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Asian Students' Brain Circulation and Japanese Companies An empirical study to explore the relationship

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Purpose

The purpose of this paper is to explore the relationship between the brain circulation of Asian graduates of Japanese universities and Japanese companies by picking up China, Thailand, Indonesia and Vietnam, which are among the top countries which send students to Japan and host Japan-affiliated companies.

Design/methodology/approach

Questionnaire responses of Japanese university graduates from four countries are compared, especially between those who work for Japanese companies in Japan and in their countries of origin (COO), coupled with existent data analysis, interviews of these graduates and human resources (HR) managers/executives of Japanese companies.

Findings

A mobility of Japanese university graduates from Japan to their COO has been promoted by an increase in Japan-affiliated companies in their COO, which tend to offer better working environment than Japanese companies in Japan.

Practical implications

Japanese companies need to provide better working conditions to able local staff in overseas subsidiaries in order to recruit and retain the returned graduates of Japanese universities and to realize mutually beneficial brain circulation.

Originality/value

The role and constraints of study destination companies in relation with international students' brain circulation were explored based on empirical study.

Keywords

China, Thailand, Indonesia, Vietnam, International students, Japanese companies,

Background, previous studies and purpose

As a country with a need for global talent who will add value to its exports and expand overseas business, Japan has faced difficulty in attracting and retaining the highly-skilled. In the eleven months after the start of a Points-Based System for Highly-Skilled Foreign Professionals (HSFP) in 2012, only 434 professionals were qualified as HSFP when the target was more than 2,000; 17 applied from overseas while the remaining 417 were living in Japan; 44% of them were international graduates of Japanese universities (Oishi, 2014a, p.431). The percentage of Japanese university graduates in HSFP further rose to 59.4% in 2017 (MIAC, 2019, p.25). In such a situation, international students have been regarded as the most important source of skilled workers in Japan (see, Sato, 2018, p.30).

Japan's international student policy underwent a major change in 2008 when the plan to accept 300,000 international students was announced by the then Prime Minister Fukuda: it declared a linkage with recruitment of the highly-skilled whereas students had previously been encouraged to return to their country of origin (COO) after graduation because international student policy had been conducted as a part of ODA (official development assistance) for human resource development. Since then, various programs have been launched to support international students with their job searches and employment with Japanese companies (see, Breaden, 2014; Sato, 2018). The number of international students who changed to skilled work visas in Japan grew by 2.7 times from 8,272 in 2006 to 22,419 in 2017 (MOJ, 2018). This move has been further promoted by the Japanese government's "Revitalization Strategy 2016," which set a goal of raising the international student employment rate in Japan from the current 30% to 50% (PMJC, 2016, p.160).

However, Japan's initiative to retain international graduates has not been very successful: according to the EYJ's survey entrusted by the Ministry of Economy, Trade and Industry (METI), nearly 40% of international graduates working in Japanese companies plan to leave the workplace within five years (EYJ, 2015, p.64). DISCO's survey of the employers of foreign nationals shows that the top reason for foreign employees' retirement is "to go back to their COO" (DISCO, 2018, p.11). Why do international graduates choose to return to their COO rather than remaining in Japan despite the Japanese government's initiative to promote their employment in Japan?

Though Li (2017) points out that research on international students' progress and achievements in the workplace and their subsequent careers is scant, there are a few studies on international students who find employment in Japanese companies. Liu-Farrer (2013) discusses the "occupational niche," or job opportunities for Chinese graduates of Japanese universities in Japanese companies, created by the expansion of business with China. Breaden (2014) points out a paradox between international students' global attributes and the requirement for local socio-cultural literacy in order to find a job in Japanese companies. Conrad and Meyer-Ohle (2017) contend that this is rooted in the ethnocentric nature of Japanese companies, which demands the employees to comply with the conventional human resource (HR) management rather than reforms it in response to the expansion of global business and workforce. Oishi (2014b) raises the issue of seniority system, which hampers wage hikes and speedy promotion of young able staff in Japanese companies, as the main obstacle for retaining the highly-skilled, including international graduates of Japanese universities. The author assumes, however, that this is also because of economic development and increase of Japan-affiliated companies in their COO. The number of Japan-affiliated companies overseas has increased by 42% from 2008 to 2017 and the overseas production ratio of Japanese manufacturing companies rose to 25.4% (METI, 2019), which lead to the greater need of personnel who oversee quality production overseas; graduates of Japanese universities who understand Japanese culture and language will be ideal staff in such positions.

