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Analysis of Cross-Border Higher Education for Regional Integration  
and Labor Market in East Asia

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# **Cross-Border Collaborative Degree Programs in East Asia: Expectations and Challenges**

Takako Yuki<sup>\*</sup>, Yeeyoung Hong<sup>†</sup>, Kyuwon Kang<sup>‡</sup>, and Kazuo Kuroda<sup>§</sup>

## **Abstract**

This paper sheds light on the increasingly diverse forms of cross-border higher education in East Asia, ranging from traditional student mobility (e.g., full-time study abroad) to the mobility of the programs themselves. Specifically, this paper examines the expected outcomes and risks or challenges of cross-border collaborative degree programs by focusing on differences in the level of collaboration and by using two survey datasets on leading East Asian universities and their collaborative degree programs. As for the expected outcomes of such programs, this survey of universities indicates that improving the quality of education is perceived as a more important outcome of collaborative degree programs than it is for traditional forms of simple student mobility. However, this survey of programs confirms the variation in the degree of collaboration among collaborative programs in terms of location, curriculum and degree provision; it also shows that bilateral programs, which require greater collaboration between the partner institutions, tend to perceive promoting intercultural awareness, achieving research excellence and promoting regional collaboration and Asian identity as more important than one-side led programs do. Bilateral programs also see economic benefits in collaborative degree programs, such as meeting the demands of the global economy, when the data samples used for the analysis are limited to programs conducted between institutions from high-income and middle-income countries, thus excluding programs with low-income countries. On the other hand, the risks and challenges of cross-border collaborative degree programs tend to be perceived as less significant by bilateral programs than by one-side led programs. These results point to the importance of the greater involvement of each of the partner institutions in meeting the expectations of the other partner and mitigating any risks or challenges in cross-border degree programs. In particular, it is worth considering such increasingly higher levels of collaboration as each country in the partnership develops its economy and higher education institutions.

**Keywords:** cross-border higher education, double degree, twinning, ASEAN, Asia

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## 1. Introduction

In East Asia, higher education has been developing significantly along with a surge in demand. Cross-border higher education has also played an important role in this development, as represented by the large number of students from East Asian countries who study abroad. According to UNESCO data, China, Japan, Korea, and Malaysia are among the top ten countries sending outbound students.<sup>1</sup> As Bashir also discusses (2007), the main importers of higher education services (i.e., those countries sending students abroad) are from Asia, the Middle East and the Caribbean, and the value of these imports for the countries concerned is significant in relation to their domestic public spending on higher education. More recently, East Asian countries have also been serving as host countries, and the number of inbound students has been growing in not only the long-standing host countries, such as Australia and Japan, but in other countries as well. For example, Malaysia has been receiving students from not only Asia, but also the Middle East and Africa, and their numbers have been growing, especially after September 11 (Morshidi 2011).

Not only has such mobility of students become common in East Asian countries, but the mobility of the programs themselves has also increased, enabling students to obtain foreign degrees or diplomas in less time and at a lower cost than staying abroad for the entire period. According to the JICA-RI 2009/10 East Asian leading university survey, senior officers of the leading universities perceived cross-border collaborative degree programs as being less active than traditional forms of student mobility, but they expected them to be more active in the future (Kuroda et al. 2010). Although it is difficult to determine the actual figures, the number of such

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1. See [Annex Table A.1](#) for details.

collaborative programs now appears to be increasing in several countries in the region, such as Japan, China, and Malaysia.<sup>2</sup>

Recent policy trends in this region also support the enhancement of cross-border collaboration in higher education. For example, the first East Asia Summit, held in 2005, recognized higher education as an important sector for regional cooperation.<sup>3</sup> At the second Japan-China-Korea Trilateral Summit, held in Beijing in October 2009, the leaders of the three countries agreed to promote an Asian version of the European Union's Erasmus Mundus Programme, called "Campus Asia" (KEDI 2009; MEXT Japan 2010).

Generally speaking, the cross-border mobility of programs requires closer collaboration between higher education institutions from two or more countries (either host or home countries) than does conventional student mobility, which is not associated with program mobility (e.g., outbound students enrolled in higher education institutions in a foreign country without belonging to any institution in their own country). If such close collaboration between higher education institutions from developed and developing countries is facilitated, program mobility can have a positive impact on the importing country's higher education sector (OECD and World Bank 2007, 76). Bashir (2007), which also explains that some countries in the region, such as China, Malaysia and Vietnam, are trying to build their private education institutions or improve the quality of public sector institutions through partnerships with institutions from a number of foreign countries.

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2. According to MEXT (2009, 180), the number of Japanese universities establishing double-degree programs with foreign institutions has been growing steadily over the years. As of 2008, 260 double-degree programs at 85 universities are currently active in Japan. As Uroda (2011) discussed, China also showed growth in transnational education in the 2000s. According to Sugimura (2011), any increase in the number of international students largely depends on the spread of transnational programs in Malaysia.

3. See the website of the Association of Southeast Asian Nations (ASEAN). <http://www.aseansec.org/21002.htm> (accessed July 21, 2011).

However, as Knight (2008a, 90) points out, while there is more data and more analyses on the movement of students across borders, information on the mobility of programs is still relatively lacking, especially in terms of comparative data between countries. Surveys and empirical research conducted previously for Europe and North America may provide information about the motivating factors and concerns of collaborative degree programs (e.g., Kuder and Obst 2009), but to our knowledge, very limited research exists for East Asia. What are the expected outcomes of cross-border collaborative degree programs? What challenges or risks must be taken into consideration if policymakers want to promote such collaboration? Based on data collected as a part of surveys on leading universities in ASEAN, China, Korea, Japan, and Australia, this paper attempts to examine the expected outcomes and challenges for cross-border collaborative degree programs in East Asia.

## **2. Analytical framework**

This paper defines “cross-border collaborative degree programs” as “higher education degree programs that are institutionally produced or organized with cross-border university partnership agreements by at least two institutions in two countries or more.” To articulate this definition conceptually, we modified Knight’s framework for analyzing cross-border higher education (Knight 2008a, 99) by indicating the degree of collaboration between higher education institutions across borders (less or more close) on the horizontal axis. As Figure 1 indicates, this definition captures part of the “mobility of programs” (but not all forms) in the conceptual framework. It includes double/joint<sup>4</sup> and twinning programs but not branch campuses, which do not have any partner institution in the host country. In addition, it does not include conventional student exchange programs, which are not necessarily required for the

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4. Although our program survey attempted to distinguish joint and double degree programs, the number of joint degree programs that were clearly identified is very limited. Therefore we decided to put joint and double degree programs in the same category for the analysis of the survey data.

fulfillment of a specific degree program, but are undertaken rather by individual students as an extra or optional form of study.

**Figure 1.** Framework for cross-border higher education

(a) Category of mobility	(b) Example forms of mobility by “degree of collaboration” between higher education institutions across borders:	
	<i>Low</i>	<i>High collaboration</i>
	<i>One-side led program</i>	<i>Bilateral program</i>
↓ People mobility (e.g. , students, scholars)	<u>Full degree abroad</u> <u>Semester/year abroad</u>	
↓ Program mobility (e.g. , courses, program, degree)	Franchised Online/distance	<u>Twining**</u> <u>Double/joint degree**</u>
↓ Provider mobility (e.g. , institutions)	Branch campus Virtual university	<i>Bi-national university</i>

Note: \* Vertical categories come from Knight while the horizontal column (b) is for this research. Words in Italics are our additions. The underlined forms of mobility are our interests in this paper.

