

論文 / 著書情報  
Article / Book Information

Title	A Case of Policy Evaluation Utilizing a Logical Framework: Evaluation of Japan's Foreign Student Policy towards Thailand
Authors	Sato Yuriko
Citation	Evaluation, Vol. 11, No. 3, pp. 351-378
Pub. date	2005, 7
DOI	<a href="http://dx.doi.org/10.1177/1356389005058483">http://dx.doi.org/10.1177/1356389005058483</a>
Note	このファイルは著者（最終）版です。 This file is author (final) version.

**A Case of Policy Evaluation Utilizing a Logical Framework:  
Evaluation of Japan's Foreign Student Policy towards Thailand**

Yuriko Sato  
Tokyo Institute of Technology, Japan

**Introduction**

In 1954, shortly after defeat in World War II, the Japanese Government restarted its Foreign Student Policy (FSP) when it introduced the Japanese Government Scholarship Program (GSP). Since then, Japan has made efforts to increase the number of foreign students by taking various measures such as to strengthen GSP and the Support Program (SP) for those who study in Japan at their own expense. The majority of these foreign students are from Asian countries. The purpose of this study is to demonstrate a comprehensive theory-based evaluation of Japan's FSP between the years of 1954 and 2001 towards one of these Asian countries, Thailand, by utilizing a logical framework named Policy Evaluation Matrix (PEM).

Foreign students from Thailand made up the fifth largest foreign student group in Japan for the year of 2002, ranking next to China, Korea, Taiwan and Malaysia. Because of the large number of Thai alumni from Japanese universities and the existence of a well-organized alumni association, the author chose Thailand to be the country to focus her research on.

Regarding the composition of this paper, previous studies on policy evaluation are reviewed and a new policy evaluation method utilizing PEM is presented in Section 1. In Section 2 the history and major policy statements of Japan's FSP are reviewed and two PEM corresponding to the two identified objectives of FSP are introduced. In Section 3 the situation of study abroad in Thailand is explained as background

information for policy evaluation. In Section 4 the outline of the comparative questionnaire survey and main attributes of the respondents are explained. In Section 5 and 6, the actual evaluation of Japan's FSP towards Thailand is conducted from the perspective of human resource development (HRD) and that of friendship promotion, respectively. In Section 7, the efficiency and impact on the two goals are compared on a three-dimensional graph and the strength and weakness of this evaluation is reviewed.

### **1. Previous Studies on Policy Evaluation and Proposal of a New Method**

With respect to policy/program evaluation, various models have been previously proposed. Theory-based evaluation (TBE) is the one, which attracts people's attention most in recent years. Chen argued that theoretical approach is needed in program evaluation (Chen 1990). Logic model can be an approach to embody this TBE (Weiss 1998:62). However program has a very complex nature (Pawson 2003, Stame 2004) and no standardized logic model has been established yet for policy/program evaluation.

Vedung, who reviewed previous researches on policy and program evaluation in his book, listed eight models in a category of substantive evaluation. First is the goal attainment model in which evaluation is conducted in the following steps:

After identifying the goals of the program, teasing out their actual meaning and rank order, and turning them into measurable objectives, the second step involves determining to what extent these premeditated goals have been realized in practice.

The third step in goal attainment evaluation implies ascertaining the degree to which the program has promoted or dampened goal realization (Vedung, 1997, p.38).

Because of the simplicity in taking the premeditated policy goals as criteria of merit and as an organizer of evaluation, this model can be applied to government interventions at all political and administrative levels. This model enjoys a prime status in objective and descriptive valuing as policy goals reflect the citizens' will through a parliamentary

chain of control. As for the shortcomings of this model, Vedung lists the following points: haziness of policy goals, disregard of unintended effects, hidden agendas, costs and implementation processes (Vedung 1997, pp.40-48).

By applying this goal attainment model, the author proposes a new policy evaluation method, which takes advantage of the merits and resolves some of the shortcomings of this model. Table 1 shows a Policy Evaluation Matrix (PEM), which is created by the author by shifting a PDM (Project Design Matrix) vertically to a higher political level. PDM is a logical framework widely used for ODA project evaluation in Japan and is based on the ZOPP (*Ziel Orientierte Projekt Planung* or Object-Oriented Project Planning) method developed in Germany.

In the leftmost column of PEM the reader can see overall goal(s), a policy objective, policy outcomes, policy outputs and programs. These items have ends-means relations vertically. In the rightmost column, important assumptions corresponding to each item in the leftmost column are listed. Between these columns are columns of verifiable indicators and means of verification. In the bottommost row, there is a cell to enter institutions in charge of the programs and their inputs.

In the PEM, almost all the elements affecting or deriving from the policy/program are listed. This can be called visualization of the theory of the policy/program. Knapp argues that one of the benefits of TBE is offering a 'framework of reference' for policy makers and stakeholders (2004:24-25). PEM will present a very clear 'framework of reference' for evaluators and policy makers to discuss program's theory and examine its process and result.

As there exist ends-means relations between policy, programs and projects (Yamatani, 1997, pp.11-12) , it is possible to shift the PDM framework vertically to a higher political level and keep the similar logical structure and function as the original one. Therefore, the author proposes that PEM should be utilized for policy evaluation in the similar style as PDM is utilized for project evaluation.

Policy Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Overall Policy Goal(s)			
Policy Objective			
Policy Outcomes			
Policy Outputs			
Programs	Institutions in Charge of the Programs and their Inputs		

The author proposes a comprehensive theory-based policy evaluation to measure effectiveness, impact, efficiency and relevance by utilizing PEM in the following way:

- (1) The attainment rate of each policy outcome is measured by comparing it with the outcome of other successful policy and that of the control group. The attainment of policy objectives (i.e. effectiveness) is calculated from the average attainment rate of the related policy outcomes, if all the important assumptions are fulfilled. This calculation is justified because policy outcomes are interrelated and it is difficult to discern which policy outcome affects the attainment of policy objective most.
- (2) Policy impact is calculated by multiplying the policy outputs and the attainment rate of policy objective.
- (3) Policy efficiency is calculated by dividing the policy impact by the accumulated annual budgetary inputs, which are deflated by the annual consumer price index.
- (4) Relevance is examined by comparing the policy objective and overall policy goal(s) with higher level policies or the needs of the target group.

This new policy evaluation method proposed by the author can be regarded as an application of the goal attainment model. The new method facilitates the examination of attainment of a policy objective and overall policy goal(s) by clearly showing their ends-means relations in PEM. It also incorporates cost and implementation process factors which are disregarded in the original goal attainment model. As for unintended effects, another disregarded factor, it is possible to examine them in the analysis of policy impact. Since the goal attainment model is applicable to government interventions at all political and administrative levels, the author argues that this new evaluation method utilizing PEM can be applied to all program and policy evaluations. Funnell and Miyoshi proposed a Program Theory Matrix (PTM), which is used for program evaluation by skimming and accumulating only the left column of PDM (Funnell 2000, Miyoshi, 2002). However, this PTM lacks columns of verifiable indicators, means of verification, important assumptions and institutions in charge of the programs and their inputs, which are necessary for evaluators to design surveys and to be reminded of the policy process and external factors which affect policy results. While PTM is useful to glance at the relations between projects and a program, PEM is useful to evaluate the policy as a whole.

## **2. Japan's Foreign Student Policy**

Japan's postwar FSP was started in 1954, when the Government Scholarship Program (GSP) was started by the Ministry of Education, Science and Culture (MESC). The aims of the GSP were 'to promote international exchange of culture and the friendship between Japan and foreign countries' and 'cooperation in training promising youth who will contribute to social and economic development' of the student dispatch countries, especially in Asia and Middle East (Ministry of Education, Science and Culture 1970).

