In respect to the benefits and risks of internationalization, universities responded as follows:

Table IV-1-3 List of benefits and risks associated with internationalization

Benefit	Risk
More internationally oriented students and staff(22%) Improved academic quality (21%) Strengthen research and knowledge production (15%) Innovations in curriculum, teaching and research (14%) Grater international understanding and solidarity (12%)	Commodification and commercialization of education programs (23%) Increase in number of foreign 'degree mills' and/or low quality providers (17%) Threat of brain drain (15%) Glowing elitism in access to international education oppotunities (12%) Overuse of English as a medium of instruction (9%) Loss of cultural or national identity (9%)

Source: Knight, J. (2006) *Internationalization of Higher Education: New Directions, New Challenges*. 2005 IAU Global Survey Report, International Association of Universities (IAU).

In light of the macro-level trend to university internationalization around the world, JSPS decided to conduct a survey of efforts for university internationalization recognized as an important part of the national agenda in foreign countries. The methods employed in this survey are described later. The survey addressed both government-level initiatives and efforts made by individual institutions, in the hope that results will stimulate greater efforts towards internationalization of Japanese universities, serve as a reference for universities engaged in such efforts, and furnish suggestions for initiatives at the governmental level.

In implementing this survey, JSPS aimed not simply to gather data but also to disseminate information on the SIH Project and conditions in Japanese universities.

2. Overseas survey

Based on the opinion of the University International Strategy Council, JSPS used the following three methods to gather data on overseas trends in university internationalization.

A. Field survey at overseas universities, etc.
B. Participation in the "Workshop on the International Mobility of Researchers" held by the Steering and Funding of Research Institutions (SFRI), OECD Committee for Scientific and Technological Policy (CSTP)
C. Utilizing JSPS overseas offices to collect information relevant to provision of support for university internationalization.

(1) Field survey of overseas universities, etc.

JSPS decided to start with a survey of European universities pursuing internationalization initiatives as part of the rapid development of "Europeanization" in both education and research. The survey targeted universities in non-English speaking countries in particular, as they face many of the same challenges as Japan. As stated in "1. Background", university internationalization is considered a priority not only by the institutions themselves, but by governments throughout Europe. For this reason, JSPS included government agencies in the survey.

Data was gathered primarily from interviews with personnel in charge of international strategy and internationalization at universities, and personnel in charge of university internationalization policy in government agencies. Survey staff visited universities and government agencies in France and the Netherlands from February 12 to 19, 2006. Details of the survey results are described in the references at the end of this report.

Outline of the survey in France and the Netherlands [Briefing paper for the 3rd University International Strategy Council Meeting]

In the rapid movement toward Europeanization of higher education founded in the Bologna Process, both governments and individual institutions in France and the Netherlands are highly conscious of an urgent need to respond to the issue of "university internationalization". A variety of initiatives are being instituted in the two countries: some of the more notable initiatives are outlined below.

1. France

(1) Government agencies

A. Ministry of Education and Research

- Universities and the Ministry of Education and Research discussed the four-year contract system. "Internationalization" has been one of the key issues in recent contract renewals.
- The Ministry is discussing a proposal for amendment of the Immigration Control Law incorporating extension of the maximum period of stay aimed to promote the mobility of students (primarily doctoral students) and researchers, and simplification of processes for converting student visas into working visas after graduation.

B. Ministry of Foreign Affairs

- The French government initiated the "Competitive Clusters" program in 2005 to support the formation of characteristic local clusters through cooperation among universities, research institutes, and private enterprises (examples: cancer research in Lyon, nanotechnology in Grenoble, and aerospace engineering in Toulouse). These clusters will be used as hubs to promote international collaboration.

(2) Grandes écoles

A. École Centrale Paris (ECP)

- ECP is one of France's grandes écoles in the field of engineering. It is characterized by rigorous entrance requirements, a high standard of education closely linked to research activity, close cooperative ties with enterprises, and a focus on international education.
- "Internationalization" is the top-priority issue. ECP develops its internationalization policy based on surveys of trends in overseas international education institutions and industry needs. Actual international operations are handled by each department.
- ECP is promoting a double degree program at master's course level, utilizing T.I.M.E. (Top Industrial Managers for Europe), a consortium established by ECP. Keio University and Tohoku University in Japan are members of the consortium.
- Internships (from six weeks to one year in duration) are a compulsory component of the core course. IHI Corporation in Japan is one of the enterprises to which students are sent.
- For student exchange, both ECP and partner institutions offer pre-departure foreign language courses and require students to attain sufficient proficiency in the relevant foreign language before they travel to the country in question. (ECP has a policy that educational programs should be conducted in French, although English is widely used in research activities.)