\*\*Defined as “cross-border collaborative degree programs” in this paper.

The vertical axis of the conceptual framework implies that there is a transition from people mobility to program mobility. By examining it along with the horizontal axis, this transition in forms of mobility often requires greater collaboration between higher education institutions across borders. For example, compared to summer student exchange programs, universities must communicate and collaborate with foreign institutions more when they design and manage double/dual degree programs. We assumed that the expectations of the institutions concerned could be higher or more distinct for more collaborative forms than for other forms of cross-border higher education.

The previous literature provides some information about the motivations and challenges of cross-border collaborative degree programs, although few studies have addressed these issues by paying attention to the degree of collaboration between higher education institutions. For Europe and North America, some studies have been conducted on higher education systems or the institutional perceptions of cross-border programs, especially double/dual and joint degree programs. For example, Kuder and Obst (2009) recorded responses from the senior administrators of 180 higher education institutions (primarily in Europe and the US) about the importance of motivating factors in launching joint or double degree programs. They indicated that among the seven aspects presented, the most important aspect perceived by institutions was “advancing the internationalization of the campus,” followed by “raising the international visibility and prestige of the institution.” The motivation of lowest priority for both EU and US institutions was “increasing revenues.” In 2011, the Institute of International Education (IIE) conducted a survey of 245 higher institutions from 28 different countries with the aim of gathering information regarding joint and double degree programs from a global perspective (Obst et al. 2011). The IIE survey asked about the impact of joint and double degree programs and the data showed that the most important impact for universities is “greater collaboration between the faculty at the home institution and the partner institution” followed by the “increasing international visibility of the institution” and “increasing internationalization of the campus.”

In terms of challenges, Kuder and Obst (2009) investigated the institutional perceptions of 14 potential challenges, most of which pertain to administrative issues. They indicated that the EU and US respondents found similar issues most challenging, such as “securing adequate funding” and “ensuring the sustainability of the program,” while “language issues” were seen as



less challenging. Based on a survey of 31 higher education systems in Europe,<sup>5</sup> Tauch (2002) indicated that different national legal frameworks, quality assurance and accreditation may cause problems for the future development of joint degree programs. The EUA Joint Masters Project shows how the recognition of joint degrees can be a fundamental issue (EUA 2004). According to Maiworm (2006), the most significant difficulties perceived by program directors in Europe appeared to be “recruiting students.” Knight (2008b) also investigated technical level challenges, such as different regulatory systems, academic calendars, credit systems, tuition, and scholarship schemes.

In the context of Asia, Macaranas (2010) compared the current availability of twinning and double/joint programs in 14 countries and examined whether a country participated in certain types of activities. It appeared that half of the countries, including Malaysia, Japan, and Australia, provided both twinning and double/joint programs as of 2006; however, there was no discussion of the perceptions of expected outcomes or challenges. Some country-specific studies have informed the current status of cross-border collaborative degree programs. For Korea, MEST and KEDI (2007) found that the number of universities establishing cross-border collaborative degree programs has increased in recent years and that most prefer to build partnerships with North America and China. According to Morshidi (2005), Malaysian institutions began launching collaborative degree programs (e.g., twinning) starting in the mid-1990s, primarily with the UK and Australia. For Japan, Kuriyama et al. (2008) conducted a survey of universities with graduate schools to examine the characteristics of cross-border collaborative degree programs at the graduate level. According to responses from the 12 currently active programs, the main difficulties encountered by Japanese graduate programs appeared to be administrative, such as “lack of accreditation” and “regulations for credit transfer.”

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5. Questionnaires were sent to the official contact persons for the Bologna Process, the Rectors' Conferences (or equivalent) and the NARIC/ENIC offices of each country covered by the EU SOCRATES programs.

### 3. Data collection

#### 3.1 Overview of the surveys

To examine the expectations and challenges of cross-border collaborative degree programs in East Asia, this paper focuses on the degree of collaboration and uses the datasets of surveys of leading universities (university surveys) and their “cross-border collaborative degree programs” (program survey) in Southeast Asia and in four other countries (China, Japan, Korea, and Australia).<sup>6</sup> Both surveys were conducted by the JICA Research Institute in 2009/2010.

The 300 “leading” universities were systematically selected on the basis of (i) the number of times that a university was ranked in three international university-ranking sources or (ii) its membership in eight international university associations.<sup>7</sup> The university-level questionnaires were distributed primarily by e-mail or fax to senior executive officers, such as directors, managers, or vice rectors, in charge of international affairs offices or the equivalent. Of the 300 universities, 131 (44%) completed and returned the questionnaire (see [Annex Table A.2](#) for details). The university survey provides information about these leading universities’ perceptions of their cross-border activities, including (i) the degree of activeness of cross-border activities by type and (ii) the importance of expected outcomes by type of activity.

After selecting the 300 leading universities, their cross-border collaborative degree programs were identified through the following three steps.<sup>8</sup> The first step was to search for the relevant national information from the Ministries of Education (MOE) or from key

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6. New Zealand was included in the preparation of the survey, but no response was collected.

7. See Kuroda et.al. 2010 for details of the selection criteria for the 300 universities.

8. The JICA-RI team received technical assistance from graduate students of Waseda University to identify the cross-border degree programs, and the majority of students were tasked with searching for programs at universities in their home countries using their native languages. The team included R. Ishiyama and M. Ito (Japan), K. Kang, Y. Hong and S. Shimauchi (Korea), N. Anh (Singapore and Vietnam), K. Chen and W. Fang (China), A. Herna (Malaysia, Brunei and Indonesia), S. Edwards (Australia and New Zealand), and B. Ts (the Philippines).

publications.<sup>9</sup> The second step was to conduct website searches for each of the 300 leading universities with relevant keywords, such as twinning and double/joint degrees, and to look through the homepages of the offices of international affairs or the equivalent, which often list partnering universities according to the different types of memorandums of understanding (MOUs). The website searches were conducted in both English and in the local languages as often as possible. Keyword searches by program type and university name were also conducted using Google. Lastly, the document and website search results were compiled into one list totaling 1,048 identified collaborative degree programs with the corresponding information, including the name and country of the partner university, the source of the search results, the contact address of the office in charge (e.g., international affairs) or an alternative contact,<sup>10</sup> and when possible, the level of degree (e.g., bachelor), field of study, and type of program.