As Japan achieved rapid economic development in the 1950's and 1960's, the number

of privately supported foreign students also increased, coming to Japan to learn the secrets of its development. The year 1983 can be marked as the beginning of an epoch in Japan's FSP. Prime Minister Nakasone announced a 'Plan to Accept 100,000 Foreign Students by 2000' which was to increase the number of foreign students enrolled at the higher educational institutions (HEI) in Japan from 8,116 in 1982 to 100,000 by 2000. A governmental advisory group, convened by PM Nakasone, compiled 'Declaration concerning FSP towards the 21<sup>st</sup> Century', in which the aim of the FSP is stated to be 'promotion of international understanding and cooperation', 'HRD in developing countries', and 'to heighten the level of education and research in Japan and student dispatch countries'. This Plan heralded many measures for foreign students, including a system to decrease or exempt tuition fees for privately supported students, an increase of honors scholarships and GSP, abolishment of the guarantor system for study in Japan, and start of short term student exchange programs. The target of 100,000 foreign students was accomplished in 2003.

In 1999 another governmental advisory group to MESC issued a policy statement on Japan's FSP in the 21<sup>st</sup> century: the main goal of the policy is stated to be an 'international intellectual contribution' towards world stability and development through HRD, while enhancing national interest by deepening mutual understanding and friendly relations with other countries; by strengthening Japanese intellectual influence on international society; and by promoting the internationalization of economic and social institutions (Ministry of Education, Culture, Sports, Science and Technology 2001).

Based on the policy statements mentioned above, the author identifies two main objectives of Japan's FSP between the years of 1954 and 2001: an external objective of HRD in student dispatch countries and a national interest of fostering pro-Japanese leaders in order to promote friendship with these countries (Sato 2002a, 2002b). The author assumes that behind the expression of 'promotion of friendship' there lies hidden

expectation of the Japanese government that those who studied in Japan may become influential in their home country and affect the public opinion or policies in favor of Japan. As for the other policy goals such as ‘internationalization of Japan’s economic and social institutions’, they will be dealt as positive policy impacts because they are newly added goals.

Table 2 PEM of Human Resource Development

Policy Summary	Verifiable Indicators	Means of Verification	Important Assumptions
(Overall policy goal) Economic and social development of Thailand is attained	Data on the economic and political situation	Statistics	
(Policy objective) Human resources necessary for the development of Thailand are developed by Japan’s FSP	Major and profession of alumni of Japanese HEI, their contribution in their workplaces	Name list analysis, questionnaire and interviews	
(Policy outcomes) 1. Excellent and highly motivated students from all over Thailand go to study at HEI in Japan 2. They acquire sufficient knowledge and skill at HEI in Japan 3. They can utilize and disseminate what they had acquired in Japan in their workplaces	1. Reason to have chosen Japan as country of their study, study attitude, birth place 2. Degree acquisition rate, satisfaction with study environment, study attitude 3. Survey on working environment, utilization and dissemination of what they acquired in Japan	From 1. to 3. name list analysis, comparative questionnaire survey and interviews	1.Many of them return to Thailand 2.Graduates of HEI in Japan can find employment in Thailand
(Policy outputs) The number of Thais who studied in HEI in Japan	Accumulated number of Thais who enrolled in HEI in Japan between 1954-2001:22,255 man-years	statistics	
(Programs) 1-1. Public relations on study in Japan 1-2. Recruitment and selection of Japanese Government Scholarship (GS) students 2. Education and support to foreign students in Japan 3. Follow-up to the alumni	(Institutions in Charge of the Programs and their Inputs) 1. Embassy of Japan in Thailand (MOFA) and AIEJ Thai branch office (MEXT) 2. MEXT, AIEJ, and HEI in Japan 3. Embassy of Japan in Thailand (MOFA), AIEJ (MEXT), and HEI in Japan Accumulated budgetary inputs of FSP towards Thailand between 1954-2001: 37,952 million yen		

Note 1:HEI stands for Higher Educational Institutions, AIEJ stands for the Association for International Education, Japan, MEXT stands for the Ministry of Education, Culture, Sports, Science and Technology, MOFA stands for the Ministry of Foreign Affairs.

Note 2: Policy outputs are calculated by adding the annual number of Thais enrolled in HEI in Japan between 1954-2001.

Note 3: Inputs of FSP towards Thailand is calculated in the following way: 1. Annual budgetary inputs are divided into two categories: budget for GS and other budget. 2. Each budgetary input between 1954-2001 is deflated by the annual consumer price index (2000 is set to be the base year). 3.Accumulate the deflated budgetary inputs between 1954-2001 in two categories. 4. Accumulated budgetary input of GS towards Thailand is calculated by multiplying the accumulated budget of GS and the ratio of Thai GS recipients among the total GS recipients. Accumulated budgetary input of other program towards Thailand is calculated by multiplying the accumulated budget of other program and the ratio of Thais among the total number of those who studied in Japan under other programs. 5. The accumulated budgetary inputs towards Thailand in the two categories are added.

Source: Made by the author



There is a rule that we can set only one project objective in a PDM as it is the focal point of the matrix, on which other matrix elements depend. The same rule applies for PEM. Corresponding to the two policy objectives of Japan's FSP, the author made two PEM, namely 'PEM of HRD' and 'PEM of Friendship Promotion', as shown in Tables 2 and 3. The policy outcomes listed are the expected results of the related programs from recruitment to follow-up of students.

Table 3 PEM of Friendship Promotion

Policy Summary	Verifiable Indicators	Means of Verification	Important Assumptions
(Overall policy goal) Friendship between Japan and Thailand is promoted	Thai people's perception of Japan and the Japanese, exchange between the two countries	interviews, statistics, articles/ broadcasts ,	
(Policy objective) Pro-Japanese leaders are fostered by Japan's Foreign Student Policy	The feelings of alumni of Japanese HEI towards Japan, their social influence	questionnaire survey, interviews, name list analysis,	
(Policy outcomes) 1. Excellent and highly motivated students from all over Thailand go to study at HEI in Japan 2. They are satisfied with study and living environment in Japan 3. They built good human relations during their study in Japan and continue them afterwards 4. They engage in friendship promotion activities with Japan	1. Reason to choose Japan as country of their study, study attitude, birth place 2. Situation of degree acquisition, satisfaction with study and life in Japan, 3. Survey on human relations in Japan and their continuity 4. Number of alumni involved in friendship activities	From 1 to 4. name list analysis, comparative questionnaire survey and interviews	There is no major political obstacles between Thailand and Japan
(Policy outputs) The number of Thais who studied in Japanese HEI	Accumulated number of Thais who enrolled in HEI in Japan between 1954-2001:22,255 man-years	statistics	
(Programs) 1-3. Public relations on study in Japan 1-4. Recruitment and selection of Japanese Government scholarship students 2. Education and support to foreign students in Japan 3. Promotion of exchange between foreign students and Japanese students/residents 4. Follow-up to the alumni	(Institutions in Charge of the Programs and their Inputs) 3. Embassy of Japan in Thailand (MOFA) and AIEJ Thai branch office (MEXT) 4. MEXT, AIEJ, and HEI 5. MEXT, AIEJ, and HEI 6. Embassy of Japan in Thailand (MOFA), AIEJ (MEXT), and HEI in Japan Accumulated budgetary inputs of FSP towards Thailand between 1954-2001: 37,952 million yen		

Note 1-3 and Source are the same with Table 2.

