non-pilot universities (Ota and JSPS 2010). Some pilot universities achieved the following notable results when coordinating overseas staff training with universities in counterpart countries. Hitotsubashi University created such training programs in collaboration with Monash University and University of Glasgow and has carried out incorporated internships designed to reflect the university's own needs. In an effort to hone their staffs' abilities to plan and operate international programs and to solve problems related to such programs, Kyoto University has organized the University Administrators Workshop[15] for international exchange program administrators from both other SIH pilot institutions in Japan and the university's partner institutions overseas. This Workshop has also provided networking opportunities for the participated universities' staff. Additionally, it was also found at almost all the pilot universities that the implementation of international operations can be expedited by effectively employing outside personnel who used to work for international companies (Osanai 2010).

Improving of Services and Support for International Researchers

Increasing the number of international researchers is one of the most important elements in advancing university internationalization. Yet, it is an area in which Japan lags far behind other universities around the world. The SIH Project has demonstrated the need for setting up support systems for international researchers, including one-stop service facilities, at Japanese universities. It also has shown that

[15] See more information about this Workshop at http://www.opir.kyoto-u.ac.jp/en/aboutopir/workshop/

engaging international researchers in regular, real-time dialogue is an effective way to grasp their needs and identify problems they often encounter. Accordingly, there is a need to provide linguistically balanced opportunities and platforms for exchange between university administrative staff and international researchers. Furthermore, when considering Japan's continuing science and technology development, there is a need to acquire excellent young Asian researchers for long-term and full-time positions in addition to visiting researchers from North America and Europe. In that respect, Japanese universities need to take care in accommodating the diverse nationalities and cultures of international researchers (Yonezawa 2010). Waseda University, one of the pilot universities, has provided opportunities for overseas researchers to talk about their situations on-campus and to make requests, and through this process Waseda University officials aim to identify problems that require priority treatment and take concerted measures to resolve them. Moreover, in addition to establishing one-stop service windows and research consultation services in an effort to improve the campus environment for international researchers, Waseda University, University of Tokyo, and National Institutes of Natural Sciences have respectively prepared various handbooks for international researchers as well as guidebooks for related host faculty members and administrative staff. Another pilot university, The University of Aizu, has also taken measures to attract overseas researchers by implementing international recruitment activities and initiating university-wide policies that promote the hiring of overseas researchers into long-term and full-time positions (Yonezawa 2010).

In this respect, the 20 pilot universities showed an 11 % increase in the number of visiting international researchers hosted vis-à-vis a 7 % increase by other surveyed universities during the period from 2005 to 2008 (Ota and JSPS 2010). Additionally, the pilot universities made remarkable progress concerning (1) having systematic support for family members accompanied by international researchers, (2) providing systematic support for international researchers' immigration procedures, (3) compiling procedure manuals for faculty and staff members who host or employ international researchers, (4) providing opportunities for international researchers to learn the Japanese language, and (5) providing systematic support for the daily life of international researchers. The pilot universities' affirmative responses to the above five items in the survey were more than 25 percentage points higher than the other non-pilot universities (Ota and JSPS 2010).

Expanding Overseas Study and Research Opportunities for Young Japanese Researchers

It is important for Japanese universities to proactively dispatch young researchers overseas in order to stimulate the internationalization of research activities. Such efforts under the SIH Project have shown that organizational support, including the provision of risk-management systems, is necessary to increase overseas study and

research activities by young researchers. For example, Tohoku University, one of the 20 pilot universities, has taken proactive measures in collaboration with its partner institutions abroad, such as creating double-degree programs to mitigate career-path losses for young researchers after returning to Japan from overseas stays. Osaka University has provided young researchers with not only necessary research skills in an English-speaking environment to increase their overseas research opportunities but also a risk-management system to support those researchers' possible crisis cases appropriately, utilizing JSPS International Training Program[16] effectively (Sunami 2010).