The survey design identified the cross-border collaborative degree programs and a draft questionnaire was reviewed and discussed with participants from the target countries at a workshop jointly organized by JICA-RI and the Southeast Asian Ministers of Education Regional Centre for Higher Education and Development (SEAMEO RIHED) on June 30, 2009, in Bangkok.<sup>11</sup> Thereafter, the questionnaire was distributed via e-mail or fax to officers in the office of international affairs or other relevant office responsible for the degree program that was identified. The questionnaire asked about the degree program's features, expected outcomes, and challenges. Of the 1,048 identified degree programs (full sample) of leading universities, 254

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9. Chinese data was found online ([http://www.crs.jsj.edu.cn/check\\_info.php?sortid=2](http://www.crs.jsj.edu.cn/check_info.php?sortid=2), accessed June 24, 2009), and Korean and Vietnamese data were sent directly from the Korean Educational Development Institute (November 30, 2008) and the Ministry of Education and Training of Vietnam (April 1, 2009). Key publications used included: "Education Guide Malaysia (2007)" by the Ministry of Higher Education Malaysia (for Malaysia); "Collaborative Degree Programmes between Thai and Foreign Higher Education Institutions (2006)" by the Commission on Higher Education (for Thailand); and "Godeung Gyoyuk Jipyo Mit Jisu Gyebal Yeon Gu (Indicators and Indices for Development of the Internationalization of Higher Education) (2006)" by the Ministry of Education Science and Technology (MEST) and the Korean Educational Development Institute (KEDI) (for Korea).

10. Survey implementation (i.e., finalizing contact information and sending and collecting the questionnaires) was undertaken primarily by a commissioned non-profit organization (AsiaSEED) in close coordination with the JICA-RI team.

11. The participants included policymakers and researchers from eight Southeast Asian countries (Brunei Darussalam, Cambodia, Indonesia, Malaysia, Myanmar, Vietnam, the Philippines, and Thailand) as well as Korea, Japan, China, and Australia.

responses (subset sample) were received. However, this survey only focused on leading universities in the East Asia region and 254 responses are not really representative of the 14 countries since the sample distribution across the countries was unbalanced. Therefore, the analysis in this paper does not claim to be representative of all existing cross-border collaborative degree programs in the entire East Asia region.

Although the response rate of the program survey may not appear high, the basic features do not seem to be substantially different with regard to the respondents in comparison with a more complete sample of identified programs. For example, our sample of cross-border collaborative programs at leading East Asian universities is more likely to be at the post-graduate level than at the undergraduate level (see [Annex Table A.3](#) for details). Masters degrees appear to be the most popular in both the full sample programs (37%) and the subset of sample programs that responded to the survey (44%). At both the post-graduate and bachelor levels, the most popular academic fields are social sciences, business and law. Engineering appears to be the second most popular academic field, particularly at the bachelor level. Interestingly, this pattern of popular fields of studies among the full sample of cross-border higher education programs and the subset of sample programs is similar to what has been observed for the distribution of tertiary enrollments in the region.<sup>12</sup>

### **3.2 Cross-border collaborative degree programs by degree of collaboration**

For the degree of collaboration between higher education institutions across borders, the responses of the program survey provide information on the following four items: (i) teaching staff, (ii) study location, (iii) curriculum provider, and (iv) degree provider. To simply but systematically capture variations in collaboration, we separated our sample cross-border

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12. According to the data from the UNESCO Institute of Statistics (UIS), among eight fields of study in tertiary education, “social sciences, business and law (36%)” were the most popular academic disciplines in terms of the share of total enrollments in the ASEAN+4 region, followed by “Engineering, manufacturing and construction (15%).” (See [Annex Table A.1d](#) for details.)

collaborative degree programs into two groups according to their degree of collaboration (“one-side led programs” or “bilateral programs,” which require relatively more collaboration between institutions), which was defined according to each of the above-stated four items. For example, if a program was a twinning program, which requires two years of residential study in one institution (in one country) and two years in its partner institution (in another country), the program was categorized as a “bilateral program,” according to the study location. Yet according to the degree provider, the same program was categorized as a “one-side led program” because the twinning program’s degree is granted by only one institution and not both. A double-degree program whose curriculum is prepared by both universities and taught by their teaching staff with residential requirements in both universities was categorized as a “bilateral program,” according to all four items.

Table 1 summarizes the distribution of the sample collaborative degree programs that responded to our survey by item and degree of collaboration. Overall, the majority of our sample collaborative degree programs are “bilateral programs.” In particular, this trend is evident when they are grouped according to the teaching staff provider and study location. However, only approximately 60% of collaborative degree programs are grouped into “bilateral programs” (such as double/joint degree programs) according to the degree providers. Based on all four items, 42% of the programs are categorized as “bilateral programs,” indicating strong collaboration.

**Table 1.** Number of collaborative degree programs that responded to the survey by item and degree of collaboration

Item of collaboration	<i>Low</i> → <i>High collaboration</i>		N.A. or Missing	Total
	One-side led programs	Bilateral programs		
Teaching staff provider	33 (13%)	190 (76%)	26 (10%)	249 (100%)
Study location	46 (18%)	187 (75%)	16 (6%)	249 (100%)
Curriculum provider	43 (17%)	176 (71%)	30 (12%)	249 (100%)
Degree provider	92 (37%)	145 (58%)	12 (5%)	249 (100%)

Source: JICA Survey

## **4. Results**

### **4.1 Expected outcomes**

Regarding university-level perceptions, the 2009/10 East Asian leading university survey asked about the “expected outcomes” for five types of cross-border activities. Respondents were asked to identify the significance of a given item on the expected outcomes of cross-border activity, using a 5-point Likert scale: “4: highly significant,” “3: fairly significant,” “2: moderately significant,” “1: slightly significant,” and “0: not significant.” As Table 2 indicates, for student mobility (i.e., acceptance of foreign students or the outgoing mobility of students) and program mobility (i.e., cross-border collaborative degree programs), the respondent universities viewed the academic and political dimensions of outcomes as more significant than the economic dimensions. Kuder and Obst (2009) previously showed that the least prioritized motivation for both EU and US institutions was “increasing revenues,” and the same was true in our survey of leading East Asian universities. For one element of the academic dimension (“to improve the quality of education”), program mobility was accorded higher expectations than was conventional student mobility. For other elements of the “expected outcomes,” the differences between the two forms of mobility were very small and statistically insignificant.

**Table 2.** Significance of "expected outcomes" of cross-border activities for universities that responded to the survey by form of activity

Expected outcomes		Student mobility		Program mobility
		Acceptance of foreign students	Outgoing mobility opportunities for students	Cross-border collaborative degree programs
Academic	To improve quality of education	3.13	3.20	3.57
	To achieve research excellence	2.89	3.06	3.21
	To promote intercultural/ international awareness and understanding	3.29	3.35	3.33
Political	To promote global citizenship	2.88	2.94	2.86
	To promote regional collaboration and identity of Asia	3.06	2.86	2.78
	To promote national culture and values	3.07	2.94	2.86
	To improve international visibility and reputation of your university	3.45	3.33	3.42
Economic	To meet the demand of global economy	2.60	2.60	2.66
	To meet the demand of Asian regional economy	2.59	2.55	2.60
	To meet the demand of your national economy	2.79	2.69	2.72
	To generate revenue for your own institution	2.57	2.00	2.53

Source: JICA Survey

Note: 4 = "Highly significant"; 3 = "fairly significant"; 2 = "moderately significant"; 1 = "slightly significant"; 0 = "not significant".

Regarding program-level perceptions, key expected outcomes for cross-border collaborative programs overall pertain more to academic and political dimensions than to economic dimensions. This tendency is consistent with the above-discussed results of the survey of the 300 leading universities. Among the sample programs that responded to our survey, approximately 60% considered “to improve international visibility and reputation of your institution” or “to improve the quality of education” as “highly significant” or “fairly significant” (see [Annex Table A.5a](#) for details). However, only approximately 40% responded that the expectation “to generate revenues for your own institution” is “highly significant” or “fairly significant.”