Then, the next question is whether the returned graduates of Japanese universities work for Japan-affiliated companies in their COO. Toda (2013) shows that university graduates in their 20s and 30s in South Asian countries have positive images of Japan-affiliated companies regarding skill and expertise acquisition, and Mori et al. (2019) point out that Japanese-style HR management looks attractive to university students and mid-career workers in Malaysia. However, it is still unknown if it also looks attractive to the Japanese university graduates who returned to their COO.

Considering the above, this paper aims to compare the consciousness of international graduates who work for Japanese companies in Japan and Japan-affiliated companies in their COO (hereafter referred to as "Japanese companies in COO") in order to explore the reasons and consequences of their mobility from Japan to their COO. The results are based on a questionnaire survey, coupled with existent data analysis, and interviews of international graduates and HR managers/executives of Japanese companies in Japan and in their COO.

Return of the international graduates to COO has been called brain circulation in contrast to brain drain/gain, the traditional one-way mobility from developing countries to developed countries (Saxenian, 2005). Brain circulation is said to bring benefits to both COO and study destination (Tung, 2008, p.299). So far, contributions in the form of starting a business (Saxenian, 2005; Newland, 2007; Khadria, 2009) or academic contribution by upgrading doctoral training and research in COO (Yonezawa et al., 2016) have been introduced as benefits of brain circulation. However, the role and benefit of study destination companies in relation with students' brain circulation has not been studied enough. In this regard, this paper aims to explore the relationship between the brain circulation of Asian graduates of Japanese universities and Japanese companies, and the benefits and constraints brought by their mobility.

The targets of this research are China, Thailand, Indonesia and Vietnam, which are among the top countries which send students to Japan and host Japan-affiliated companies. Since the GDP per capita (current US\$) of their COO differs from 8,069 in China to 2,065 in Vietnam (World Bank, 2018), the choice of graduates of Japanese universities might be different reflecting their development level.

This paper is organized as follows: first the number of students and Japan-affiliated companies in the four countries will be confirmed, followed by a comparison of questionnaires and interviews among the graduates, especially between those who work for Japanese companies in Japan and in their COO. Then, the interview results of HR managers/executives of several Japanese companies will be examined to know the situation and constraints of their retention, before leading to the conclusion.

Students from and Japan-affiliated companies in China, Thailand, Indonesia and Vietnam Table I shows the number of Chinese, Thai, Indonesian and Vietnamese students who study in Japan's HEIs (higher educational institutions) and those who found employment in Japan, and the number of Japan-affiliated companies in the four countries.

	I. Number of and the number											
	Students in HEIs in Japan (2018) A% in % in totalStudents who found employment (2017) B% in % in totalJapan- affiliated companies (2018)											
China	86,439	41.4%	10,326	46.1%	0.12	7,463	29.8%					
Thailand	3,241	1.6%	239	1.1%	0.07	2,221	8.9%					
Indonesia	4,719	2.3%	253	1.1%	0.05	1,058	4.2%					
Vietnam	42,083	20.1%	4,633	20.7%	0.11	957	3.8%					
Total	208,901	100.0%	22,419	100.0%	0.11	25,034	100.0%					
	e by the author b conomy, Trade an			O (2019b),	Ministry (of Justice (201	8), and					

In 2018, Chinese students constituted the largest group in Japanese HEIs, followed by students from Vietnam, Nepal, Korea, Taiwan, Indonesia, Sri Lanka, Myanmar and Thailand (JASSO, 2018). As shown in B/A, Chinese students have a higher ratio of finding employment in Japan, partly because of their advantage in mastering Japanese (Chinese characters are used in Japanese language) and support from the large Chinese graduate community.

The number of Japan-affiliated companies is the largest in China, followed by Thailand, Indonesia and Vietnam. The percentages of Thai and Indonesian students who study at Japanese HEIs and those who found employment in Japan are small, compared with their country's share of Japan-affiliated companies.