Regarding the previous studies on the impact of Japan's foreign student education, the Gondo and his study group analyzed the impact of study in Japan in seven Asian countries (1991). Since they compiled the research mainly based on published statistics

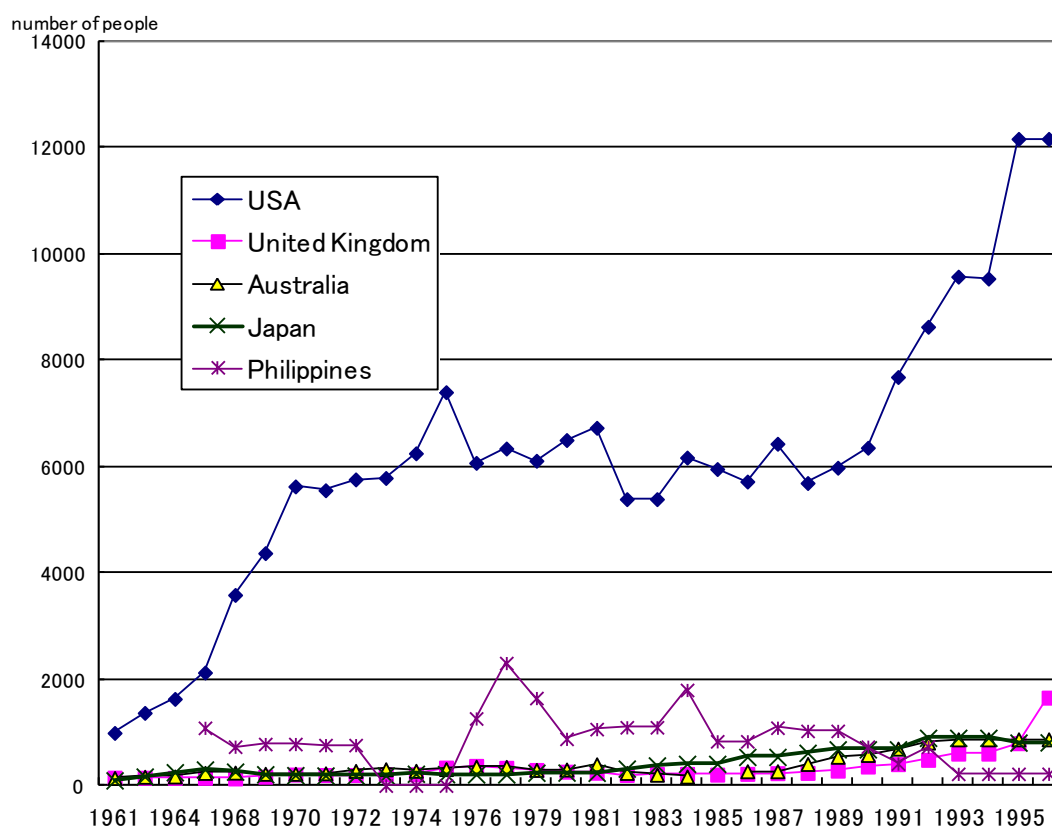
and limited interviews without conducting substantial questionnaire surveys, they provide only a general view on its impact in these countries. Endo and her study group conducted comparative questionnaires on alumni from Japanese and American universities in China, Korea, and Thailand (Endo et al. 2002). Though their study depicts the difference in academic and professional merit between the graduates of Japanese and American universities through analyzing their questionnaires, their concern is mainly focused on foreign students' individual satisfaction and on receiving feedback in regards to education in Japan rather than on analyzing the whole policy impact in these countries. In this paper, the author conducts a comprehensive evaluation of Japan's FSP towards Thailand over the last fifty years by utilizing PEM.

### **3. The Study Abroad Situation in Thailand**

Before conducting an actual policy evaluation, it is important to examine the situation of study abroad in Thailand to understand its background. Thailand has a long history of dispatching youths abroad, since 1871, to modernize the country. The first batch of eight students was dispatched to Japan in 1902 by the Thai government.

According to the UNESCO statistics, the number of Thai students who studied abroad was 2,512 in 1964, which increased to 17,093 or 0.03% of the total Thai population in 1996. Figure 1 shows the change in the numbers of those who study abroad by destination. The total number of those who studied abroad between 1964 and 1996 is 290,281. The major destinations are USA (67.2%), the Philippines (8.1%), Japan (4.5%), Australia (4.2%), India (3.7%) and UK (3.6%). The overwhelmingly most popular destination is USA and its share is increasing year by year and was 71.2% in 1996. Japan was the third most popular country in the late 1960's but the number stagnated in the 1970's and early 1980's. Numbers rebounded in the late 1980's and Japan became the second most popular destination from 1992 to 1994. As of the mid 1990's UK and

Australia began to attract more students, thus Japan has been the fourth most popular destination since 1995.



**Figure 1 Thais who study abroad by major destinations**

Source: Made by the author based on UNESCO Statistical Yearbook 1963–1998

A total of 6,392 Thai students are estimated to have studied at HEI in Japan between 1954 and 2001: 46.9% are those sponsored by GSP, 49.2% are privately supported students and 3.8% are dispatched by the Thai government.

Thai alumni who graduated from Japanese HEI have formed an association called Old Japan Student Association, Thailand (OJSAT). The major findings from the analysis of the OJSAT list of 2,192 members are listed below:

- (1) Gender: male 51.3%, female 48.7%. Gender is rather balanced.
- (2) Profession: 54.9% are company employees, 21.0% are government officers and 16.8% are academic staff members of universities.
- (3) Work place: 71.2% now work in Bangkok, 14.5% in the central region (aside from

Bangkok), 7.4% in the northern region, 2.5% in the eastern region and 2.0% in the north eastern region. The percentage of those who work in Bangkok is high while the percentage of Bangkok residents is only 9.2% of the total population.

- (4) Majors at HEI: 30.8% majored in engineering, 22.7% in economics, 21.0% in humanities, 8.7% in medicine, 7.0% in agriculture, 4.7% in science and 3.2% in law.
- (5) Major VIPs: Four Ministers, four lawmakers and a president of a national university.

#### **4. Outline of the Questionnaire Survey**

In 2002 the author conducted a survey in Thailand, which was based on the verifiable indicators and means of verification listed in the two PEM. As for the questionnaire respondents, samples were taken from not only the Thais who had studied in Japan but also the Thais who studied in American universities for more than one year between 1954 and 2001, and those who never studied abroad but graduated from Thai universities during this period. The responses of the alumni of the American universities were used to determine the attainment of the American FSP, which was referred to as a successful policy model since the USA has attracted the largest number of foreign students from, not only Thailand, but all over the world. The graduates of the Thai universities were used as the control group. All questionnaires were translated into Thai. 332 replies of the graduates of Japanese HEI (hereafter referred to as Japan alumni) were collected in response to the mailed questionnaires to those on the OJSAT list. 223 replies of the graduates of the American HEI (hereafter referred to as USA alumni) were collected in response to the mailed questionnaires to those having odd numbers on the list of the American University Alumni Association (AUAA). 72 replies were also collected from the graduates of Thai HEI who had never studied abroad (hereafter referred to as Thailand alumni). Most of the Thailand alumni were sampled from either faculty members of universities or company employees, the two major professional

groups of Japan alumni in order to facilitate the comparison between the two groups.

<b>Table 4 Main attributes of the questionnaire respondents in Thailand</b>			
	alumni of Japanese HEI	alumni of American HEI	alumni of Thai HEI
number of respondents	332	223	72
gender	male 61.1%, female 38.9%	male 80.4%, female 19.6%	male 49.3%, female 50.7%
distribution of year of birth	1932–1982, mean average 1957	1918–1976, mean average 1948	1943–1980, mean average 1969
profession	55.1% are company employees (33.7% work at Japanese capital companies, 13.6% at Thai capital companies and 7.8% at other foreign capital companies), 26.2% are academic staff members of universities, 20.8% are government or semi-government officers, 14.5% are company owners and 0.9% are politicians	43.4% are government or semi-government officers, 40.4% are company employees (22% work in Thai capital companies, 9.9% in American capital companies and 8.5% in other foreign capital companies), 28.7% are academic staff members of universities, 15.2% are company owners and 1.3% are politicians	51.4% are company employees (36.1% work in Thai capital companies, 4.2% in Japanese capital companies and 11.1% in other foreign capital companies), 44.4% are academic staff members of universities, 2.8% are company owners
level of course joined or graduated	37.3% studied in an undergraduate course, 35.8% in a masters course and 17.2% in a doctors course; 26.8% joined other programs	25.6% studied in an undergraduate course, 71.7% in a masters course and 22.4% in a doctors course and 11.2% joined other programs	63.9% studied in an undergraduate course, 23.6% in a masters course and 6.9% in a doctors course
scholarship	49.7% received Japanese Government Scholarships, 6.6% received Thai Government Scholarships and 24.1% obtained other scholarships	15.7% received American government scholarships, 14.3% received Thai Government Scholarships and 18.8% obtained other scholarships	
majors	26.1% majored in engineering, 21.1% in humanities including Japanese language, 21.1% in economics, 10.1% in science, 8.2% in medicine, 6.6% in agriculture and 3.8% in law	39.2% majored in economics, 16.3% in engineering, 8.8% in humanities, 8.6% in medicine, 7.7% in science, 7.2% in law and 5.3% in agriculture	29.8% majored in science, 28.1% in economics, 21.1% in engineering, 17.6% in humanities, 1.8% in law and 1.8% in agriculture
Source: Made by the author based on the questionnaire survey conducted in 2002.			
Note 1: % is the percentage of the total respondents of the group.			
Note 2: In the item of profession and level of course, respondents chose multiple answers.			