Table 3 compares the “expected outcomes” of the cross-border collaborative programs between two groups separated by the degree of collaboration according to three items (location, curriculum provider, and degree providers), as explained in Section 3.<sup>13</sup> The last three rows of the table indicate that “bilateral programs” tend to perceive academic and political dimensions as

13. A grouping based on the teaching staff was not used in this section, as it categorizes most of the programs into bilateral programs and very few into one-side led programs.

more significant than “one-side led programs” do, while they tend to perceive economic dimensions as less significant than “one-side led programs” do.

**Table 3.** Significance of "expected outcomes" of collaborative degree programs by item and degree of collaboration

Expected outcome	Study location		Curriculum provider		Degree provider				
	<i>Low</i>	<i>High collabo</i>	<i>Low</i>	<i>High collabo</i>	<i>Low</i>	<i>High collabo</i>			
	One-side led Mean	Bilateral Mean	One-side led Mean	Bilateral Mean	One-side led Mean	Bilateral Mean			
<b>Academic</b>									
To improve quality of education	2.90	<	3.13	3.25	>	3.11	2.98	<	3.09
To achieve research excellence	2.53	<	2.82	2.63	<	2.89	2.56	<	2.83 *
To promote intercultural/international awareness and understanding	2.58	<	3.16 ***	2.85	<	3.17 *	2.89	<	3.09
<b>Political</b>									
To promote global citizenship	2.51	<	2.78	2.65	<	2.82	2.66	<	2.72
To promote regional collaboration and identity of Asia	2.45	<	2.81 *	2.55	<	2.88 *	2.71	<	2.71
To promote national culture and values	2.45	<	2.70	2.53	<	2.76	2.67	>	2.60
To improve international visibility and reputation of your university	3.08	<	3.11	3.13	<	3.19	3.05	<	3.07
<b>Economic</b>									
To meet the demand of global economy	2.85	>	2.66	2.95	>	2.73	2.80	>	2.62
To meet the demand of Asian regional economy	2.93	>	2.59 *	3.03	>	2.70 *	2.93	>	2.50 ***
To meet the demand of your national economy	2.95	>	2.81	3.10	>	2.89	2.91	>	2.83
To generate revenue for your own institution	2.88	>	1.95 ***	2.95	>	1.97 ***	2.83	>	1.64 ***
<b>Average of dimension</b>									
Academic	2.67	<	3.04 **	2.91	<	3.06	2.81	<	3.00
Political	2.62	<	2.85	2.71	<	2.91	2.77	<	2.78
Economic	2.90	>	2.50 **	3.01	>	2.57 ***	2.87	>	2.40 ***

Source: JICA Survey

Note: 4 = "Highly significant"; 3 = "fairly significant"; 2 = "moderately significant"; 1 = "slightly significant"; 0 = "not significant".

\* $p < .1$  in  $T$ -test of differences in means between “one-sided programs” and “both-side partnership programs.”

\*\* $p < .05$   $T$ -test of differences in means between “one-sided programs” and “both-side partnership programs.”

\*\*\* $p < .01$   $T$ -test of differences in means between “one-sided programs” and “both-side partnership programs.”

Examining each element of the academic dimension, when collaborative degree programs are grouped according to the study location and the curriculum provider, “bilateral programs” perceive the expectation “to promote intercultural/international awareness and understanding” as more significant than “one-side led programs” do. In addition, when collaborative degree programs are grouped according to the degree provider, “bilateral programs” perceive the expectation “to achieve research excellence” as more significant than “one-side led programs” do. The expectation “to improve the quality of education” tends to be viewed by both types of programs as fairly important, and there is no statistically significant difference between the two groups.



Regarding the perceptions of the political dimension of the “expected outcomes,” the pattern seems to be similar to that found for the academic dimension. For most elements of the political dimension, the mean scores of the perceived significance for “bilateral programs” are higher than those for “one-side led programs.” However, on average, this difference is not statistically significant. Only for the expectation “to promote regional collaboration and Asian identity” is the difference statistically significant, and it is perceived as more important by “bilateral programs” than by “one-side led programs” when these programs are grouped according to the study location and curriculum provider.

The economic dimension of “expected outcomes” shows a pattern opposite to those of the academic and political dimensions: it is perceived as more significant by “one-side led programs” than by “bilateral programs.” Specifically, “one-side led programs” perceive the expectation “to meet the demands of the Asian regional economy” and “to generate revenues for your own institution” as more important than “bilateral programs” do when these collaborative degree programs are grouped according to any of the three criteria.

The perceptions of the economic dimension of “expected outcomes” may be more affected by the level of economic development in the respective countries than by other dimensions. To address this potential economic effect, we first separated the sample collaborative degree programs into two categories: (i) programs conducted between institutions in low-income and high-income countries and (ii) programs conducted between institutions in middle-income and high-income countries. For each category, Table 4 compares differences in the expected outcomes between “one-side led programs” and “bilateral programs.” The differences are statistically significant for the second category (i.e., programs between institutions in middle-income and high-income countries). In addition, the academic, political, and economic dimensions of the “expected outcomes” are perceived as being more important by

“bilateral programs” than by “one-side led programs.” One exception is “generating revenues,” which “one-side led programs” perceive as being more important than “bilateral programs” do.

**Table 4.** Significance of "expected outcomes" of collaborative degree programs by development level of partnering countries and the degree of collaboration as a degree provider

Expected outcome	Low-income and high-income <sup>a</sup>		Middle-income and high-income <sup>a</sup>	
	Degree provider		Degree provider	
	<i>Low</i>	→ <i>High collabo</i>	<i>Low</i>	→ <i>High collabo</i>
	One-side led	Bilateral	One-side led	Bilateral
	Mean	Mean	Mean	Mean
<b>Academic</b>				
To improve quality of education	3.64	<	3.88	1.91 < 2.89 ***
To achieve research excellence	2.64	<	3.21 **	2.24 < 2.88 ***
To promote intercultural/international awareness and understanding	3.07	<	3.19	2.58 < 3.19 ***
<b>Political</b>				
To promote global citizenship	2.83	>	2.69	2.38 < 2.80 **
To promote regional collaboration and identity of Asia	2.76	>	2.72	2.52 < 3.00 **
To promote national culture and values	2.76	>	2.73	2.36 < 2.75 *
To improve international visibility and reputation of your university	3.14	<	3.35	2.70 < 3.15 **
<b>Economic</b>				
To meet the demand of global economy	3.21	<	3.28	2.09 < 2.58 **
To meet the demand of Asian regional economy	3.26	>	3.16	2.36 < 2.52
To meet the demand of your national economy	3.40	<	3.44	2.12 < 2.89 ***
To generate revenue for your own institution	3.02	>	1.68 ***	2.42 > 1.82 **
<b>Average of dimension</b>				
Academic	3.12	<	3.43 **	2.24 < 2.99 ***
Political	2.88	>	2.87	2.49 < 2.92 ***
Economic	3.23	>	2.89 *	2.25 < 2.45

Source: JICA Survey

Note: 4 = "Highly significant"; 3 = "fairly significant"; 2 = "moderately significant"; 1 = "slightly significant"; 0 = "not significant".

<sup>a</sup>Our sample countries are categorized into 3 groups (i.e., high-, middle- or low-income countries) according to World Bank (2009) on the classification of economies by income.