(3) Universities

A. Université Paris 1 Panthéon-Sorbonne

- There is university-wide concern about internationalization. Developing an image as an "international university" is important.
- French is used in principle in all regular educational programs. The university offers a course for foreign students where lectures are given in English in the first year and a master's program is conducted in French in the second year.

B. Université Paris-Sorbonne Paris IV

- The university established an internationalization promotion steering committee under the leadership of the President in December 2005. Each of the 20 faculty members on the committee is assigned reponsibility for a particular region. .
- The university's midterm plan (2006-2009) establishes integration of foreign students/researchers and French students/researchers as a basic institutional goal.

2. The Netherlands

(1) Nuffic (Netherlands Organization for International Cooperation in Higher Education)

- Nuffic has set up a helpdesk for people associated with Dutch universities, foreign students and foreign researchers. Many people use it for assistance with immigration procedures.
- As part of ERA-MORE (the European Network of Mobility Centers) led by the EU Commission, Nuffic is creating a database for access to information on researcher job vacancies, fellowships, research grants, health insurance, pension insurance, family affairs, accommodation, etc.
- Nuffic conducts training in international affairs for university staff.

Key points in the Netherlands Ministry of Education policy paper on internationalization (November 2004):

a. Strengthening the European Higher Education Area
b. Making internationalization mainstream
c. Strengthening the shift from quantity to quality
d. Promoting brain circulation

(2) Universities

A. University of Amsterdam

- Employs a diffused system where each department handles international affairs directly (Mainstream model)

B. Leiden University

- "Leiden World Wide", an organization auxiliary to the university, previously played the core role in international activities. The system was reviewed in 2005 and international operations were re-incorporated into the main internal university structure.
- The university appointed Dr. Robert Coelen from Australia as Vice President International and established a headquarters system directly subordinate to the President (central office). The Vice President functions as a planner and consultant on international activities undertaken in each department.
- The university developed and announced a new international strategy in April 2005 ("Focusing on Talent").

(2) Involvement in OECD/SFRI Workshop

A. Outline

Under the auspices of the OECD Committee for Scientific and Technological Policy (CSTP)

Working Group on the Steering and Funding of Research Institutions (SFRI), a "Workshop on the International Mobility of Researchers" was organized by OECD, MEXT and JSPS in March 2007.

This workshop was designed to explore possibilities for measures to promote good "brain circulation". Specifically, it was designed to gather information on each government- and institution-level efforts made in each country to enhance the international mobility of researchers, analyze the effects of these measures, compile case examples of good practice, and furnish them as a reference source for policymaking in each country in the future.

The workshop was led by Japan under the strong initiative of MEXT, which commissioned the SIH Project. SIH was introduced to participants as a distinctive government-level effort aimed to enhance the international mobility of researchers. Seven of the SIH pilot institutions made presentations on their own efforts to achieve greater international mobility of researchers through institutional internationalization.

B. JSPS survey "The International Mobility of Researchers: Policy Support at National and Institutional Levels"

As one means to gaining a better understanding of the current degree of international mobility of human resources in the field of science and technology, prior to the workshop MEXT and JSPS conducted an online survey on actual national and institutional policies and initiatives to promote the mobility of researchers.

An outline of the survey is given in the reference section at the end of this report.

C. Outline of discussions at the workshop

At the workshop held on March 28, 2007, presentations and discussions held principally around three themes: (1) the scale, direction, and impetus for international researcher mobility, (2) issues and options to enhance this mobility, and (3) overview (case studies) of government- and institution-level measures made in each country.

As with any form of population shift, the mobility of researchers is a very complex phenomenon. Elements such as scale, period, type of mobility, destination and motivation are intertwined in a highly diverse and composite manner. Therefore, mobility cannot be explained by reference to simple factors such as the demand and supply of researchers, pull and push factors in mobility, and brain drain and gain. Monetary incentives (scholarships, grants, preferential tax treatment, etc.) are certainly important and indeed vital to strengthen the incentive for mobility, but they are not the top priority.