Establishing and Operating Overseas Bases

Against an evolving knowledge-based society backdrop, increasing worldwide competition for talented young people and cross-border issues, such as environmental and health-care problems, has provided the impetus for more and more universities to consider and establish overseas bases, e.g., offices, branches, and research centers. In the past, it was common for universities in advanced countries to establish bases in developing countries for recruiting high-potential students or conducting international cooperation projects; now there are cases of universities in advanced countries setting up bases in other advanced countries for collaborating on advanced scientific research. Japanese universities rapidly increased their overseas bases from 170 in 2004 to 276 in 2006, with 60 % of them placing their bases in Asian countries (MEXT 2006). In addition, according to the survey, 95 % of the pilot universities had overseas bases in 2008, whereas only 28 % of the other non-pilot universities had them. Over the period from 2005 to 2008, the average number of newly established overseas bases per university was 4.6 by the pilot universities vis-à-vis 1.6 by the other non-pilot universities (Ota and JSPS 2010).

The pilot universities' experiences in this respect have shown that an institution should make strategic decisions when setting up an overseas base or office. First, the university should carefully examine and consider whether or not there is a need for an overseas base. Second, if it is needed, the university should clearly articulate the concept for its overseas base's placement, mission, and function, determining the form of the overseas base, e.g., the university's own independent office, a shared office with other institutions, or a collaborative office established on a partner institution's campus. Also, the SIH Project's pilot universities' cases have attested to a need for conducting periodic evaluations of the overseas office's operations, including its post-establishment cost-effectiveness so as to make necessary

[16] JSPS International Training Program aims to strengthen overseas research and education opportunities for young researchers in Japanese universities. To advance these objectives, this program supports Japanese universities in their organizational efforts to establish collaborative relationships with overseas research institutes and groups. See more information at http://www.jsps.go.jp/english/e-itp/index.html

modifications flexibly while enhancing operational efficacy through the sharing of accumulated know-how and knowledge with other institutions having such offices (Kawamura 2010). Furthermore, it has been revealed that accountability and sustainability are key factors for the success of those overseas bases and offices. In this respect, according to the survey, more than 90 % of the pilot universities, which were more than 25 percentage points higher than the non-pilot universities, responded that they made better progress both in securing funding to sustain the operations of their overseas bases and in linking those bases' activities with the domestic operations of their educational programs and research projects effectively (Ota and JSPS 2010). Consequently, throughout almost all the pilot universities' campuses, overseas bases' activities and achievements have been repatriated and well recognized, and this has facilitated the securing of funding resources to further sustain these universities' overseas bases (Kawamura 2010). Exemplary practices have been exhibited by some pilot universities. For instance, Tottori University and its base in Mexico and Kyushu University and its office in California both have achieved notable results in the advancement of international joint research, the development of international joint curricula, and the establishment of faculty development programs with institutions located around the base and office of the two institutions (Kawamura 2010).

In summary, though pilot institutions had, to some degree, already established the infrastructure for international programs and expansion, survey and interview results showed that these 20 pilot universities achieved an overall higher level of internationalization than the other non-pilot universities regarding the foregoing nine themes of analysis. Placing particular emphasis on (1) internationalization concepts, objectives, plans, and organizations; (2) interuniversity cooperation; (3) staff development; (4) faculty and student exchange; and (5) establishment and operation of overseas bases/offices, the pilot universities have succeeded in generating many good practices for university internationalization.

Challenges and Recommendations for University Internationalization

Based on an analysis of the survey and interview findings, this chapter presents challenges and recommendations for institution-wide, strategic internationalization of Japanese universities.