The main attributes of the respondents are shown in Table 4. Those of Japan alumni mostly correspond with those of OJSAT members stated in the previous section, proving that the samples reflect the population. We can see the following trends of the three groups of respondents:

- (1) The percentage of company employees is high among Japan alumni while that of government & semi-government officers is high among USA alumni.
- (2) The percentage of academic staff of universities and that of company owners are similar between Japan and USA alumni.
- (3) The percentage of those who study in a master course is high among USA alumni.

- (4) The percentage of scholarship recipients is 48.8% among USA alumni, while that of Japan alumni is as high as 80.4%, of which more than half are the recipients of GS.
- (5) The most popular major among Japan alumni is engineering, followed by humanities and economics while 39.2% of USA alumni choose economics as their major, followed by engineering.

In many items of the questionnaire, respondents are requested to choose the applicability of statements in five degrees. The mean of the answers given by questionnaire respondents and other data are compared among the three groups to measure the relative attainment of policy outcomes of Japan's FSP. This attainment rate of policy outcomes is shown in the following five degrees, 100%, 75%, 50%, 25% or 0% and would be used as a base to evaluate the effectiveness, impact and efficiency.

## **5. Policy Evaluation from the Perspective of Human Resources Development**

### **5.1 Examination of the policy outcomes**

- (1) Excellent and highly motivated students from all over Thailand go to study at HEI in Japan: attainment 75%

Table 5 shows the main reasons to have chosen the country of study as responded in the questionnaire survey. The reason why 'I wanted to study in any foreign country' is listed as the top for Japan alumni and the second for USA alumni seems to lie with the perception of Thai students that they can benefit simply by studying in an advanced country.

Table 5 Main reasons to have chosen the country of study				
		alumni of Japanese HEI	alumni of American HEI	significant difference between the two groups
1	I wanted to study in any foreign country	4.26	4.36	no
2	The country is economically and technologically advanced	4.24	4.42	yes
3	I had an interest in the language of the country	3.94	4.19	yes
4	I had an interest in the culture of the country	3.90	3.07	yes
5	The level of research in the country is high in my field of study	3.85	4.05	yes
6	I obtained a scholarship	3.79	2.94	yes
7	Seniors and friends also studied in the country	2.59	3.31	yes
8	My supervisor advised me to go to the country	2.32	2.53	yes
Note 1: The figures without specifications are the mean averages of the answers chosen by the respondents among five degrees of applicability.				
Note2: Not significantly different is declared at more than 0.05 level of probability.				
Source: Made by the author based on the questionnaire survey conducted in 2002.				

Regarding the economic and technological advancement, interest in the language, high level of research, existence of seniors and friends studying there, and advice of supervisors, USA alumni show stronger motivation than Japan alumni with significant differences at 0.05 level of probability (hereafter, not significantly different is declared at more than 0.05 level of probability). Regarding the interest in the culture and availability of scholarship, Japan alumni show stronger motivation than USA alumni with significant differences.

As for opportunities to study in other countries when they chose to study abroad, 34.5% of Japan alumni and 21.3% of USA alumni respondents said that they had such opportunities. This figure means that about one third of the Japan alumni chose to study in Japan on their own initiative at the expense of study opportunities in other countries. The major countries where Japan alumni gave up studying are USA (63), UK (8), Germany (6), and Australia (5) (the figures in parentheses show the number of respondents).

As the item 1 of Table 6 shows, there is no significant difference between the study attitude of Japan and USA alumni while there exist significant differences between Japan/USA alumni and Thailand alumni. This result shows that those who studied in Japan and USA are more motivated to study than those who studied in Thailand.

Table 6 Study attitude and environment during their study						
		alumni of Japanese HEI (A)	alumni of American HEI (B)	significant difference between A and B	alumn of Thai HEI (C)	significant difference between A and C
1	I studied hard in the universities/schools.	4.21	4.20	no	3.81	yes
2	I could choose lectures among many choices.	3.28	3.90	yes	3.14	no
3	I could get practical training.	3.57	3.54	no	3.36	no
4	My supervisor guided me well in my research.	3.79	3.80	no	3.64	no
5	Laboratories were well equipped.	3.59	3.70	no	3.07	yes
6	Library had enough books and data.	3.85	4.42	yes	3.32	yes
7	Library was easy to utilize.	3.87	4.43	yes	3.54	yes
8	Foreign students were cared enough	3.74	3.60	no		
9	I was satisfied with my study environment.	3.93	4.03	no	3.53	yes
10	Degree acquisition rate at bachelor course	97.0%	98.2%	no		
11	Degree acquisition rate at master course	97.1%	97.5%	no		
12	Degree acquisition rate at doctor course	93.9%	100.0%	yes		
13	I had financial difficulty.	1.95	1.91	no		
14	I had difficulty to find a good accommodation.	2.28	1.97	yes		
15	I was right to have chosen Japan/USA as the country of my study.	4.23	4.34	no		
16	Have you recommended the people around you to study in Japan/USA?	Yes 84.6%, No 12.3%	Yes 79.8%, No 10.8%	no		
17	How many people went to study in Japan/USA as the result of your recommendation above?	2.4 persons	3.8 persons	yes		

Note 1, 2 and source are the same with Table 5

The selection of GSP candidates is conducted by the Japanese Embassy in Thailand. The minimum required GPA (General Point Average, its maximum is 4.0) is 3.8 for those who apply for undergraduate courses and 3.5 for the applicants for graduate courses. In spite of this high requirement, the ratio of successful applicants to total applicants is 1:80 for undergraduate course study and 1:6 for graduate course study.

Regarding their birthplace, 63.9% of Japan alumni and 62.0% of USA alumni respondents were born in Bangkok while the percentage of Bangkok residents is only 9.2% of the total population in 2001. This shows that those born in Bangkok have more opportunities to study abroad than those born in other regions.

From the above results, we can state that the policy outcome 1 is for the most part attained although some of the pull factors for study in Japan are weaker than those for study in USA, and a better regional balance of applicants is desired.



(2) They acquire sufficient knowledge and skill at HEI in Japan: attainment 75%

From item 2 to 9 of Table 6 shows the questionnaire result on the satisfaction with their study environment. As item 9 shows, there is no significant difference regarding the overall satisfaction with the study environment between Japan and USA alumni, while there exist significant differences between Japan/USA alumni and Thailand alumni. USA alumni are more satisfied than Japan alumni regarding choices of lectures, library collection and services.

As for the degree acquisition shown in item 10-12, degree acquisition at doctor course is lower in Japan than in USA. This is partly because awarding doctor degrees has been regarded rather special in Japanese universities, especially in social sciences and humanities. Japanese language is more difficult than English for most Thai students who often choose English as their first foreign language and this can be seen as another barrier to obtain a degree.

As already seen in the examination of the policy outcome 1 above, Japan and USA alumni responded that they studied hard at HEI. From these results we can state that many Japan alumni could acquire a level of knowledge and skill in Japan that was sufficient in fulfilling their expectations though some aspects of higher education in Japan, including award of degrees, need further improvement compared with the USA.

(3) They can utilize and disseminate what they had acquired in Japan in their workplaces: attainment 75%

Table 7 shows the result of the questionnaire survey regarding working environment and utilization/dissemination of what they had acquired abroad. Regarding item 1-3 which show the satisfaction with budget/money, facilities and attitude of their superiors/colleagues in their workplaces, USA and Thailand alumni are more satisfied than Japan alumni. Broken down by profession, company employees show more dissatisfaction with these items compared with academic staff members of universities

and government & semi-government officers. In companies, the first priority is set to produce more profits while in universities and governmental organizations, broader and long-term purposes are in place and utilization of knowledge and skill acquired abroad tends to be more encouraged.