\* $p < .1$  in  $T$ -test of differences in means between “one-sided programs” and “both-side partnership programs.”

\*\* $p < .05$   $T$ -test of differences in means between “one-sided programs” and “both-side partnership programs.”

\*\*\* $p < .01$   $T$ -test of differences in means between “one-sided programs” and “both-side partnership programs.”

## 4.2 Challenges

As compared with the “expected outcomes,” most of the sample collaborative degree programs tend to perceive challenges as “not significant” or only “slightly or moderately significant” (see [Annex Table A.5b](#) for details). Among the various challenges, those perceived as being most significant by the programs appear to be “difficulty of recruiting students” and “difficulty of resolving language issues,” although the degree of significance is not high. For example, only 8% of the sample programs consider “difficulty of recruiting students” as a “highly significant challenge,” while 26% consider it as “slightly significant” or “not significant.”

Resolving language issues is perceived as “highly significant” by only 6% of the total number of respondents, while 29% of the respondents perceive it as “slightly significant” or “not significant.” Other aspects worth considering include insufficient financial resources and difficulty of ensuring quality. These programs are less likely to perceive risks with regard to social aspects, such as a brain drain or a loss of cultural or national identity.

**Table 5.** Significance of "challenges" of collaborative degree programs by item and degree of collaboration

Challenges	Study location		Curriculum provider		Degree provider				
	<i>Low</i>	<i>→ High collabo</i>	<i>Low</i>	<i>→ High collabo</i>	<i>Low</i>	<i>→ High collabo</i>			
	One-side led Mean	Bilateral Mean	One-side led Mean	Bilateral Mean	One-side led Mean	Bilateral Mean			
<b>Social</b>									
Inequity of access	1.60	>	1.33	1.70	>	1.34 *	1.58	>	1.27 *
Brain drain	1.75	>	1.35 *	1.73	>	1.40	1.66	>	1.27 **
Overuse of English as medium	1.53	>	1.16 *	1.53	>	1.24	1.48	>	1.09 **
Loss of cultural or national identity	1.58	>	1.22	1.50	>	1.28	1.51	>	1.13 **
<b>Academic</b>									
Difficulty of assuring quality	2.03	>	1.75	2.13	>	1.75 *	2.06	>	1.62 **
Irrelevance of education content	1.68	>	1.57	1.60	<	1.67	1.69	>	1.53
Difficulty of employment prospect	1.48	<	1.63	1.58	<	1.62	1.73	>	1.51
Lack of accreditation	1.58	>	1.46	1.54	>	1.52	1.57	>	1.44
<b>Administrative</b>									
Insufficient financial resource	1.95	>	1.78	1.83	<	1.90	1.94	>	1.70
Insufficient administrative capacities	2.05	>	1.60 **	1.80	>	1.73	1.94	>	1.51 **
Miscommunication with partner university	1.68	>	1.47	1.55	>	1.54	1.71	>	1.38 *
Difficulty of credit transfer recognition	1.80	>	1.40 *	1.58	>	1.47	1.69	>	1.35 *
Differences in academic calendars	1.73	<	1.79	1.63	<	1.86	1.86	>	1.71
Difficulty of recruiting students	2.05	<	2.19	2.23	<	2.23	2.10	<	2.19
Difficulty of resolving language issues	1.84	<	2.08	1.95	<	2.13	1.87	<	2.13
<b>Average of dimension</b>									
Social	1.61	>	1.27 *	1.61	>	1.32	1.56	>	1.19 **
Academic	1.69	>	1.60	1.71	>	1.64	1.76	>	1.53
Administrative	1.87	>	1.76	1.79	<	1.84	1.87	>	1.71

Source: JICA Survey

Note: 4 = "Highly significant"; 3 = "fairly significant"; 2 = "moderately significant"; 1 = "slightly significant"; 0 = "not significant".

\* $p < .1$  in  $T$ -test of differences in means between “one-sided programs” and “both-side partnership programs.”

\*\* $p < .05$   $T$ -test of differences in means between “one-sided programs” and “both-side partnership programs.”

\*\*\* $p < .01$   $T$ -test of differences in means between “one-sided programs” and “both-side partnership programs.”

As Table 5 indicates, for differences according to the degree of collaboration, the challenges/risks tend to be perceived as more significant by “one-side led programs” than by “bilateral programs.” When the challenges are categorized into the three dimensions (social, academic, and administrative), this trend is very evident, particularly for the social dimension of challenges, as shown in the last three columns of Table 5. Examining each element of the social dimension, when these collaborative degree programs are grouped according to the study location and the degree provider, “one-side led programs” perceive that the “brain drain” and

“overuse of English as a medium” are more significant than “bilateral programs” do. Moreover, “one-side led programs” perceive that “inequity of access” as more significant than “bilateral programs” do when they are grouped according to the curriculum provider and degree provider. Lastly, when grouped according to the degree provider, a “loss of cultural or national identity” is also perceived as more significant by “one-side led programs” than by “bilateral programs.”

Similarly, the academic dimension of challenges is also perceived as more significant by “one-side led programs” than by “bilateral programs.” For each element of the academic dimension, the means of “one-side led programs” were higher than those of “bilateral programs,” although most were not statistically significant. However, one element with a statistically significant difference indicates that “one-side led programs” perceive the “difficulty of ensuring quality” as more significant than “bilateral programs” do when these collaborative degree programs are grouped according to degree provider and curriculum provider.

For the administrative dimension of challenges, the means of each element for “one-side led programs” were overall higher than those of “bilateral programs.” Among the several elements of the administrative dimension, “one-side led programs” perceive “insufficient administrative capacities” and “difficulty of credit transfer recognition” as more significant than “bilateral programs” do when grouped according to the study location and degree provider. “Miscommunication with partner universities” is considered by “one-side led programs” to be a more significant challenge than by “bilateral programs” when they are grouped according to degree provider.

## 5. Conclusion

By modifying what Knight (2008a) presented in her conceptual framework of cross-border higher education, this paper sheds light on the movement from student mobility to program mobility and on the degree of collaboration between higher education institutions across borders. With a focus on differences according to the degree of collaboration, this study attempts to fill the analytical gap in program mobility by examining expected outcomes and challenges of cross-border collaborative degree programs using survey data on leading East Asian universities and their collaborative degree programs.

For the expected outcomes, the university survey results indicate that one element of the academic dimension (i.e., “to improve the quality of education”) is perceived as slightly more important for collaborative degree programs than for conventional forms of student mobility. Our program survey indicates that key expected outcomes for the overall sample cross-border collaborative programs appear more often in the academic and political dimensions than in the economic dimension. When analyzed according to the degree of collaboration, it is also found that the academic dimension of the expected outcomes tends to be perceived as more important by programs that require relatively more collaboration between participating institutions (named as “bilateral programs”) than by “one-side led programs.” However, the economic dimension (e.g., “to meet the demands of the Asian regional economy”) is viewed as more important by “one-side led programs.” Yet, it appears that the economic dimension is also perceived as more important by “bilateral programs” than by “one-side led programs” when we limit the sample of programs to those between institutions in countries with closer levels of income (i.e., focusing on programs between middle- and high-income countries by excluding other programs, such as those between low- and high-income countries). One exception is the expectation “to generate revenues for your own institution,” which “one-side led programs” view as more important.