Each country expressed its views on the political background and issues regarding the international mobility of researchers (expected and unexpected outcomes, etc.). All countries agreed that inviting talented human resources from all over the world and promoting international exchange and circulation of these human resources are important means to generate innovation, and that such efforts will increase national competitiveness and research capability. At the same time, however, it was suggested that the "talent war" – the phenomenon of intensified international competition for human resources – is becoming more and more intense as developed countries take a more active approach to promoting inflow, return, and recruitment (settlement) of talent from abroad in response to changes in their domestic population structure (particularly since the 1990s). (In response, the U.S., Australia, and other developed countries stated that they have not instigated any specific government-level measures to attract talent and that such measures would not be effective even if they were taken. According to these countries, the process by which researchers select the location for their research activities is usually personal and voluntary, so it is not appropriate to over-emphasize the "talent war" phenomenon.)

Most participants agreed that providing a more attractive research environment is one of the important incentives to increase the inflow and return of researchers. Many countries

noted the importance of science and technology programs such as the development of Centers of Excellence and clusters. In respect to conventional measures to promote the inflow of researchers such as fellowships and grants, participants reported trends such as: (1) fellowships and grants for "star researchers" and senior researchers with established status, in addition to those provided for young researchers; (2) those requiring interactive exchange between researchers in different countries (to avoid an increase in one-way researcher movement); and (3) in Europe and Africa, those intended for researcher exchange within a single region or continent.. On the other hand, the question of equity was raised, with some participants pointing out that developing countries are at a disadvantage in terms of access to fellowships and grants and cost burdens related to mobility.

Several measures were reported as means to increase the mobility and diversity of researchers without providing direct monetary incentives. These included: (1) university-/institution-level provision of support services to foreign researchers and their families to address issues related to community life and adaptation to different cultures (especially in non-English-speaking countries); (2) creating a network between domestic researchers currently abroad and researchers/institutions in the home country, and maintaining connections between host researchers/institutions and foreign researchers who have returned home (including virtual networks utilizing IT); (3) special preferential treatment for researchers in immigration control and visa systems (linked to immigration policy and measures to promote growth in economy and industry), (4) improving the portability of social security systems, and (5) support for career development after international experience (especially for young researchers). Furthermore, the importance of internationalizing universities/institutions that accept foreign researchers was pointed out, and the SIH Project introduced as one of Japan's initiatives in this area. Kyushu University, one of the 20 SIH pilot institutions, made a presentation on its strategic effort to promote exchange of researchers with Asian universities.

In relation to research on the mobility of researchers, examples of data collection and analysis techniques from Norway and Australia were introduced. Presenters highlighted the importance of improving data quality, as well as increasing data quantity, and understanding the processes involved.

Based on the discussions above, the OECD secretariat raised issues regarding the quantity and balance of researchers, including (1) the appropriate level of international researcher mobility (some countries suggested 10%), (2) balance between short-term and long-term movements of researchers, and (3) balance between young researchers and senior researchers. Another issue raised was how to achieve the appropriate level of and balance between training, experience, skills, and expertise to be accumulated through international movements. Some countries pointed out that future analysis should note that these issues depend to a significant degree on researchers' individual choice as a major factor in determining patterns of international mobility. As a result of these discussions, the majority agreed that it would be difficult for the OECD to establish an appropriate level of international mobility of researchers because conditions and contexts vary considerably among countries.

Some counties expressed the opinion that it is necessary to re-assess why the international mobility of researchers is necessary in the first place, and what type of international mobility will bring what kind of specific benefits. Other countries asserted that artificial control (political intervention) to increase or regulate the mobility of researchers would be difficult because researchers are not very sensitive to international borders and the basis for moving abroad in many cases is provided by personal connections with other researchers internationally or research collaboration.

Subsequently, the OECD secretariat reported the results of a pilot survey of measures taken by Japan, Australia, Canada, and South Africa to increase the international mobility of

researchers. The secretariat expressed its willingness to conduct a survey of OECD member countries and requested cooperation. Following that, Japan reported the results of a survey of measures taken by government agencies and major universities in various countries to increase the international mobility of researchers. This study was conducted by MEXT with the cooperation of JSPS. In reporting the results, Japan suggested that the OECD conduct an official survey using the results of the MEXT/JSPS study as a reference, because those results, although not comprehensive, had identified various significant policy trends.