Table I	I. Percenta	ge of those v	vho hop	e to find emp	loyment in Jap	oan and their fu	iture plans						
		Those who		Future plan of those who hope to find employment in Japan (B)									
	Total respondents (A)	hope to find employment in Japan (B)	B/A	Want to work in Japan for a long time	Want to return to COO and find employment there	Want to find employment in a third country	Not decided yet						
China	1,649	1,044	63.3%	325	384	88	247						
		100.0%		31.1%	36.8%	8.4%	23.7%						
Thailand	85	42	49.4%	7	21	2	12						
		100.0%		16.7%	50.0%	4.8%	28.6%						
Indonesia	126	83	65.9%	26	31	6	20						
		100.0%		31.3%	37.3%	7.2%	24.1%						
Vietnam	642	457	71.2%	152	228	27	50						
		100.0%		33.3%	49.9%	5.9%	10.9%						
.	4009	2,726	68.0%	969	987	215	555						
Total		100.0%		35.5%	36.2%	7.9%	20.4%						

Source: Made by the author based on the responses of the international students who study at HEIs in JASSO (2019a) "Survey on living conditions of privately-funded international students."

Table II shows the percentage of the international students who hope to find employment in Japan and their future plans, based on survey data of privately- funded international students (JASSO, 2019a). The percentage of those who hope to find employment in Japan is the lowest among Thai students: it seems to be influenced by the low unemployment rate in Thailand, which is only 0.5% in 2017 for above 25 years old (ILO, 2018). Regarding future plans after being employed in Japan, those who hope to work in Japan for a long time is 35.5% on average while this figure is only 16.7% among Thai students. Instead, 50.0% of Thai students and 49.9% of Vietnamese students hope to return to their COO after working in Japan for some time. This percentage is 37.3% for Indonesian students and 36.8% for Chinese students, which are still regarded as a big loss since 94% of the Japanese companies hope to retain the hired international graduates for as long as possible (EYJ, 2015, p.63).

Graduate survey

Outline of the surveys and major attributes of the respondents

A questionnaire survey of international graduates of Japanese universities was conducted in the form of an online survey from 2016 to 2018 intermittently through different channels: the mailing list of IFSA (International Foreign Students Association), JAPI (Japan Association for Promotion of Internationalization) and the author's university networks.

	who wo	ork for Ja	oanese c	ompanies	in Japar	n or in th	eir COO			
		Chi		Thai			nesia	Vietnam		
Co	ountry of residence	Japan	China	Japan	Thailand	Japan	Indonesia	Japan	Vietnam	
Nur	mber of respondents	121	43	21	6	40	14	28	10	
	in which they started studying in Japan	1996~ 2012	1997~ 2011	1996~ 2015	2006~ 2015	2001~ 2014	1998~ 2012	2001~ 2015	2000~ 2009	
	% of female	54.2%	42.5%	61.9%	60.0%	27.5%	23.1%	37.0%	70.0%	
	6 with science and engineering majors	51.2%	34.9%	52.4%	50.0%	75.0%	61.5%	74.5%	50.0%	
Degree	Bachelor	31.7%	35.7%	36.4%	33.3%	40.5%	33.3%	33.3%	30.0%	
	Master	57.5%	52.4%	54.5%	50.0%	40.5%	55.6%	59.3%	70.0%	
ed	Doctor	10.8%	11.9%	9.1%	16.7%	18.9%	11.1%	7.4%	0.0%	
	Less than 200 mil.	8.9%	0.0%	14.3%	20.0%	2.6%	25.0%	3.6%	50.0%	
	200~399mil.	36.6%	5.3%	38.1%	80.0%	26.3%	62.5%	39.3%	10.0%	
Annual	400~599mil.	37.6%	13.2%	23.8%	0.0%	52.6%	12.5%	35.7%	30.0%	
	600~799mil.	13.9%	26.3%	19.0%	0.0%	15.8%	0.0%	21.4%	10.0%	
(yen)	800~999mil.	3.0%	13.2%	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	
	1000~1999mil.	0.0%	28.9%	0.0%	0.0%	2.6%	0.0%	0.0%	0.0%	
	2,000mil.~	0.0%	13.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Interviews of international graduates working for Japanese companies in Japan and in their COO were also conducted during the same period.