**Table 7 Working environment and utilization/dissemination of what they had acquired abroad**

		alumni of Japanese HEI (A)	alumni of American HEI (B)	significant difference between A and B	alumn of Thai HEI (C)	significant difference between A and C
1	I had enough budget/money to practice what I had acquired abroad/at HEI in Thailand	2.07	2.65	yes	2.37	yes
	company employees	1.89	2.51	yes	2.24	no
	academic staff members of universities	2.40	2.68	no	2.53	no
	government & semi-government officers	2.00	2.75	yes		
2	I had sufficient facility to practice what I had acquired abroad/at HEI in Thailand	2.15	2.57	yes	2.99	yes
	company employees	2.01	2.42	yes	2.47	yes
	academic staff members of universities	2.42	2.60	no	3.56	no
	government & semi-government officers	2.00	2.61	yes		
3	My superiors/colleagues are supportive to practice what I had acquired abroad/at HEI in Thailand	2.30	2.95	yes	3.03	yes
	company employees	2.01	2.77	yes	2.75	yes
	academic staff members of universities	2.70	3.16	yes	3.34	yes
	government & semi-government officers	2.41	2.94	yes		
4	I introduce the working style of the country of my study in my workplace	3.98	3.75	yes		
	company employees	4.04	3.59	yes		
	academic staff members of universities	4.07	4.02	no		
	government & semi-government officers	3.85	3.65	no		
5	I utilize the relationship with the people of the country of my study to facilitate my work	3.10	2.65	yes		
	company employees	3.24	2.52	yes		
	academic staff members of universities	2.98	2.79	no		
	government & semi-government officers	2.73	2.60	no		
6	Do you have a chance to meet the Japanese/American in your work?	3.23	3.07	yes	1.90	yes
	company employees	3.39	3.08	yes	1.89	yes
	academic staff members of universities	3.08	3.11	no	1.81	yes
	government & semi-government officers	3.01	3.00	no		
7	I utilize what I had acquired abroad/at HEI in Thailand	4.09	4.10	no	3.73	yes
	company employees	4.11	4.00	no	3.75	no
	academic staff members of universities	4.15	4.41	yes	3.69	yes
	government & semi-government officers	4.03	4.31	no		
8	To how many people in your workplace did you convey knowledge and skill which you had acquired abroad?	6.2	11.9	yes		
	company employees	5.2	8.2	no		
	academic staff members of universities	6.7	12.0	no		
	government & semi-government officers	7.4	11.0	no		

Note 1, 2 and source are the same with Table 5

Note 3: In item 1-3 and 7, the questions to the alumni of Thai HEI was related to 'what they had acquired at HEI in Thailand'.

Note 5: The answer of item 6 was chosen among the four degrees of frequencies. For the alumni of Thai HEI, the frequency to meet with the Japanese was asked.

Note 6: The answers of item 8 show the average number of persons.

However, the satisfaction of Japan alumni is lower even in the same professional group.

According to a Japan alumni who has worked for a Japanese capital companies for thirty years, the top management of his company has been sent from the head office in Japan and the Thai employee like him who graduated from the Japanese HEI have not been given broad authorities. Since more than 60% of Japan alumni working in private sector work in Japanese capital companies, this will explain their lower satisfaction than USA and Thailand alumni.

In universities and governmental organizations Japan alumni don't enjoy the equal promotion and support as USA alumni, which will explain their lower satisfaction in these professional groups. These phenomena will be illustrated in the next section. Thailand alumni feel less frustration in the practice of what they learned in HEI because they face less cultural friction in the introduction of what they had learned in Thai HEI. Regarding the introduction of working style and utilization of the relationship with the people of the country of their study, Japan alumni show stronger tendency to do so than USA alumni as shown in item 4 and 5. As Item 6 shows there is a significant difference between Japan and Thailand alumni in the frequency of meeting Japanese, indicating that Japan alumni tend to be assigned to posts which liaise with the Japanese. Japan alumni working in companies meet the Japanese most frequently and utilize the relationship with them most. Close economic relation with Japan and the importance of human networks in business will explain this tendency.

Regarding the utilization of what they had acquired abroad/at HEI in Thailand shown in item 7, there is no significant difference between Japan and USA alumni while the answer of Thailand alumni is lower than these two groups. These figures show that positive attitude of Japan and USA alumni towards the utilization of what they had learned abroad.

In order to know which factor affects the utilization of what they acquired abroad most for Japan alumni, the author conducted multiple regression analysis by putting their answers of item 7 as a dependent variable and those of item 1 to 5 as independent

variables using the stepwise method. As a result, the standardized coefficient of item 4 of the introduction of working style was the highest .497, followed by .133 of item 5 of the utilization of the relationship with the Japanese.

Item 8 shows the number of people to whom they conveyed the knowledge and skill, which they acquired abroad. The average result of Japan alumni is less than that of USA alumni. Broken down by profession, government officers and academic staff members of universities show larger values while company employees show smaller values than the average. The reason for the significant difference between Japan and USA alumni can be explained partly by the higher ratio of company employees among Japan alumni. From these results we can conclude that although Japan alumni utilize the Japanese working style and relationship with the Japanese as fruits of study abroad, dissemination of the knowledge and skill acquired in Japan has not been practiced as widely as USA alumni in their workplaces. This attainment of this policy outcome is estimated to be 75%.

## 5.2 Examination of the important assumptions

### (1) Many students return to their home country: fulfilled

According to the Immigration Office of Japan, the number of Thais who changed their visa status from 'study' to 'work' was 42 or 3.0% of the total Thais enrolled at HEI in Japan in 2002. The number of this kind of visa change of foreign students has increased by 58.4% in the last ten years. The percentage of Thai students who choose to work in Japan after their study has been small.

According to the first secretary in charge of foreign student affairs in the Japanese Embassy in Thailand, most Thai students who studied in Japanese HEI return home because they have strong family ties and can find good employment in Thailand, which economy has expanded rapidly. From this data we can safely assume that this assumption is fulfilled.

(2) Graduates of Japanese HEI can find employment in Thailand: fulfilled

The questionnaire results show that 29.4% of the Japan alumni respondents were reinstated in their former posts, 44.7% found new jobs and 18.8% fall into other categories such as working in family companies or having started their own businesses. To those who found new jobs after their graduation, applicability of the following statement 'I had an advantage in finding a job because I studied abroad/in Thailand' was asked and the average answer of Japan alumni was 3.85, that of USA alumni was 3.88 while that of Thailand alumni was 3.61. To the statement 'I had difficulty in finding a job because of the economic situation in Thailand' the average answer was 2.11 for Japan alumni, 1.97 for USA alumni and 2.73 for Thailand alumni with significant differences between Japan/USA alumni and Thailand alumni. These figures show that Japanese alumni could find employment in Thailand as easily as USA alumni and more easily than Thai alumni.

5.3 Examination of the policy objective and the effectiveness of the policy

Because the average attainment of the three policy outcomes is 75% and the important assumptions are fulfilled, the necessary conditions for the attainment of the policy objective are mostly fulfilled. Now, the author would like to determine if the policy objective of HRD is also attained.

First let us consider the needs of HRD in Thailand. In the National Economic and Social Development Plans which have been made and employed since 1961, HRD in the field of science and technology has been given high priorities consistently. In the 7th plan for 1992-1996, it is stated that the proportion of engineers should be increased from 9.8 to 14.9 and that of scientists to be increased from 7.2 to 10.2 per 10,000 capita. In the 8th plan for 1997-2001, it is stated that the ratio of graduates in the field of science and technology to those in social science and humanities should be increased from the

current 31:69 to at least 40:60. In the supplementary document of the 8th plan it is stated that the ratio of lecturers holding doctorate's, master's and bachelor's degree should be raised from 2:4:1 to 3:6:1. Higher education in Japan, which has produced many Thai graduates in the field of engineering and masters and doctorate degree holders, has matched this need of HRD in Thailand.