Although the institutions see few risks/challenges in cross-border collaboration as a whole, it is found that they perceive more risks in the administrative and academic dimensions (e.g., “insufficient administrative capacities” and “difficulty of ensuring quality”) than in the social dimension. When the collaborative degree programs are divided into two groups based on the degree of collaboration, the challenges tend to be perceived as more significant by “one-side led programs” than by “bilateral programs.” This tendency is particularly notable for the social dimension of challenges, such as the brain drain and inequity in relation to access.

### **5.1 Policy implications**

Regarding the motivation to diversify the forms of collaboration and to increase collaboration in general between higher education institutions across borders, these results support what has been illustrated by the conceptual framework of cross-border higher education. If policies can address the perceptions of higher education institutions with regard to the expected outcomes and risks in engaging in collaborative degree programs, such as those identified in this paper, such policies may be able to further promote and facilitate collaboration by targeting certain groups of institutions or the system as a whole. Because collaborative degree programs between two or more institutions in different countries are a new and fast growing form of cross-border higher education, many governments are seeking evidence-based policy implications to guide these activities to achieve higher quality with improved societal effects. For example, the “Campus Asia” program is being formulated under a trilateral agreement between China, Korea and Japan, and the three governments are now attempting to identify the elements that would promote cross-border degree collaboration in higher education to ensure the quality of education by selecting and funding pilot programs (e.g., double degree programs) that are collaboratively proposed by universities in the three countries in 2011. Some ODA providers may also want to consider allocating a portion of public funds for the development of higher

education to facilitate and promote newer forms of program mobility, which may also be expected to address this objective in a more collaborative way across national borders. In particular, it could be worth considering to support for collaborative degree programs that require both partner institutions to participate in further collaborative efforts as each partner country develops its economy and higher education institutions.

As this study has also found, program providers perceived the quality of education to be a significant “expected outcome” of their cross-border collaborative degree programs, but they simultaneously see ensuring quality as a challenge. Given current policy directions in establishing a new Asian framework for quality assurance in cross-border higher education and credit transfers by the Southeast Asian Ministers of Education Organization (SEAMEO) and the Asia-Pacific Quality Network (APQN), regulatory and procedural frameworks should be improved to encourage higher education institutions to deepen their commitment to cross-border collaborative degree programs in the region.

In-depth case studies are necessary to further examine the implications of this, such as whether and how newer forms of cross-border higher education have advantages compared with the conventional forms and if regional or international higher education policies (e.g., quality assurance) facilitate cross-border degree programs. Because this survey is, to our knowledge, the first such attempt in this region, it may be replicated but also advanced to address our limitations by increasing the scope of the target higher education institutions and their degree programs and by improving the response rate. Even among the respondent universities or programs, the valid responses provided limited factual information, such as the number of students and their countries of origin. With support from local stakeholders with an increasing interest in this area, the information may also be made more comprehensive.

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## Statistical Annex A

**Annex Table A.1a.** Number of outbound mobile students, 2000-2009, top 10 countries

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
China	115,850	132,236	201,903	306,642	360,786	395,836	385,654	427,764	438,177	468,706
India	53,266	58,683	91,189	110,716	125,881	138,072	136,238	154,116	172,946	184,284
Republic of Korea	70,091	70,137	85,438	91,116	96,652	99,835	101,283	105,618	113,975	119,841
Germany	53,501	54,123	60,248	63,208	56,937	55,289	68,521	77,265	81,122	87,656
Malaysia	37,877	20,704	38,353	41,567	41,049	41,478	39,890	44,635	49,384	47,864
Turkey	46,939	48,036	50,829	51,728	51,857	50,060	34,624	36,977	41,103	45,339
Canada	29,303	28,328	36,193	37,891	38,662	41,789	42,607	43,479	43,986	44,893
France	49,669	50,156	55,063	56,587	45,705	47,819	52,240	53,633	39,063	44,443
Japan	58,932	54,176	63,754	64,695	61,316	63,102	57,850	55,023	49,096	42,752
Russian Federation	22,591	24,707	29,096	32,854	33,706	38,186	39,276	42,789	43,285	41,366
<b>Growth rate</b>										
China		14%	53%	52%	18%	10%	-3%	11%	2%	7%
India		10%	55%	21%	14%	10%	-1%	13%	12%	7%
Republic of Korea		0%	22%	7%	6%	3%	1%	4%	8%	5%
Germany		1%	11%	5%	-10%	-3%	24%	13%	5%	8%
Malaysia		-45%	85%	8%	-1%	1%	-4%	12%	11%	-3%
Turkey		2%	6%	2%	0%	-3%	-31%	7%	11%	10%
Canada		-3%	28%	5%	2%	8%	2%	2%	1%	2%
France		1%	10%	3%	-19%	5%	9%	3%	-27%	14%
Japan		-8%	18%	1%	-5%	3%	-8%	-5%	-11%	-13%
Russian Federation		9%	18%	13%	3%	13%	3%	9%	1%	-4%

Source: UNESCO Institute of Statistics (UIS).

**Annex Table A.1b.** Number of outbound mobile students in East Asian countries, 2000-2009

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Brunei Darussalam	2,045	1,297	1,864	1,809	1,824	2,142	1,976	2,416	2,737	2,649
Cambodia	1,515	1,490	1,811	2,210	2,042	2,323	2,106	2,813	2,967	2,947
Indonesia	31,617	21,267	36,589	36,911	31,322	25,423	27,957	30,625	31,347	23,853
Laos	1,076	974	1,224	1,429	917	2,350	1,148	3,462	3,837	2,077
Malaysia	37,877	20,704	38,353	41,567	41,049	41,478	39,890	44,635	49,384	47,864
Myanmar	1,398	1,424	2,359	2,378	2,743	2,278	2,962	3,296	4,317	3,594
Philippines	5,047	4,229	5,940	6,779	7,022	7,072	7,376	7,754	8,281	8,665
Singapore	20,481	9,468	25,676	25,040	20,778	18,870	18,401	18,479	18,020	18,546
Thailand	18,636	15,754	23,359	23,752	23,876	22,725	23,266	24,333	23,760	22,856
Viet Nam	8,167	7,203	11,466	13,928	16,287	20,305	22,671	27,622	35,635	38,405
China	115,850	132,236	201,903	306,642	360,786	395,836	385,654	427,764	438,177	468,706
Japan	58,932	54,176	63,754	64,695	61,316	63,102	57,850	55,023	49,096	42,752
Republic of Korea	70,091	70,137	85,438	91,116	96,652	99,835	101,283	105,618	113,975	119,841
Australia	5,235	5,113	5,640	6,181	8,738	9,200	6,766	10,010	9,292	9,467
New Zealand	6,005	1,642	7,355	6,873	6,482	3,751	4,081	4,090	4,024	4,389

Source: UNESCO Institute of Statistics (UIS).