Table III shows the major attributes and annual incomes of respondents of the four countries, who work for Japanese companies in Japan or in their COO. The percentages of those who majored in science and engineering and those who obtained masters and/or doctorate degrees are higher than the average of international students at Japanese HEIs shown in JASSO's statistics. This is because some calls for the survey were made through the author's university network. This selection bias is a limitation of this research. However, it is possible to say that this survey reflects the tendency of those who majored in science and engineering at the graduate level, the group categorized as a source of the highly-skilled in Japanese society.

Reasons for the choice of workplace

Table IV shows the reasons for the choice of workplace of the graduates who work for Japanese companies in Japan or in their COO. Respondents were asked to select the applicability of the reason from five degree options; each group's means and S.D. (standard deviation) as well as t-test results between the answers of those who work in Japan and in their COO are listed.

For the Chinese respondents, there are significant differences between the answers of those who work in Japan and those who work in China regarding utilization of capacity/specialty, and convenience of spouse and parent(s). Utilization of capacity/specialty is a stronger reason for choosing a workplace in China rather than in Japan. However, the opposite tendency is seen among Thai respondents. This may be because China is more developed and offers more opportunities for the utilization of their capacity/specialty than Thailand. Convenience of spouse, parent(s) and children are the factors which motivate them to return and work in China.

As for the Thai graduates, utilization of capacity/specialty and living environment seem to induce them to work in Japan while convenience of parent(s) and contribution to their COO tend to motivate them to return to Thailand.

			Т	able	ľ	V. Re	ason	s behi	nd cł	10	ice of	work	place	а						
Nationality		С	hina				Tha	ailand				Indo	onesia		Vietnam					
Country of residence	Jap	ban	China			Japan		Thailand		Japan		Indonesia			Ja	pan	Vie	tnam		
	Mean	S.D.	Mean	S.D.		Mean	S.D.	Mean	S.D.		Mean	S.D.	Mean	S.D.		Mean	S.D.	Mean	S.D.	
Salary	3.41	1.03	3.36	1.12		3.29	0.96	3.33	1.51		3.65	0.95	3.46	0.66		3.33	1.27	3.70	0.67	
Living environment	3.69	1.14	3.50	1.19		3.90	0.77	3.50	1.38		4.20	1.02	3.69	0.75		3.61	1.23	4.00	0.67	
Prospect of career development	4.11	1.10	4.29	0.89		3.85	0.59	3.67	0.52		3.78	1.05	3.92	0.95		4.19	0.88	4.10	0.74	
Prospect of promotion	2.83	1.21	3.00	1.01		2.85	1.14	3.00	1.10		2.93	0.97	3.69	0.95	***	2.96	1.13	3.70	1.06	
Utilization of capacity/ speciality	3.26	1.25	4.00	1.03	***	3.95	0.80	3.17	1.33	*	3.85	1.00	3.77	0.93		4.04	1.02	4.10	0.57	
Convenience of spouse	1.92	1.19	2.48	1.43	××××	2.05	1.50	1.50	0.84		3.30	1.62	3.00	0.82		2.22	1.55	1.90	1.29	
Convenience of parent(s)	1.84	1.15	2.26	1.20	***	1.75	1.29	2.17	1.47		3.05	1.36	3.00	1.04		1.63	0.97	2.10	1.45	
Convenience of children	1.68	1.02	2.34	1.35		1.48	0.93	1.17	0.41		2.65	1.18	3.00	1.04		1.96	1.34	1.50	1.27	
Contribution to home country ^b						2.76	1.41	3.00	1.26		3.15	1.23	3.58	1.31		3.19	1.36	3.20	1.23	

Notes: ^aAnswers were selected based on the following five degree options: 1) does not apply at all, 2) does not apply so much, 3) neither way, 4) applies to some extent, 5) applies very much; ^bThis question was not asked to Chinese graduates; *p<0.1, **p<0.05, ***p<0.01

For the Indonesian graduates, living environment seems to be an important reason to choose to work in Japan whereas the prospect of promotion, convenience of children and contribution to their COO seem to be the important reasons in choosing to work in Indonesia. An Indonesian graduate who works for an automobile company in Japan told me that he hopes to be assigned to the subsidiary in Indonesia while his children attend a primary school in Indonesia since he wants his children to be raised in Indonesian culture and Muslim tradition.