Establish a Body for Advancing Internationalization That Revolves Around a University President's Leadership

The SIH Project, as implemented by the 20 pilot universities, has demonstrated that university-wide internationalization can be effectively advanced when an international strategy headquarters is established on campus, and its initiative is

exercised under the leadership of the university president or vice-president. In other words, if a university would like to carry out internationalization in an institutionally organized manner, it should have an internal organization, such as an international strategy headquarters, which gives strong support and thrust to the leadership of the university president (Ninomiya 2010). Concomitantly, it is necessary for both the academic and administrative staff to share an understanding of the goals and objectives of the organization's internationalization. That is, the university staff as a whole needs to possess a mutual understanding of what is to be internationalized, in what ways the university's internationalization is to be promoted, and what university image is specifically being sought through the promotion of internationalization (Ninomiya 2010). So as to diffuse internationalization deeply into a university's administration as well as into its educational curriculum and research programs, it is useful and beneficial to establish an international strategy headquarters under the leadership of the university president in conjunction with an attendant internationalization strategy devised with the participation of as many members of the campus community as possible.

Establish Concrete Objectives, Prioritized Goals and Plans, and an Evaluation System for Promoting Internationalization

All the 20 selected pilot universities developed comprehensive international strategies through the SIH Project; however, some of them tend to be too abstract and lack specifics. Moreover, objectives and plans within these strategies lack, in some cases, clearly articulated implementation priorities (Ota 2010). The first step in creating an international strategy should be to collect data and do an analysis of the university's current state of internationalization by some method, for example, using a SWOT analysis,[17] from which issues can be extracted to form the strategy's content. Taking into account how and to what degree, addressing them will contribute to realizing the university's overall internationalization mission and vision, these issues then need to be itemized and prioritized. Furthermore, considering both the university's unique strengths and budgetary availability, each prioritized internationalization item should be stratified by determining its measurable goals (descriptions leading to attainable outcomes) and specific objectives with highly practicable action plans that include specific measures, steps, and time frames (i.e., defining specifically what to achieve to what extent).

Fundamental to evaluating internationalization efforts is the need both to periodically check the progress status of the action plans and to conduct scheduled

[17] SWOT analysis is a strategic planning method used to evaluate the strengths, weaknesses, opportunities, and threats involved in a project or in a business venture. It involves specifying the objective of the business venture or project and identifying the internal and external factors that are favorable and unfavorable to achieve that objective.

reviews of the university's developing international strategy (Ota 2010). The foregoing survey revealed that 7 % of all respondent universities used a specially designed evaluation system to assess internationalization efforts, whereas 20 % of the pilot universities implemented such evaluations. About half of both the pilot universities and other non-pilot universities used external reviewers for evaluating their progress toward internationalization[18] (Ota and JSPS 2010). This suggests a need to not only use more third-party reviews but also to refer to different evaluation mechanisms commonly used in US and European universities, such as benchmarking and peer reviewing (Ota 2010). When carrying out evaluations, it is more effective to use a specially designed procedure solely to assess internationalization activities rather than to assess them as part of general procedures to evaluate the entire university operation. In addition, through the use of the PDCA (plan-do-check-act) cycle method, a university should harness evaluation results to both revise its current international strategy's objectives and action plans and develop the subsequent term's internationalization agenda.

Carrying Out Organized Activities to Secure External Funding for Internationalization

In general, Japanese universities are heavily reliant on government subsidies and competitive (application based) funds to support their international programs. They should diversify their funding sources to include private sector funding, overseas funding, donations, and project revenues and to seek other forms of external funding. Stable funding is indispensable to advancing university internationalization, and such funding is paramount to employing qualified staff to operate international programs (Ashizawa 2010). It is, therefore, desirable for universities to set up an organization for procuring external funds and to either place the funds procurement organization within their international strategy headquarters or to operate it in close connection with the headquarters.