Thai economic growth had been promoted by large foreign investment. 41.3% of the total foreign investment between 1960 and 1998 was from Japan, outdistancing USA (11.8%) and Taiwan (7.8%). Japanese capital companies have contributed to the development of the Thai economy (Pornavalai, 1995). About one third of Japan alumni work in these Japanese capital companies. They have contributed to the development of these companies bridging the Thai workers and the Japanese management staff. They have heightened the morale of workers by introducing the Japanese working style and utilized their relationship with the Japanese to promote their business. Japan alumni in other capital companies and those who manage their own companies also made the most use of their study experience in their business. In this sense, not only academic staff members of universities and government officials but also those in the private sector have contributed to the development of Thailand: the former through their involvement in research/education and policy making/implementation and the latter through their business activities to boost the Thai economy.

From this analysis we can conclude that Japan's FSP towards Thailand has been effective in developing the human resources necessary for Thailand.

#### 5.4 Impact, efficiency, relevance and unintended effects

In this section we examine what impact Japan's FSP has had on the economic and social development of Thailand.

Thailand's economic and social development in the last 50 years has been remarkable. In spite of several coups, the political system of Thailand has been rather stable in the

past 40 years. The average economic growth rate between 1967 and 1996 was as high as 7.8%. The economic crisis in 1997-1998 brought about economic stagnation but the Thai economy overcame this negative impact by the early 2000's. Japan's FSP had a positive impact on this development by fostering human resources in the needed fields. As for the volume of the policy impact the author calculates it to be 16,691 man-years by multiplying the policy outputs and the attainment rate of the policy objective. Since the output of American FSP is calculated to be 262, 782 (estimated accumulated number of Thai students who studied at HEI in USA between 1954-2000), the impact of Japan's FSP will be much smaller than that of American FSP although this difference may be reduced considering the lower returning rate of USA alumni. Japan's FSP has attained its objective well though its policy impact is much smaller than USA.

Policy efficiency is calculated to be 0.44 by dividing the policy impact by the accumulated and deflated annual budgetary inputs. This figure shows the supposed policy impact per the input of one million yen.

Regarding relevance, the author examines the recent policy and the need of higher education in Thailand. In the 8th National Economic and Social Development Plan for 1997-2001, the need for human resources that are capable of research and development is stressed. This is to cope with the situation that foreign investments are shifting from Thailand to China and other Asian countries, which provide cheaper labor. It has become necessary for Thailand to add higher value to its products by realizing technological innovations. For Japan's FSP to continue to be relevant to the needs of HRD of Thailand, it should offer the educational opportunities which will foster people who are well capable of research and development.

As for unintended effects related to HRD, the author examines two phenomena: brain drain and hindrance to the development of higher education. Brain drain refers to foreign students who choose to work in the country of their study. The risk of brain drain is low concerning Japan's FSP since most of Thai students who studied in Japan



return to their home country as shown in the examination of the important assumptions. Regarding the hindrance to the development of higher education in Thailand, undergraduate education is not affected much because the number of the Thai students enrolled in HEI has increased rapidly and has exceeded the accommodation capacity of HEI in Thailand. As for graduate education, graduate schools have been established in major national universities and efforts have been made to keep students in these schools. Some of them started 'sandwich programs' which offer education in Thailand in the beginning and the end and send students to some overseas universities in between so that excellent Thai students will be enrolled in these graduate schools. Japan should also consider this new style of graduate education to minimize this side effect and keep its higher education relevant to the changing needs of the Thai society.

## **6. Policy Evaluation from the Perspective of Friendship Promotion**

### **6.1 Examination of the policy outcomes**

(1) Excellent and highly motivated students from all over Thailand go to study at HEI in Japan: attainment 75%: Already examined in the previous section.

(2) They are satisfied with study and living environment in Japan: attainment 75%

As we have already seen in the examination of the policy outcome 2 of the previous section, Japan alumni are mostly satisfied with their study environment though some items show lower satisfaction than USA alumni. Item 13 and 14 of Table 6 shows the questionnaire results regarding living environment: Japan alumni face more difficulty to find good accommodation than USA alumni during their study.

Item 15 shows the overall satisfaction of their study abroad experience. There is no significant difference between the answers of Japan and USA alumni. Item 16 shows the number of people whom they recommended to study in the country of their study.

The percentage of Japan alumni who answered ‘Yes’ is similar to that of USA alumni, though the actual number of those who studied in Japan is smaller than that of those whom studied in the USA, with a significant difference as shown in item 17. This difference is explained partly by a higher percentage of USA alumni working at government offices and universities where workers have more opportunities to obtain scholarships than other professions, and partly by the easier access to higher education in USA for its standardized entrance system requiring TOEFL and GRE scores.

From these results we can state that this policy outcome is mostly attained, although some aspects of higher education in Japan needs further improvement to make it as attractive and accessible as that of USA.

<b>Table 8 Human relations during and after their study, friendship activities</b>				
		alumni of Japanese HEI	alumni of American HEI	significant difference between the two groups
1	I could make close relationship with my supervisor.	3.82	3.65	yes
2	I could make friends with natives of the country of my study on campus.	3.81	3.44	yes
3	I could make friends with natives of the country of my study off campus	3.30	2.87	yes
4	I still keep contact with supervisor of the country of my study.	2.26	2.14	no
5	I still keep contact with the friends from the country of my study	2.73	2.33	yes
6	Are you involved in any activities to promote friendship between Thailand and the country of your study?	Yes 84.3%, No 11.4%	Yes 68.2%, No 29.1%	
	1) Alumni Activities	53.0%	54.7%	
	2) To introduce Japanese/American culture	33.1%	17.5%	
	3) To teach Japanese/English	37.7%	17.0%	
	4) Regular meeting with Japanese/American people in Thailand	41.9%	40.4%	
Note 1, 2 and source are the same with Table 5				
Note 3: % is the percentage of the total respondents of the group				

(3) The students built good human relations during their study in Japan and continue them afterwards: attainment 100%

Item 1 to 5 of Table 8 show the questionnaire result on the human relations during and after their study. In every item Japan alumni’s average answer is higher than that of USA alumni, indicating that Japan alumni formed closer human relationships with the Japanese than USA alumni with the Americans. The chances to make friends on and off

campus are higher in Japan than in USA and Japan alumni show a stronger tendency to keep contact with Japanese friends than USA alumni with the American. From these results we can conclude that this policy outcome is well attained. The formation of good human relations can be counted as strength of study in Japan.

(4) They engage in friendship promotion activities with Japan: attainment 100%

Item 6 of Table 8 shows the questionnaire result on their participation in the friendship promotion activities with the country of their study. The percentage of those who participate in friendship promotion activities with the country of their study is higher among Japan alumni than USA alumni. As for their activities, the percentage of those who introduce culture and language of the country of study is higher among Japan alumni than USA alumni. From these results we can conclude that this policy outcome is attained well.

## 6.2 Examination of the important assumptions

(1) There are no major political problems between Thailand and Japan: fulfilled

Since the end of World War II, there have been no serious political obstacles between Thailand and Japan. On the contrary, we can say that their relationship has been mostly smooth and strengthened by expanding economic ties. Despite her economic stagnation, Japan provided large ODA funds to Thailand at the time of economic crisis in 1998. Thailand is regarded by Japan as one of the most important political and economic partners in Asia and vice versa.

## 6.3 Examination of the objective and effectiveness of the policy

Because the average attainment of the policy outcomes is 87.5% and the important assumption is fulfilled, the necessary conditions for the attainment of the policy objective are also fulfilled. Now, let us see if the policy objective of fostering of pro

Japanese leaders is actually attained.