For the Vietnamese graduates, the prospect of career/capacity development and utilization of capacity/specialty are the strongest reasons to choose a workplace regardless of the country where they live. There exists a significant difference between the answers of those who work in Japan and those who work in Vietnam regarding the prospect of promotion.

In fact, prospect of promotion is a weaker reason in choosing to work in Japan than in their COO for all the four countries graduates, implying that the slower promotion in Japanese companies is a widely recognized issue among international students.

For all groups, the prospect of career development is among the top reasons for choosing to work for Japanese companies. This may reflect the characteristics of HR management of Japanese companies, which try to develop employees' capacities through various trainings, including on-the-job training (OJT) (see, Conrad & Meyer-Ohle, 2017; Mori et al., 2018).

Working environment

Table V shows the satisfaction with the working environment of the graduates who work for Japanese companies in Japan or in their COO. Respondents were asked to select their satisfaction level with their working environment from five degree options. The mean and S.D. of the answers of each group and t-test results between the answers of those who work in Japan and in COO are listed.

Table V	. Sat	isfact	tion w	<i>i</i> ith w	/or	king e	enviro	onme	ntª (J	ар	anese	e con	npanie	es in J	Japan	or in	coc))	
Nationality		С	hina				Th	ailand	ł			Indo	onesia		Vietnam				
Country of residence	Japan China Jap			oan	Thai	land		Japan Indonesia			Ja	pan	Vietnam						
	Mean	S.D.	Mean	S.D.		Mean	S.D.	Mean	S.D.		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	
Correspondence between actual work and what I want to do	3.45	0.90	3.82	0.72	***	3.55	1.22	3.67	1.51		3.45	1.04	4.00	1.04	3.57	1.00	3.80	0.79	
Utilization of expertise/ speciality	3.35	1.08	3.83	0.80	***	3.45	1.10	3.67	1.03		3.68	1.05	3.25	0.97	3.46	1.20	3.50	0.97	
Salary	3.28	1.04	3.52	0.69		2.91	1.06	3.33	1.37		3.83	1.06	3.67	0.78	3.59	0.93	3.60	0.84	
Relationships with colleagues	3.70	0.89	3.89	0.68		4.23	0.75	3.67	0.82		3.75	0.84	3.83	1.03	3.82	0.94	4.20	0.42	
Guidance from superiors	3.72	0.83	3.80	0.87		3.86	1.04	4.00	0.89		3.70	0.85	3.92	0.90	3.68	1.06	4.10	0.57	
Promotion	2.98	1.04	2.96	0.90		2.64	1.33	2.67	1.03		3.10	1.08	3.50	1.00	3.14	0.89	3.20	0.92	
Working hours	3.22	1.18	3.44	0.87		3.27	1.20	3.67	0.82		3.18	1.03	3.42	1.16	3.67	1.21	3.00	1.15	
Work efficiency	3.13	1.05	3.22	0.90		3.05	0.95	3.83	0.75		3.08	0.93	3.25	1.14	3.26	1.06	3.40	0.84	
Clarity about duty sharing	3.46	1.07	3.47	0.84		3.00	1.07	4.00	0.89	**	3.28	1.06	3.17	1.11	3.39	1.26	3.60	0.84	
Personnel evaluation system	3.08	0.97	3.05	0.81		2.95	1.09	3.33	0.52		3.33	1.35	3.00	1.21	3.21	0.99	3.20	0.79	
Realisation of opinions	3.23	1.03	3.22	0.82		3.45	0.91	3.67	0.82		3.46	1.07	3.42	1.08	3.54	1.07	3.60	0.84	
Social insurance and fringe benefits	3.65	1.06	3.89	0.65		3.82	0.96	3.33	1.37		3.48	1.09	3.50	1.17	3.75	0.93	4.00	0.67	
Understanding of different cultures ^b						3.41	0.91	4.67	0.52	***	3.16	0.99	3.67	1.07	3.70	1.03	4.00	0.94	
Overall satisfaction	3.52	0.82	3.67	0.72		3.64	0.90	3.50	0.84		3.63	0.88	3.83	0.94	₩ 3.43	0.92	4.00	0.47	

Note: ^aAnswers were selected based on the following five degree options: 1) very dissatisfied, 2) dissatisfied, 3) neither way, 4) satisfied, 5) very satisfied; ^bThis question was not asked to Chinese graduates; *****p<0.1, ******p<0.05, *******p<0.01

Chinese graduates who work for Japan-affiliated companies in China show higher satisfaction than their counterparts in Japan with significant difference regarding the correspondence between actual work and what she/he wanted to do and utilization of expertise/specialty.