**Annex Table A.1c.** Number of inbound mobile students in East Asian countries, 2000-2009

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Brunei Darussalam	78	189	n.a	41	198	164	150	177	190	295
Cambodia	n.a	36	39	n.a	40	n.a	68	n.a	n.a	n.a
Indonesia	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	3,023	n.a
Laos	75	124	129	95	215	174	172	254	332	n.a
Malaysia	18,892	16,480	27,731	30,407	23,441	n.a	24,404	30,581	41,310	n.a
Myanmar	n.a	n.a	n.a	n.a	n.a	n.a	n.a	57	n.a	n.a
Philippines	n.a	2,323	2,609	4,744	3,495	4,836	5,136	n.a	2,665	n.a
Singapore	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	40,401
Thailand	n.a	2,508	4,092	n.a	4,170	4,334	5,601	8,534	10,915	16,361
Viet Nam	622	661	936	1,048	n.a	2,053	n.a	3,230	3,362	4,207
China	n.a	n.a	n.a	n.a	n.a	n.a	36,386	42,138	51,038	61,211
Republic of Korea	3,373	3,850	4,956	7,843	10,778	15,497	22,260	31,943	40,322	50,030
Japan	59,691	63,637	74,892	86,505	117,903	125,917	130,124	125,877	126,568	131,599
Australia	105,764	120,987	179,619	188,160	166,954	177,034	184,710	211,526	230,635	257,637
New Zealand	8,210	11,069	17,732	26,359	41,422	40,774	n.a	33,047	31,565	38,351

Source: UNESCO Institute of Statistics (UIS).

**Annex Table A.1d.** Distribution of tertiary enrollment according to the study major in East Asian countries

Countries	Education		Humanities and arts		Social sciences, business and law		Science		Engineering, manufacturing and construction		Agriculture		Health and welfare		Services		Unspecified programs		Total (all programs)		
	Enrollment	%	Enrollment	%	Enrollment	%	Enrollment	%	Enrollment	%	Enrollment	%	Enrollment	%	Enrollment	%	Enrollment	%	Enrollment	%	
Australia	94,729	8%	128,112	11%	431,650	39%	104,168	9%	117,341	10%	14,465	1%	186,043	17%	38,614	3%	2,682	0%	1,117,804	100%	
Brunei	2,179	36%	972	16%	603	10%	721	12%	766	13%	n.a.	n.a.	543	9%	.	.	323	5%	6,107	100%	
Cambodia	4,624	4%	18,292	15%	70,471	57%	11,229	9%	3,780	3%	2,994	2%	5,545	5%	30	0%	961	1%	122,633	100%	
China	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	26,691,696	100%	26,691,696	100%	
Indonesia	722,342	15%	23,140	0%	2,441,220	50%	390,199	8%	782,167	16%	235,523	5%	189,583	4%	0	0%	75,235	2%	4,859,409	100%	
Japan	288,955	7%	624,696	16%	1,149,204	29%	115,949	3%	617,043	16%	91,000	2%	507,772	13%	222,820	6%	321,193	8%	3,938,632	100%	
Laos	13,626	15%	14,628	16%	41,851	47%	3,281	4%	8,092	9%	4,625	5%	2,009	2%	1,030	1%	315	0%	89,457	100%	
Malaysia	104,802	11%	30,893	3%	325,269	35%	133,348	14%	215,920	23%	8,053	1%	81,830	9%	15,216	2%	6,908	1%	922,239	100%	
Myanmar	7,685	2%	244,726	48%	144,920	29%	110,329	22%	0	0%	0	0%	0	0%	0	0%	0	0%	507,660	100%	
Korea	199,566	6%	584,781	18%	711,790	22%	285,642	9%	867,450	27%	38,314	1%	308,865	10%	207,902	6%	0	0%	3,204,310	100%	
Singapore	6,595	3%	18,330	9%	79,387	37%	32,273	15%	60,406	28%	135	0%	13,234	6%	3,004	1%	82	0%	213,446	100%	
Thailand	182,630	8%	136,127	6%	1,131,174	47%	302,153	12%	248,371	10%	n.a.	n.a.	n.a.	n.a.	45,323	2%	380,799	16%	2,426,577	100%	
Viet Nam	400,291	23%	70,817	4%	610,251	34%	0	0%	360,493	20%	122,922	7%	67,042	4%	81,040	5%	0	0%	1,774,321	100%	
Philippines	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2,651,466	100%
Total	169,002	11%	157,960	14%	594,816	36%	124,108	10%	273,486	15%	51,803	3%	123,861	7%	55,907	2%	65,708	3%	1,598,550	100%	

Source: UNESCO Institute of Statistics (UIS).

**Annex Table A.2.** Number of universities that responded

	Responded universities	Response rate(%)	Target universities
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
(Sub total of ASEAN)	83	42	196
China	19	61	31
Japan	17	59	29
Korea	5	56	9
Australia	7	25	28
New Zealand	0	0	7
(Sub total of plus 5)	48	20	35
<b>Total</b>	<b>131</b>	<b>44</b>	<b>300</b>

Source: JICA Survey.

**Annex Table A.3a.** Number of collaborative degree programs that responded to the survey

	Full samples		Subset samples	
	Number of identified programs	Number of universities with at least one program	Number of programs that responded	Number of universities with at least one program
Brunei Darussalam	7	1	0	0
Cambodia	3	2	4	2
Indonesia	133	23	32	5
Laos	0	0	0	0
Malaysia	112	14	2	2
Myanmar	1	1	0	0
Philippines	13	3	0	0
Singapore	81	7	2	1
Thailand	72	15	7	2
Vietnam	150	13	85	12
(Sub total of ASEAN)	572	79	132	24
China	157	26	85	22
Japan	92	16	26	9
Korea	69	7	1	1
Australia	154	16	10	3
New Zealand	4	2	0	0
(Sub total of plus 5)	476	67	122	35
<b>Total</b>	<b>1,048</b>	<b>146</b>	<b>254</b>	<b>59</b>

Source: JICA Survey.

Note: The subset samples include a few cases that are not included in the full samples.

**Annex Table A.3b.** Distribution of the identified collaborative degree programs (full sample) and the programs that responded to the survey (subset) according to the study major

	Full sample*		Subset sample**	
	Postgraduate	Bachelor	Postgraduate	Bachelor
Social sciences, business and law	63.0%	41.2%	46.3%	31.9%
Engineering, manufacturing and construction	14.6%	23.9%	14.7%	28.7%
Science	3.4%	5.3%	5.9%	4.3%
Education	2.3%	0.0%	1.5%	1.1%
Health and welfare	2.3%	3.3%	1.5%	3.2%
Humanities and arts	2.3%	5.3%	5.9%	3.2%
Others	3.1%	6.6%	24.3%	27.7%
missing	8.9%	14.3%	0.0%	0.0%
	100%	100%	100%	100%

Source: JICA Survey.  
 \*Full sample N=1,048  
 \*\* Subset sample N=249

**Annex Table A.3c.** Distribution of the identified collaborative degree programs (full sample) and the programs that responded to the survey (subset) by the level of academic degree

	Full sample*	Subset sample**
Postgraduate	55.3%	54.6%
Bachelor	28.7%	37.8%
Bachelor and Postgraduate	1.5%	7.2%
Others	0.2%	0.4%
missing	14.2%	0.0%
	100%	100%

Source: JICA Survey.  
 \*Full sample N=1,048  
 \*\* Subset sample N=249

**Annex Table A.3d.** Distribution of the identified collaborative degree programs (full sample) and the programs that responded to the survey (subset) by the region of the partner institution