Secure Resources and Personnel Needed for the University to Vitalize Interuniversity Partnerships with Overseas Institutions and to Participate Effectively in International University Consortiums

Cooperative exchange agreements concluded between Japanese and overseas universities have increased in recent years; however, it is widely known that many exchange agreements have been inactive, while others have not, in practice,

[18] These evaluation practices included both specially designed ones for assessing internationalization activities and general ones for assessing them as part of the entire university operation.

been implemented for many years. In order to develop meaningful programs while improving the quality of international activities based on interuniversity agreements, Japanese universities should periodically review those existing agreements and reconsider the stagnant programs contained within them. For that purpose, universities are advised to include effective implementation periods (termination clauses) when establishing international exchange agreements, and, in turn, relevant partner institutions will also need to review their agreements by examining their achievements and effectiveness at the time of their renewal (Akiba and Watanabe 2010).

There has also been a trend in shifting from bilateral university exchanges to both multilateral exchanges and the establishment of international university consortiums. For the success of such consortiums, member institutions should secure a stable funding base to ensure a continuous, organic operation that is expected to generate synergy effect within a consortium (Akiba and Watanabe 2010). In turn, each member institution has to be committed to actively participating in and contributing to the activities of the consortium. It is also important that the consortium's operational format and method be designed so as to provide mutual, educational benefits to all its diverse member institutions, particularly in giving financial consideration to members in developing countries. Moreover, in order to create a special office for supporting multi-tiered linkage and program coordination among a consortium's member institutions, it is necessary to employ qualified personnel at the host institution's international headquarters.

Strengthen the Capabilities of Staff Engaged in International Programs and Create Career Paths for Them

Compared to the specialized training programs and career paths made available for teaching and research staff, Japanese universities still do not have sufficient mechanisms in place for providing those same kinds of programs and paths to the administrative staff of international programs. Most of the SIH pilot universities have implemented professional development programs to train and dispatch staff overseas; however, the problem of providing career paths for them still persists. The administrative staff of international programs not only often serve as liaisons with overseas partner universities but also run exchange programs for students and scholars while supporting international joint research projects. Over and above proficiency in a foreign language, these demands require each of them to possess wide and varied skill set. Whereas the acquisition of "ready fire power"—the employment of highly specialized professional staff—would be ideal, budgetary and financial constraints have made it difficult to do so these days. Therefore, by focusing on their prioritized international programs, universities need to clarify what personnel capabilities and placements are needed to advance internationalization and then carry out staff development programs to nurture their human

resources according to those defined capabilities. In turn, career paths should be created for those specialized administrative staff. Additionally, rather than individual universities doing staff training and career-path development by themselves, it can be more effective if they do so in linkage with other universities by carrying out joint staff-development activities and staff-exchange programs (Osanai 2010).

Concurrently, transcending the existing dichotomy of faculty and staff, universities need to establish an effective evaluation system when hiring and promoting staff engaged in international program administration from the viewpoint of their professionalism in this area, as manifested by quality and ability . On top of that, university should provide institutional incentives for such personnel to further develop their attributes and capabilities.

Establish a System Within Universities for Supporting International Researchers

In recent years, along with increasing the number of international faculty employed in long-term, full-time positions, Japanese universities have pointed out they need to host more international researchers on a short- and medium-term basis. Transcending the traditional framework of "brain gain" and "brain drain," the world is gravitating toward a new concept of "brain circulation," in which networks created through the international mobility of researchers function in and of themselves to generate knowledge and innovation as well as economic value (Kuznetsov 2006). Within the scientific community, researchers are unfettered by nationality as they move around looking for a place that best supports and advances their research activities. Already existing networks play an important role in facilitating this mobility. Accordingly, it is essential for many Japanese researchers to participate in such international networks. To do so fully, Japanese universities, in turn, need to enhance their systems for both hosting short- and medium-term international scholars and for employing long-term academics on a full-time basis (Yonezawa 2010).