Responding to Japan's suggestion, some countries noted that the results of the pilot study were very interesting and that a compilation of successful measures undertaken by OECD member countries would serve as an important means of support for each country's efforts to formulate policy to promote the mobility of researchers. Other countries said that it would be very beneficial for governments of the member countries if OECD created a document that not only describes the various measures taken by member countries, but also identifies which ones were successful and unsuccessful. The U.K. is already engaged in the analysis of trends in measures taken by each country, but is facing a major challenge in terms of access to information on the effectiveness of those measures. Some countries requested that the OECD also conduct a survey of trends within researcher communities, in addition to government-level trends, and that such a survey should address the issue of mobility periods (whether researcher movements are short- or long-term).

(3) Information collection utilizing JSPS overseas offices

JSPS overseas offices gather information on university internationalization in the countries/regions in which they operate. This information is published on the SIH website.

As many as 48 topics had been posted on the website as of March 2007. Some characteristic examples are introduced below.

- **The U.S. National Institutes of Health (NIH) research grants – conditions for award to foreign institutions [JSPS Washington office]**

  Scientific research grants from the National Institutes of Health (NIH) are available not only to universities and research institutes in the U.S. but to foreign institutions as well..

  The minimum requirements considered when selecting foreign institutions are (1) whether or not the applicant is the only institution in the world that can carry out the proposed research, and (2) what benefits the research outcomes can yield for the health sciences in the U.S. and the health and lives of U.S. citizens.

- **MIT and Singapore on track to build a major new research center [JSPS San Francisco office]**

  The Massachusetts Institute of Technology (MIT) and National Research Foundation of Singapore announced that they are planning to jointly construct a major new research center in Singapore in 2007. The planned Singapore-MIT Alliance for Research and Technology (SMART) Center is expected to function as a knowledge hub for exchange between MIT and world-class Singaporean researchers in cutting-edge science and technology fields.

- **Provision of overseas research opportunities to graduate students (Princeton University) [JSPS San Francisco office]**

  Princeton University offers the "Global Network on Inequality", an overseas training program for graduate students in sociology and politics. This program provides students with an opportunity to study at leading overseas research institutes such as Sciences Po and the London School of Economics.

- **AvH initiates the "International University" contest in 2006 – Winners to be awarded the title of "Welcome Centre for Internationally Mobile Researchers" [JSPS Bonn office]**

  In 2006, the Alexander von Humboldt Foundation (AvH) initiated a contest to select German "international universities" attractive for researchers all over the world. This contest is held jointly with the Deutsche Telekom Foundation and the Stifterband fur die Deutsche Wissenschaft: Donors' Association for the Promotion of Science and Humanities in Germany.

  As many as 32 German universities participated in the first contest, and Bochum University, Bonn University, and Marburg University were selected.

- **Internationalization of higher education in the U.K. [JSPS London office]**

  A forum on "internationalization of higher education" was held at the University of Warwick in the U.K. from May 10 to 12, 2006 (organized by the Institute of Education, University of London). The JSPS London office participated in the forum and posted a report on it.

- **Report published by the Swedish National Agency for Higher Education on May 22, 2006 [JSPS Stockholm office]**

  The Swedish National Agency for Higher Education published a report on May 22, 2006. The report describes current conditions in Sweden's higher education sector, highlighting trends such as a decrease in the number of PhDs and an increase in the percentage of foreign students among applicants to universities.

- **Moves to re-integrate universities in France [JSPS Strasbourg office]**

  One of the reasons for poor showing of French universities in the Academic Ranking of World Universities announced by Shanghai Jiao Tong University in 2003 is believed to be "segmentation". Currently, integration of France's universities is proceeding based on a proposal made by the Ministry of National Education, Higher Education and Research. Through establishment of comprehensive universities, France is working actively to provide university students with more international curricular programs and to open its universities to foreign talent.

- **"European Higher Education Fairs (EHEF)" held in Bangkok [JSPS Bangkok office]**

  EduFrance, DAAD, Nuffic, and the British Council jointly held "European Higher Education Fairs (EHEF)" in several cities in Asia from September 2006 as part of the European Commission's "Asia-Link Programme".

  One of these fairs (and an Asia-Link Symposium) was held in Bangkok, Thailand on November 10, 2006. The JSPS Bangkok office reported on its participation in the fair.

Reference:

(1) Knight, J. (2006) *Internationalization of Higher Education: New Directions, New Challenges*. 2005 IAU Global Survey Report, International Association of Universities (IAU).

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