	Full sample*	Subset sample**
Western Europe	37%	31.3%
Northeast Asia	20.1%	23.1%
North America	15.7%	20.2%
Oceania and Pacific	13.7%	11.4%
Southeast Asia	7.6%	10.9%
Central and East Europe	2.4%	1.2%
Others	3.6%	2%
	100%	100%

Source: JICA Survey.  
 \*Full sample N=1,048  
 \*\* Subset sample N=249

**Annex Table A.3e.** Distribution of the identified collaborative degree programs (full sample) and the programs that responded to the survey (subset) by regional partnership

	Full sample*	Subset sample**
Southeast Asia - Western Europe	18.6%	23.3%
Northeast Asia - Southeast Asia	17.7%	14.5%
Southeast Asia - Oceania and Pacific	12.8%	9.6%
Southeast Asia - North America	10.7%	11.7%
Northeast Asia - North America	8.8%	11.7%
Northeast Asia - Western Europe	7.8%	4.4%
Northeast Asia - Oceania and Pacific	6.7%	10.8%
Northeast Asia - Northeast Asia	5.8%	3.2%
Oceania and Pacific - Western Europe	4.9%	0%
Southeast Asia - Southeast Asia	2.2%	2%
Others	4.1%	8.8%
	100%	100%

Source: JICA Survey.

\*Full sample N=1,048

\*\* Subset sample N=249

**Annex Table A.4.** Number of collaborative degree programs by the level of development of the partnering countries

	Degree provider			Total
	One-side led	Bilateral	Missing	
Low-income and high-income <sup>a</sup>	42 (60%)	26 (37%)	2 (3%)	70 (100%)
Middle-income and high-income <sup>a</sup>	35 (26%)	95 (70%)	6 (4%)	136 (100%)
High-income and high-income <sup>a</sup>	0 (0%)	20 (87%)	3 (13%)	23 (100%)
Others or Missing	15 (75%)	4 (20%)	1 (5%)	20 (100%)
Total	92 (37%)	145 (58%)	12 (5%)	249 (100%)

N=249

Source: JICA Survey

<sup>a</sup> Our sample countries are categorized into 3 groups (i.e., high-, middle- or low-income countries) according to World Bank (2009) on the classification of economies by income.

**Annex Table A.5a.** Expected outcomes of collaborative degree programs by level of significance

	Not significant	Slightly significant	Moderately significant	Fairly significant	Highly significant	Missing	Total
To improve quality of education	4.02%	9.64%	12.85%	16.47%	44.58%	12.45%	100%
To achieve research excellence	4.42%	6.43%	23.69%	28.92%	23.29%	13.25%	100%
To promote intercultural/ international awareness and understanding	3.21%	2.81%	18.88%	30.92%	31.33%	12.85%	100%
To promote global citizenship	5.22%	6.02%	20.88%	36.14%	18.88%	12.85%	100%
To promote regional collaboration and identity of Asia	5.62%	6.43%	22.09%	28.51%	24.1%	13.25%	100%
To promote national culture and values	4.82%	7.23%	24.1%	34.14%	17.27%	12.45%	100%
To improve international visibility and reputation of your university	3.61%	2.41%	20.08%	23.69%	37.35%	12.85%	100%
To meet the demand of global economy	4.42%	10.44%	21.29%	26.91%	23.69%	13.25%	100%
To meet the demand of Asian regional economy	6.43%	7.23%	20.88%	30.12%	22.09%	13.25%	100%
To meet the demand of your national economy	4.42%	9.64%	18.47%	22.49%	32.13%	12.85%	100%
To generate revenue for your own institution	20.88%	7.23%	17.67%	25.7%	15.26%	13.25%	100%

N=249

Source: JICA Survey.

**Annex Table A.5b.** Challenges of collaborative degree programs by level of significance

	Not significant	Slightly significant	Moderately significant	Fairly significant	Highly significant	Missing	Total
Inequity of access	22.49%	23.69%	24.5%	8.43%	4.02%	16.87%	100%
Brain drain	25.7%	20.88%	17.67%	17.27%	2.41%	16.06%	100%
Overuse of English as medium	32.13%	19.68%	15.66%	15.26%	1.61%	15.66%	100%
Loss of cultural or national identity	32.53%	17.67%	14.86%	15.66%	2.81%	16.47%	100%
Difficulty of assuring quality	19.28%	13.65%	26.1%	17.67%	7.63%	15.66%	100%
Irrelevance of education content	22.49%	17.67%	20.08%	21.29%	2.81%	15.66%	100%
Difficulty of employment prospect	22.89%	14.06%	23.69%	21.29%	2.01%	16.06%	100%
Lack of accreditation	27.31%	12.45%	24.5%	16.87%	2.81%	16.06%	100%
Insufficient financial resource	14.06%	18.88%	26.91%	19.68%	4.42%	16.06%	100%
Insufficient administrative capacities	20.48%	17.67%	21.29%	18.47%	6.02%	16.06%	100%
Miscommunication with partner university	22.49%	20.88%	18.07%	18.88%	2.81%	16.87%	100%
Difficulty of credit transfer recognition	26.51%	16.47%	19.28%	18.88%	2.81%	16.06%	100%
Differences in academic calendars	19.68%	12.85%	26.91%	20.08%	4.82%	15.66%	100%
Difficulty of recruiting students	11.24%	14.86%	18.88%	30.12%	8.03%	16.87%	100%
Difficulty of resolving language issues	11.65%	16.87%	22.09%	25.7%	6.43%	17.27%	100%

N=249

Source: JICA Survey.

## Abstract (in Japanese)

### 要約

#### 「東アジアにおける国際共同学位プログラム:期待される効果と課題」

本論文では、学生の移動のみを伴う従来型の留学のみならずプログラムの移動など多様な形態で展開しつつある、東アジアにおいて国境を越えて提供される高等教育について考察する。東アジアの指導的大学およびその国際共同学位プログラムに対する質問紙調査の結果を用い、共同活動の度合いの違いに焦点を充てて、国際共同学位プログラムに期待される効果と、リスクや課題を考察する。期待される効果について、大学に対する質問紙調査では、単に学生の移動を伴う従来型の留学よりも、共同学位プログラムにおいて「教育の質の向上」の重要性がより高い傾向が示唆された。しかし、国際共同学位プログラムに対する質問紙調査では、学習の場、カリキュラム、学位授与の面で、多様な共同プログラム内で共同活動の度合いが異なることも明らかになった。一方に運営の主体が偏ったプログラムよりも、双方の大学がより運営に参加する協働性の高いプログラムにおいて、「異文化理解の促進」「研究の質・水準の向上」「地域協力の促進とアジアンアイデンティティの確立」の重要性がより高い傾向が示された。分析の対象として低所得国のプログラムを除外し、高所得国と中所得国の機関間で行われているプログラムに限定した場合には、協働性の高いプログラムへの期待は、「グローバル経済の需要へ合致すること」などの経済的効果にも期待が大きいことも認められた。また、協働性の低いものと比較して協働性の高いプログラムでは、国際共同学位プログラムのリスクと課題が低く認識される傾向がある。これらの結果は、国際共同学位プログラム内で相手機関の期待に応えるため、そしてリスクや課題を軽減するためには、両機関による高い参加度が重要であることを示している。特に、パートナーシップを組んだ各国が経済および高等教育機関を発展させる上で、協働性の高い活動展開を考察する価値があるだろう。





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