Thai graduates who work for Japan-affiliated companies in Thailand show higher satisfaction than their counterparts in Japan with a significant difference regarding the clarity of duty-sharing and understanding of different cultures.

For Indonesian and Vietnamese graduates, overall satisfaction of those who work in their COO is higher than their counterparts in Japan with significant difference.

Satisfaction with salary tend to be higher for those who work in COO than those who work in Japan for Chinese and Thai graduates, while it is almost the same for Vietnamese

graduates and a bit lower for Indonesian graduates. Table III shows that Chinese graduates of Japan-affiliated companies in China receive higher salary than those working in Japan. JAC survey reveals that managers' average salary in China exceeds that in Japan and a soaring salary level in Thailand due to the shortage of workforce (JAC, 2019).

Satisfaction with promotion is rather low in all groups except for the Indonesian graduates who work in COO. Dissatisfaction with promotion in Japan-affiliated companies in COO is rooted not only in the slow promotion but also in "glass ceiling," the occupation of top management positions by the Japanese expatriates sent from the head offices (see, Conrad & Meyer-Ohle, 2017). The reason for the comparatively high satisfaction among the Indonesian graduates in COO may be because of the Indonesian government regulation which obliges foreign-capital companies to hire a certain ratio of Indonesian staff at management positions (JETRO, 2019).

Guidance of superiors and relationships with colleagues are the items of high satisfaction in all groups regardless of country of residence. This seems to reflect the tradition of careful OJT and tight-knit work groups in Japanese companies which have been perceived as merits of working there (see, Toda, 2013; Mori et al., 2018).

Future plan and reasons to return home

In the questionnaire, those who work for Japanese companies in Japan were asked their future plans in order to know the occurrence of "brain circulation". The percentages of those who plan to work for the present company for a long time are 22.0% for Chinese graduates, 42.9% for Thai graduates, 22.2% for Indonesian graduates and 19.2% for Vietnamese graduates, while the percentages of those who want to return to their COO for either finding a job or starting a business are 26.8% for Chinese graduates, 14.3% for Thai graduates, 37.0% for Indonesian graduates and 34.6% for Vietnamese graduates.

Regarding the reasons why they want to return home, care of their parent(s) is the strongest reason for Chinese, Thai and Indonesian graduates and second strongest reason for Vietnamese graduates. Vietnamese graduates raise the limited promotion opportunities in Japan as the top reason to return home. Better career prospect in home country is listed as the second most important reason by Chinese and Indonesian graduates. For Thai graduates, stress in Japanese society is the second biggest reason to return to COO.

Interview of Japanese companies

Interviews of the HR managers/executives of sixteen Japanese companies in Japan and four target countries were conducted by the author from 2015 to 2018. The interviews of the heads of the secretariats of Japanese Chambers of Commerce in Indonesia, Vietnam and Thailand were also conducted during this period to know the situation and challenges of Japan-affiliated companies in these countries.

A HR manager of a software development company in Japan said that they would like to recruit Thai and Indonesian graduates who majored in science and engineering, considering their overseas business expansion. His statement seems to reflect the situation shown in Table I and II that relatively small number of Thai and Indonesian graduates find or intend to find employment in Japan in spite of the large number of Japan-affiliated companies in their COO, which leads to higher demand for their recruitment. He also mentioned the difficulty to apply the principle of "equal pay for equal work" to the foreign employees assigned to their subsidiaries in their COO, which will lead to the cut of fringe benefits such as a

car with a driver and an apartment with safety guards, provided to the Japanese expatriates. Multiple HR managers/executives testified that the salary level of foreign expatriates assigned to their COO is lower than Japanese expatriates but higher than local staff.