Since 2008, MEXT has been implementing the "300,000 International Students Plan" (increase the number of international students enrolled in Japanese universities to 300,000 by 2020). One of its components, the Project for Establishing University Network for Internationalization (Global 30 Project),[19] stresses the need to both increase the number of non-Japanese faculty members and establish English-instructed courses and programs so as to attract international students who

[19] In 2009, for the purpose of selecting pilot universities that will function as core institutions for attracting international students, MEXT launched the Global 30 Project for Establishing University Network for Internationalization. 13 universities were selected in the first year of the Project. These core universities are expected to play a major role in dramatically boosting the number of international students educated in Japan in order to realize the goal of the 300,000 International Students Plan (MEXT 2009). See more information at http://www.uni.international.mext.go.jp/

are not proficient in Japanese language. Accordingly, Japanese universities are experiencing an increasing requirement and demand for overseas educators as well as overseas researchers (Yonezawa 2010). This makes it imperative for Japanese universities that are looking to attract international researchers and educators to both devise various measures and establish support systems for them. These may include conducting faculty recruitment procedures without domestic and international differentiation, strengthening support given to non-Japanese researchers and educators for working and living in Japan, providing multilanguage information services on campus, and elevating the university's international reputation and presence.

Expand Opportunities for Young Japanese Researchers to Receive Training Abroad and Create a System for Receiving Their International Contributions Positively upon Their Return

In promoting international "brain circulation" and research collaboration, Japanese researchers should continuously and actively participate in the world's researcher networks. In particular, young Japanese researchers should be proactively dispatched overseas so as to raise the international reputation and presence of both their research capacities and home institutions in Japan. As demonstrated by the Erasmus Mundus II[20] program launched in 2009, European universities have placed an emphasis on promoting the exchange of young researchers not only within Europe but also with other regions, making specific efforts to recruit talented young researchers from Asia and Africa.

On the other hand, however, because of obstacles such as disincentives in career development and postvisit treatment back in Japan, there are declining numbers of young Japanese researchers willing to make long-term stays at institutions abroad. In particular, when conducting job-application evaluations, Japanese universities lack an effective system for appropriately assessing young researchers' attainments and achievements acquired through overseas training and research experiences. For that reason, it is more advantageous for candidates applying for faculty positions at Japanese institutions to have stayed in Japan and published as many papers as possible than to have expended time and effort abroad, adapting to a different

[20] Erasmus Mundus II (2009–2013) is a cooperation and mobility program in the field of higher education that aims to enhance the quality of European higher education and to promote dialogue and understanding between people and cultures through cooperation with third countries. In addition, it contributes to the development of human resources and the international cooperation capacity of higher education institutions in third countries by increasing mobility between the European Union and these countries. See more information at http://eacea.ec.europa.eu/erasmus_mundus/programme/about_erasmus_mundus_en.php

research environment, acquiring foreign language skills, and building collegial networks. Accordingly, long-term overseas stays are inevitably viewed as having a negative not positive impact on a researcher's career in Japan (Sunami 2010). If this trend continues, Japan will in effect remove itself from the world's "brain circulation" and limit its competition in advanced science and technology. These circumstances give rise to a strong need for Japanese universities in the hiring and promotion of faculty personnel, to place substantially more emphasis on evaluating the quality rather than the quantity of a researcher's international publications and on assessing an applicant's overseas experience and international networking.

Promote Ongoing Internationalization Through Interuniversity Networking and Linkages

For Japan to make itself a hub within the international flow and mobility of "brain circulation" in this age of intensive competition for knowledge worldwide, it is imperative to enhance the internationalization of the country's leading research universities. In this context, the SIH Project has sought to spawn a synergistic effect through the systematic internationalization of the 20 pilot universities, and, at the same time, they have been expected to lead the way in undertaking a primary role for the internationalization of the Japanese higher education system as a whole (Kawamura 2010). Among the SIH pilot universities, some have also been selected to be core institutions of the Global 30 Project and are attempting to make even bigger strides in their internationalization efforts. Even after the end of the SIH Project's funding period in 2010, these 20 pilot universities are expected to continue supporting and developing their international strategy headquarters and to advance their campus-wide international strategies on their own. By further promoting their international programs and activities in this strategic way, those universities should be able to elevate their presence and standing within the international academic community. Furthermore, Japanese universities in general should not only build interuniversity networks to share and learn good practices of strategic internationalization among world-class universities but also form better linkages with government agencies, local civic bodies, and companies to secure resources so that those institutions too can make sustainable efforts to advance internationalization.