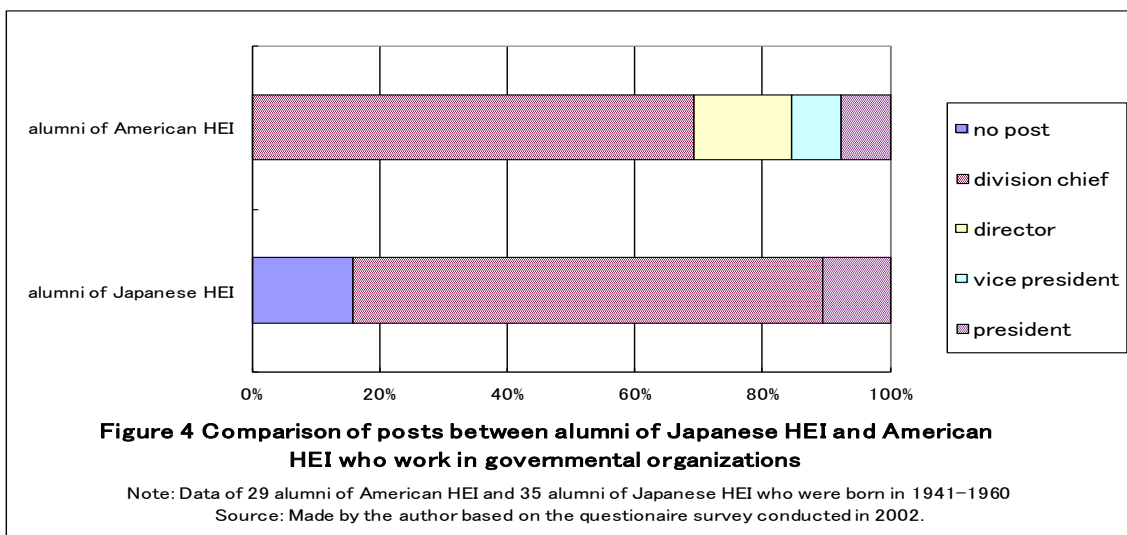
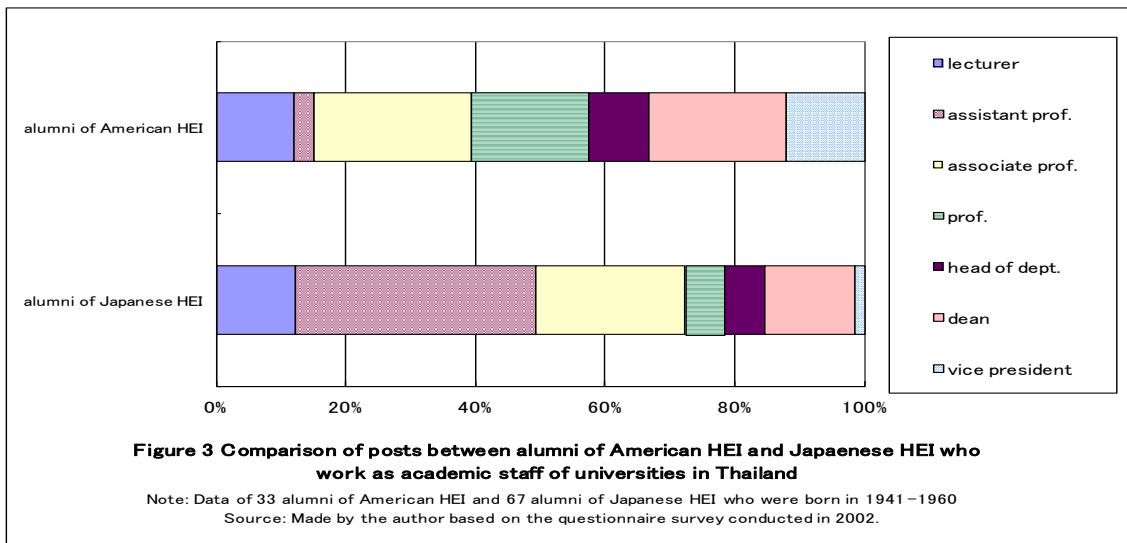
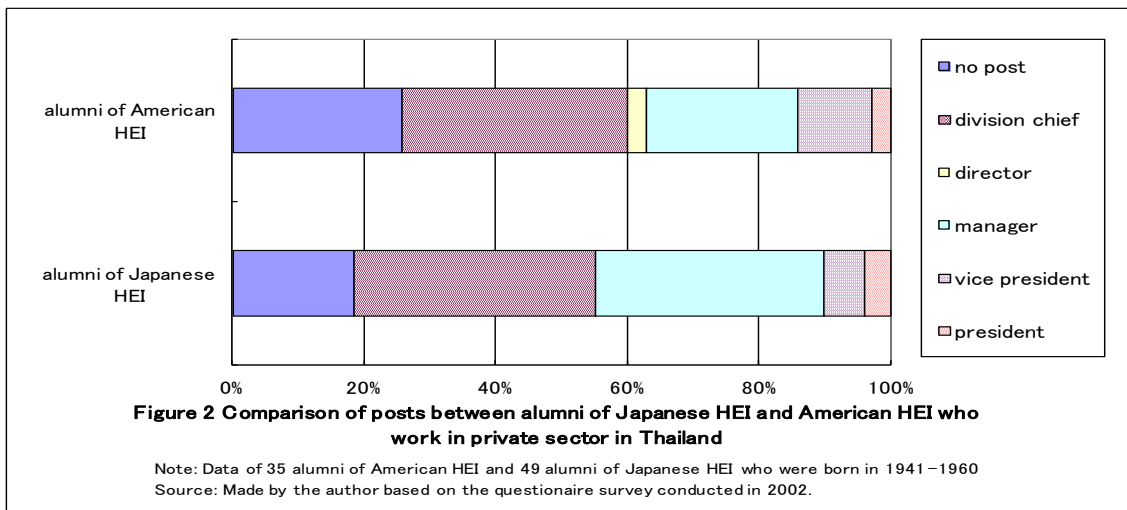
<b>Table 9 Affinity with the native of the country of their study, social influence</b>						
		alumni of Japanese HEI (A)	alumni of American HEI (B)	significant difference between A and B	alumn of Thai HEI (C)	significant difference between A and C
1	I like Japanese people.	3.66			3.41	yes
2	I like American people.		3.28		2.92	yes
3	I think the people who studied in Japan/USA are influential in the Thai society	2.85	3.54	yes		
4	The number of Thai workers in the workplaces who had studied in Japan/USA	3.1	8.8	yes		
	company employees	2.0	5.6	yes		
	academic staff members of universities	5.4	9.9	no		
	government & semi-government officers	3.6	12.6	yes		
Note 1, 2 and source are the same with Table 5						

As shown in item 1 and 2 of Table 9, Japan alumni favor the Japanese more than Thailand alumni with a significant difference. These figures show that the Japan alumni came to befriend the Japanese as a result of their study in Japan. USA alumni show less affection towards the people of the country of their study than Japan alumni with a significant difference.

Their recognition of social influence is shown in item 3. Since the number of Japan alumni is less than that of the USA, in both total number and in major professional groups as shown in item 4, their recognition of social influence is also smaller than USA alumni with a significant difference.

As for their promotion in their workplaces, the author compared the posts of Japan and USA alumni who were born between 1941 and 1960. For company employees, there is not a large difference between Japan and USA alumni, as can be seen in Figure 2. However, for academic staff members of universities and governments and semi-government officers, there exist apparent differences between the two groups as shown in Figure 3 and 4. In the private sector where exists strong economic ties with Japan, Japan alumni seem to have as much advantage as USA alumni. However in the universities and governmental organizations, Japan alumni have a smaller influence and

advantage in promotion than USA alumni because of their smaller numbers.



The author also examined the academic staff data of faculties of engineering and science of Chulalongkorn University, the most prestigious national university in Thailand. Among 304 academic staff members of the faculty of engineering, 39.1% took their final degree in USA, 30.3% in Thailand, 11.2% in UK and 9.9% in Japan. Among the twelve heads of the departments in the faculty, seven heads got their final degrees in USA, three in Thailand, one in Japan and one in UK. In the faculty of science, among 408 academic staff, 43.4% took their final degree in Thailand, 31.1% in USA, 9.3% in UK and 5.6% in Japan. Among the fourteen heads of the departments in the faculty, eight heads got their final degrees in USA, two in Thailand, two in Australia and one in New Zealand. These figures show that much more important posts are occupied by USA alumni than Japan alumni.

From these results we can conclude that Japan's FSP towards Thailand has been effective in fostering pro-Japanese leaders, although they have less social influence than USA alumni because of their smaller number. At universities and governmental organizations Japan alumni do not enjoy as much promotion as their USA alumni counterparts.

#### 6.4 Impact, efficiency, relevance and unintended effects

We have already seen that the policy objective is mostly attained. Now, we consider the kind of impact Japan's FSP has had on the promotion of friendship between Japan and Thailand.