Almost all the interviewed HR managers/executives of Japan-affiliated companies in the four countries pointed out the difficulty in retaining the trained local staff because of rampant job hopping. A vice president of a Japanese subsidiary testified that Japan-affiliated companies are called "Japan-affiliated colleges" because of their function of educating and "graduating" local employees after a few years. The head of the secretariat of the Japanese Chambers of Commerce in Thailand suggested the need to establish a "fast track" in Japan-affiliated companies, which would enable the retention of talented local staff by speedy promotion and raise of salary as in other multi-national companies (MNCs). At present, most of the subsidiaries of Japanese companies still adopt semi-Japanese style HR management to keep a consistency with the head offices. Not only in Thailand but also in the other three countries, the average salary of managers of Japan-affiliated companies tends to be lower than that of other MNCs (JAC, 2019).

According to the survey by EYJ (2015, p.36), 45.3% of international graduates working for Japanese companies in Japan answered that they chose to work there because of the possibility of assignment to overseas subsidiaries, which indicates that overseas assignment can be an effective measure for their retention. According to interviews of HR managers of a few Japanese companies in Japan, however, it is not easy to assign a young foreign staff to the subsidiaries in their COO since it sometimes causes a conflict with the local staff because of their higher position and salary level. This especially applies to the subsidiaries in less developed countries such as Indonesia and Vietnam because of the wider gap between the salary level of expatriates and that of local staff.

Conclusion

From the above analysis, we found that the four countries graduates tend to choose to work for Japanese companies with the expectation of career development, as shown in Tables IV and V. Japanese companies have a tradition of spending considerable amounts of cost, time and energy to train new recruits; it is natural for the international graduates to choose employment at Japanese companies in order to develop their career and capacity. However, more than two thirds of them who are employed in Japan don't plan to work there for a long time as shown in the questionnaire result which coincides with the survey by EJY (2015). This is partly because of the slow promotion derived from Japanese style HR management. Liu-Farrer (2011, p.796) introduces the cases of Chinese graduates who rarely feel the need to commit to one employer because of slow promotion which also derives from their being "foreigners." This also applies to the graduates from other countries, who work for Japanese companies.

As shown in the analysis of Table V, satisfaction with working environment in Japanaffiliated companies in COO tends to be higher than that in Japanese companies in Japan. Since there is not much difference in actual salary considering the commodity price level, or even higher as is the case in China, it is natural for the graduates to choose to return home and seek employment in their COO, where they can have better prospects of promotion, better care for their parent(s) and less work stress. They can also directly contribute to the development of their COO. So, in the countries which enjoy economic development and the increase of Japan-affiliated companies, a mobility of Japanese university graduates from Japan to their COO has been prompted by the above factors.

Then, does this kind of brain circulation benefit both COO and study destination country as Tung (2008) says? If the returned graduates are willing to seek employment in Japanaffiliated companies in their COO, it could be the case. According to the survey by JOEA (2019), the Japanese companies list "training of local staff" as the top issue for global management, which indicates the strong demand for trained local staff who can shoulder the management of subsidiaries. Returned graduates of Japanese universities will be an ideal human resource for such positions.

However, the choice of workplace in COO includes not only Japan-affiliated companies but also other MNCs and local companies. Since many Japan-affiliated companies still adopt semi-Japanese style HR, it is not easy to adopt "fast track" system, which would enable the recruitment and retention of returned graduates of Japanese universities. A Thai graduate who had worked for Japanese companies and now work for a Thai company, an affiliate of a Thai financial combine, attested that his company offers a better salary and position than Japan-affiliated companies. Another Thai doctorate degree holder of a Japanese university, who now work for a Japan-affiliated company in Thailand, says that she is looking for another job since she is not happy with the unpaid overtime, which seems to be transplanted from the head office in Tokyo.

The above analysis indicates that Japanese companies which have expanded overseas business and recruited Asian graduates of Japanese universities need to provide better working conditions to secure their retention. However, it is not easy to change the Japanese-style HR management at head offices as shown in previous studies (see, Breaden, 2014; Conrad & Meyer-Ohle, 2017). In this regard, it is suggested that the HR management of Japan-affiliated companies should be reformed first to provide more attractive working conditions for the talented local staff, including the returned graduates. It will also facilitate the earlier overseas assignment of Japanese university graduates recruited at head offices in Japan by decreasing the possibility of friction with the local staff employed at the overseas subsidiaries. Earlier overseas assignments will also increase their retention rate since it is an ideal career path envisaged by many international graduates (EYJ, 2015, p.36). By taking these measures, it would be possible to realize the brain circulation which is beneficial for both Japan and their COO.

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