Concluding Remarks

As part of the university reform agenda, Japanese universities, especially national universities, have only just begun to make organized and strategic efforts toward internationalization, emphasizing the leadership of university presidents. The

MEXT and other government agencies have supported such universities' internationalization efforts. In collaboration with JSPS, the SIH Project is one of MEXT's application-based competitive funding programs for university internationalization and has aimed to assist each of the 20 pilot institutions in developing an "International Strategy Headquarters," having a cross-organizational structure with an umbrella administration on campus. Also, the SIH Project has intended to support the pursuit of institution-wide, organized international activities through the newly formulated international strategies tailored to the unique institutional character of each selected institution (reorganizing those pilot institutions' international activities in a strategic way). Moreover, the SIH Project has been aimed at developing innovative models for internationalization strategies and efforts that have the potential to serve as emulative models for Japanese universities in general (Kiyoura et al. 2007). In short, the goal of the SIH Project is to change the culture, tradition, and administration of Japanese universities by developing both institutional strategies and headquarters for internationalization. To achieve this goal effectively, each international strategy headquarters established within the 20 pilot universities is under the auspices of either the university president or vice-president. While this makes the system top-down in configuration, it is also tailored in such a way to be attentive to bottom-up initiatives because, apart from the president's leadership, it is equally important that a wide range of faculty and administrative staff understand, take an interest in, respond to, and get involved with international activities carried out by their institutions.

At Japanese universities, even before preparations could be initiated, launching a new international program could traditionally entail the tedious task of obtaining the acknowledgment and approval of each and every related department through a seemingly endless series of meetings. In contrast, a president-led international headquarters has been shown to more efficiently expedite the decision and implementation process, including personnel assignments and budget appropriations for international programs. As a result of promoting a systematic change from internationalization efforts once led by individual researchers or their departments to internationalization as an organized endeavor at the university-wide level, this development of a cross-organizational structure for university internationalization has been one of the most salient successes of the SIH Project. Nevertheless, as such efforts have become comprehensive and institutionally organized, they too have become bogged down due to a lack of efficient prioritization and streamlining within the internationalization strategies created. Hence, the "strategicness" of the 20 pilot universities' internationalization efforts has concurrently not increased enough in scale. Therefore, in order to promote truly strategic internationalization, Japanese universities need to shift from an incremental add-on approach (continually layering on new programs and activities without removing ineffective existing ones) to a prioritized and core competence-based approach grounded in their university-wide missions and visions as well as their midterm and long-term goals and plans.

As internationalization grows in importance in both education and research and evolves into a more mainstream role in Japanese higher education, but at the same

time, Japan's public debt is reaching 250 % of its GDP under the prolonged economic stagnation, society and taxpayers increasingly expect universities[21] to be able to clarify the added value of the international dimensions and the impact of internationalization on the institution. Under the circumstances, a growing number of successful, international liberal arts institutions and schools—Ritsumeikan Asia Pacific University, Akita International University, and Waseda University's School of International Liberal Studies—offer an intense, international learning experience with a high percentage of English-taught courses, a highly diversified student population and faculty, and a variety of study abroad programs. They have made internationalization the first priority within their institutions' missions and efforts. However, unfortunately, those innovative, international institutions are not well recognized as models of good practice in the internationalization of higher education within the Japanese government sector, and they have not received much support from MEXT and its related agencies. Instead, MEXT has basically continued to assist the same old elite institutions in imitating those internationalized universities' efforts with a large amount of the fund.