In the attainment of this overall goal, OJSAT has played an important role. OJSAT was established in 1951 as the first Japan alumni association in the world. It has operated as one of the most prestigious Japanese language schools in Thailand and published many books related to Japan. The profits derived from the Japanese language school and publishing business have provided necessary funds for their friendship activities such as holding seminars related to Japanese culture and business. OJSAT also has cosponsored

Japan Education Fair and Examination for Japanese University (EJU) to promote study in Japan. There is another Japan related association called Technology Promotion Association (TPA), which was founded in 1973 and has been managed by those who studied or received training in Japan. TPA also operates a large scale Japanese language school, conducts seminars and publishes various books mostly related to Japanese business and technology. These well-organized activities of OJSAT and TPA have promoted the mutual friendship and understanding between the two people very much.

In the 1970's when Japanese investment increased in Thailand, anti-Japanese feeling among the Thai was provoked. The most symbolic incident was the visit of Prime Minister Tanaka in 1974, who was met with an anti-Japan demonstration so severe that he was unable to leave his car. However, in the late 1980's when Japanese investment again increased drastically in Thailand, such strong anti-Japanese feeling did not occur among the Thai. This seems to have been brought about by the people's efforts, such as the one represented by OJSAT and TPA, to promote mutual friendship and understanding as well as the efforts of Japanese capital companies which came to pay more effort to contribute to and understand the local society.

As for the volume of the policy impact the author calculates it to be 19,473 man-years by multiplying the policy outputs and the attainment rate of the policy objective. Policy efficiency is calculated to be 0.51 by dividing the policy impact by the accumulated and deflated budgetary inputs. Although these figures are larger than those related to HRD, the volume of impact remains to be much smaller than that of USA which alumni are 15 times larger than Japan alumni. From these facts we can conclude that Japan's FSP has had a positive but limited impact on this goal.

As for the relevance, Thailand remains to be one of the most important partner countries for Japan. It is still relevant for Japan to strengthen the relations with Thailand through FSP.

Regarding unintended effects, the internationalization of Japan's economic and social

institutions will be raised as one of the positive impacts which was not intended when Japan's FSP started in 1954. This effect came to be estimated high and became a policy goal itself in 1999 as we have already seen in section 2.

## **7. Closing remarks**

As we have seen in the previous sections, the effectiveness of Japan's FSP towards Thailand is measured to be 75% from the perspectives of HRD and 87.5% from the perspective of friendship promotion. We can conclude that Japan's FSP towards Thailand has been fairly successful although its policy impact is much smaller than that of the American FSP because of a smaller number of accepted students. Japan needs further efforts to attract more foreign students, especially those who study at their own expense, to increase its policy impact and efficiency.

In order to know the relation of the attainment of the two objectives, the result is plotted on a three-dimensional scatter plot in Figure 5, showing the relationships between the yearly accumulated inputs (x-axis), the yearly accumulated impact on HRD (y-axis) and the yearly accumulated impact on the promotion of friendship with Japan (z-axis). By examining x-y coordinates and x-z coordinates we can see the efficiency for development and national interest, respectively, while y-z coordinates will illustrate the relative strength of impact between the two goals. By plotting the evaluation result of FSP towards other countries, we can compare the efficiencies and impact on the two goals. Since FSP has been implemented as part of ODA in Japan, this case evaluation can be regarded as a model of ODA evaluation incorporating the perspective of development and national interest.

As a result of the evaluation, the author found the following strength and weakness of the proposed evaluation method utilizing PEM and a three-dimensional graph:

- (1) PEM, which list almost all the elements affecting or deriving from the



policy/program, is useful to ascertain its theory. The evaluator can share the same discussion platform with policy makers and other related people by making PEM.

(2) Unintended effects are not listed in the PEM and this can be counted as a weakness of this method. It is also not easy to list the important assumptions. In this regard, the discussion mentioned above will be necessary to improve the PEM and conduct a good evaluation.

(3) It is possible to measure the effectiveness, impact, efficiency and relevance of the policy/program by utilizing PEM. If it becomes possible to measure the sustainability, this method will realize policy/program evaluation fulfilling all the criteria set by the 'DAC Principles for the Evaluation of Development Assistance' (OECD 1991).

(4) Since ODA policies have two goals of development and donor's national interest by nature, this case evaluation can be regarded as a model of ODA evaluation and can be applied to other ODA policy/program to perform evaluation from these two perspectives. By plotting the evaluation result on a three-dimensional graph, it will be possible to consider an ideal ODA policy mix, which will attain the two goals of ODA in the most efficient and effective way.

As for the future work of this research, it is necessary to analyze the free description section of the questionnaire, allowing more qualitative evaluation to be conducted and thus explore the facts more deeply. To consider the income from tuition fee will be also necessary for the more accurate examination of the efficiency.

## **References**

- Chen H.T. (1990) *Theory-Driven Evaluations*. California: SAGE Publications.
- Endo, H. et al. (2003) *Comparative Follow-up Survey of Returned Students in Asia who studied in Japan, Europe and USA*. Tsukuba: Tsukuba University.
- Funnell, S.C. (2000) 'Developing and Using a Program Theory Matrix for Program Evaluation and Performance Monitoring', in Rogers, P. C. et al. (ed.) *Program Theory in Evaluation: Challenges*

- and Opportunities, New Direction for Evaluation*, pp. 91-101. San Francisco: Jossey-Bass Publishers.
- Gondo, Y. et al. (1991) *Ryugaku no kouka to seika ni kansuru kokusaiteki hikaku kenkyu* (International comparative study on the effect and influence of study abroad). Fukuoka: Kyushu University.
- Knapp, P.V.D. (2004) 'Theory-based Evaluation and Learning: Possibilities and Challenges', *Evaluation* 10(1): 16-34.
- Ministry of Education, Science and Culture (1970) *Outline of the Japanese Government Scholarship Program for Foreign Students*, Tokyo.
- Ministry of Education, Culture, Sports, Science and Technology (2001) *Outline of the Student Exchange System in Japan*. Available at: <http://www.mext.go.jp/english/news/2001/05/010501.html/>
- Miyoshi, K. (2002) 'Utilization of Program Theory Matrix for Improving the Usefulness of Evaluation Analysis', *The Japanese Journal of Evaluation Studies* 2(1): 11-27.
- National Economic and Social Development Board (1991) *The Seventh National Economic and Social Development Plan(1992-1996)*. Bangkok.
- National Economic and Social Development Board(1996) *The Eighth National Economic and Social Development Plan(1997-2001)*. Bangkok.
- OECD (1991) *The DAC Principles for the Evaluation of Development Assistance*. Paris: OECD.
- Pawson, R. (2003) 'Nothing as Practical as a Good Theory ', *Evaluation* 9(4): 471-490.
- Pornavalai, S. (1995) 'Tai no Kogyoka to Nikkei kigyo (Industrialization of Thailand and Japanese capital companies)', in Y. Ogawa (ed.) *Tai no Kogyoka to Shakai no Henyo (Industrialization of Thailand and social change)*, pp. 37-54. Fukuoka: Kyushu Daigaku Shuppankai.
- Sato, Y. (2002a) 'Impact Study of the Japanese Government Scholarship Policy toward Indonesian Students from the Perspective of Fostering Pro-Japanese Leaders', *The Japanese Journal of Evaluation Studies* 2(2): 59-78.
- Sato, Y.(2002b) 'An Impact of the Japanese Government's Foreign Student Policy toward Indonesia:

from the perspective of human resources development', *Journal of International Development Studies* 11(2): 59-78.

Stame, N. (2004) 'Theory-based Evaluation and Types of Complexity', *Evaluation* 10(1): 58-76.

UNESCO (1963-1998) *Statistical Yearbook*. Paris: UNESCO Publishing & Bernan Press.

Vedung, E.(2000) *Public Policy and Program Evaluation*. New Jersey: Transaction Publishers.

Weiss, C.H. (1998) *Evaluation* (2<sup>nd</sup> Ed.). :New Jersey: Printice-Hall.

Yamatani, K. (1997) *Seisaku Hyoka no Riron to Sono Tenkai* (Theory of Policy Evaluation and its Development). Tokyo: Koyo Shobo.