Currently, one of the crucial challenges among Japanese universities is to develop the effective evaluation process of their internationalization efforts. This challenge lies in balancing the needs for between trusted quality control (which creates a bottom line in terms of accountability), transparency, resource management, and quantitative expansion. In addition, such an approach requires a creative assessment structure and its related methods, such as peer review and benchmarking, which encourages overall internationalization initiatives and adds a strategic dimension to further university internationalization.

All in all, MEXT's initiatives (e.g., Strategic Fund for Establishing International Headquarters in Universities from 2005 to 2010 and Global 30 Project launched in 2009) have promoted the organizational restructuring of traditional Japanese universities to better attune them to these institution-wide internationalization tasks, and university leaders have equally made efforts to introduce an institutionally organized, proactive, and strategic approach to university internationalization. The Japanese government is expected to continue to develop strategic policies of university internationalization in collaboration with the private sector in order to provide a catalyst for the functional transformation of Japanese universities toward meeting the demands of the twenty-first century's global knowledge-based society.

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[21] In Japan, private universities, which account for 77 % of all universities, receive various funds and subsidies from the government and its related agencies.

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Conclusion

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As globalization progresses, alliances of universities and exchanges of academics, students, and administrators are quickly developing all over the world. The rationale for promoting even greater exchange is for every country to nurture outstanding, internationally minded individuals. However, to promote meaningful university exchanges among different countries, it is essential to define a system that can ensure the quality of education in universities. If the academic achievements of individuals who are active in several countries cannot be evaluated and guaranteed within and among partner universities, such exchanges and alliances cannot logically be sustained. In this regard, Europe may have taken the lead. Through initiatives such as the Erasmus program and the Bologna Declaration for the creation of a "European Higher Education Area," the European Union is setting up structures for student and researcher exchanges. In other parts of the world including Asia, similar phenomena have been observed with great dynamism in terms of both quality and quantity. In particular, academic mobility in Asia has

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accelerated greatly in recent years with the rapid expansion of higher education systems. East Asia, particularly, has developed the largest international student market. Here, while the flow of students and academics is still tending outward (i.e., outbound), the number of universities and higher education system that attract international academics and students is rapidly increasing.

To promote cross-border exchanges and alliances in the Asian region, it is particularly important to examine the issue of quality assurance in the framework of university exchanges. Consideration should also be given to the diversity of Asian universities and education systems and to the possibility that university exchanges can contribute to even broader forms of cooperation among Asian countries. Moreover, the private sector in higher education in countries of different regions has been expanding dramatically. Considering the highly diversified quality across and within higher education systems in East Asia, this region must take particularly dynamic and diversified approaches to reforming and restructuring higher education systems and university organizations.

Taking these issues into consideration, contributors to the present volume focus on the mobility of academics, students, and others across institutional and national borders in East Asia in relation to national policy visions. This mobility raises questions such as to whether higher education should be considered a public good for each single state or for the international/regional community as a whole. In the context of more permeable borders, there are questions regarding the responsibility of different stakeholders for assuring quality in higher education. Moreover, there are both positive and negative impacts of stakeholder mobility among higher education institutions and labor markets at national, subregional, regional, and global levels. The authors respond to these questions by looking at case studies of Asian countries and discussing the roles universities are expected to play to facilitate the mobility of stakeholders and ideas across national borders.

The emerging, increasingly regional nature of global internationalization points to the existence of a new public role for East Asian higher education. In East and Southeast Asia, the rapidly changing global economy is recognized as a fundamental driver of change in international relationships both among East and Southeast Asian countries and with other countries in the world. In a globalized knowledge-based society, higher education is a core component of such far-reaching changes. Examining changing trends in national policies and institutional behaviors in a global context, the authors clarify the issues facing higher education in its public roles. Considering the increasing autonomous capacities of higher education systems in Asia and others, the establishment of a platform for assuring mutual dialogue which allows for multiple initiatives appears to be a key solution. By providing realistic views on current conditions and the characteristics of "regionalization," "collaboration," and "harmonization" among East Asian higher education systems, the authors identify possibilities and challenges for such new initiatives in the region, suggesting what governments and universities *can* and *should* do from now.

Higher education institutions and the government must meet highly differentiated needs in their global, national, and local settings. Achieving accountability for

higher education as a public good should be examined in the actual context in higher education institutions, which are simultaneously seeking both excellence and contribution to local communities.

The regionalization of higher education can foster greater mutual trust within the region, while building a competitive and robust human resource network. By comprehensively discussing and internalizing diverse views, rather than relying on a single model or ideal, we can foster the possibility of building a higher education framework in each region that can contribute to regional peace and prosperity.

The first feature of regionalization studies is the empirical study of the "de facto" international dimension of a region's higher education systems. From this approach, it can be seen that higher education systems, economic systems, and societal values are already intertwined and integrated to a certain degree in some regions in the world. This first approach endeavors to take stock of the extent of actual regionalization. A second approach emphasizes the purpose(s) and governing principles that inform regionalization process. It may then be possible to derive ordered conceptual frameworks that reveal future pathways of regionalization. This approach asks why higher education is becoming regionalized and why further cooperation and integration in higher education is needed. The answers come mainly from historical and philosophical investigations of policy arguments. The third type of regionalization studies attempts to analyze existing frameworks and organizations for regional cooperation and integration of higher education systems. It is a political analysis that reveals practical and organizational implications for future regional cooperation and integration processes. The fourth approach focuses on the study of actors involved in the regionalization process. Countries and governments are probably the most important actors in these processes, but individual higher educational institutions are also important. The fifth approach is best described as the comparative study of regionalization, drawing on experiences from different regions other than East Asia in the world.

The analyses presented in this book reveal that, in fact, *none* of these approaches alone suffice to comprehensively explain the reality of emerging international dimensions in East Asia. There is no developed policy consensus to guide the process or even explicit agreement as to what fostering a "regional higher education arena" entails. While national leaders have managed to form a practical distinction between diplomatic relationships and actual academic exchange among institutions and researchers, consistent and systematic approaches to the regionalization of higher education in the public domain are inevitably difficult to establish.

Nevertheless, the de facto formation of a regional higher education arena through an expanding array of initiatives and already large cross-border flows of students and academics continues. These institutional and individual initiatives have served as the driver of international dimensions in higher education.

This book has discussed the concept of "public goods" in global higher education, with particular focus on the newly emerging market of East Asia. This concept has been widely debated among diverse stakeholders at various occasions and studies including the World Conference on Higher Education (July 2009 at

UNESCO in Paris) and *Constructing Knowledge Societies: New Challenges for Tertiary Education* (World Bank 2002). However, until now, the concept had not been analyzed systematically in terms of recent theoretical developments in the social sciences.

The authors who contributed to this volume further illustrate a rapidly evolving international environment, with institutional decisions affected by regional as well as national and global considerations. They have examined and attempted to understand the differences and similarities among regional dynamics in Europe, North and South America, and Africa through comparative studies with Asia. Each chapter has highlighted the commonality of issues such as cross-border education, stakeholder mobility, and privatization of higher education.

In addition to the dramatic expansion and diversification of the Asian region's higher education market, the emerging nature of internationalization in the Asian region must come to involve discussions on the subjects of quality, relevance, equity, and efficiency. It is vital that all of those involved in higher education throughout the Asian region, from students to educators and from administrators to national and regional policy makers, keep abreast of these and other developments in order to maintain positive international cooperation efforts and assure the quality of higher education. The next decade will prove pivotal in fostering autonomous, responsible, and publicly minded citizens through higher education in different Asian societies. The role of further and deeper exchange among universities, academics, and students in the region is critical.

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