No.17, November 2011

RIHE International Seminar Reports

THE CHANGING ACADEMIC PROFESSION IN ASIA: CONTEXTS, REALITIES AND TRENDS

Report of the International Conference on the Changing Academic Profession Project, 2011

Organized by: Research Institute for Higher Education, Hiroshima University and
Research Institute for Higher Education, Hijiyama University

Research Institute for Higher Education
HIROSHIMA UNIVERSITY

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The Changing Academic Profession in Asia: Contexts, Realities and Trends

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FOREWORD

As various kinds of university reform are rapidly in progress around the world, understanding the nature of the academic profession is essential for our deeper consideration of the higher education system in a global and knowledge-based society. For this reason, the Research Institute for Higher Education (RIHE) at Hiroshima University established a program of research on the Changing Academic Profession (CAP) in 2005. This five year research program was funded by the Ministry of Education and Science as a grant-in-aid for scientific research and headed by Professor Akira Arimoto, then Director of RIHE and now Professor-Emeritus at Hiroshima University and President of Kurashiki-Sakuyo University The CAP research was completed last year at which time we were awarded another four-year grant from the Ministry to continue and expand our research on academic profession especially in the Asian region.

The first conference of this new project was held in Hiroshima in February 2011. This conference was organized by the Research Institute for Higher Education, Hiroshima University, Japan in cooperation with Hijiyama University, Japan. The title of the conference was "The Changing Academic Profession in Asia: Contexts, Realities and Trends." We invited, as we did in the previous project, speakers and participants from countries in Asia and around the world.

The conference, as you may find in this publication, was very fruitful and informative. Based on the outcome of this conference, we will continue to expand the second stage of research on this topic for another four years. We are hoping that, based on the past several international conferences and workshops concerning this topic, a better and deeper understanding of the academic profession will be achieved.

November 2011

Shinichi Yamamoto
Director and Professor,
Research Institute for Higher Education,
Hiroshima University

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Acknowledgement

We would like to acknowledge the invaluable contribution of Professor Martin J. Finkelstein, Professor, Seton Hall University, USA, who edited all the manuscripts in this report.

Shinichi Yamamoto
Director & Professor,
Research Institute for Higher Education,
Hiroshima University

Akira Arimoto
President,
Kurashiki Sakuyo University

Keynote Speeches

Universities Reforms in Japan

5 February 2011

Tsuyoshi Enomoto t-enomot@mext.go.jp
Director, Higher Education Policy, MEXT

MEXT
MINISTRY OF EDUCATION, CULTURE, SPORTS, SCIENCE AND TECHNOLOGY-JAPAN

History…

From a government document…

27 March

Cabinet Office reports -

- There are students in university dormitories (大学寮) who have only narrowly acquired academic knowledge and skills through several years of study.
- Without sufficient financial support due to their family's low income, there are students who, though they like studying, cannot fulfil their desire to pursue an academic career. We would like to nominate five to ten talented students who are able to concentrate fully on their academic activities, in order to encourage the next generation through their example.

All reports were accepted.

Daigaku-ryo

Dated 27 March 730, "Continuation of Chronicles of Japan"（続日本紀）

1

History…

" I have thought that a career-oriented educational curriculum should be established in universities. … The reason is because many students graduate from universities, the best educational institutions, but are unable to find a vocation in which they can dedicate their lives. Even students who are among the most brilliant on earth spend morning to evening after graduation looking for anything to make a living. …"

"A Vocation and a Hobby" (1911) by Soseki Natsume

2

What are universities?

- High-level education and research
- Autonomy and independence
- Degree award power
- The framework guaranteed by the government

3

MEXT

University expansion

156 new universities (most are private) in the last decade.

	Number of universities				Number of students			
	National (=state funded)	Public	Private	Total	National	Public	Private	Total
1999	99	66	457	622	620T	100T	1,980T	2,700T
2010	86	95	597	778	630T	140T	2,120T	2,890T
growth	-13	29	140	156	10T	40T	140T	190T

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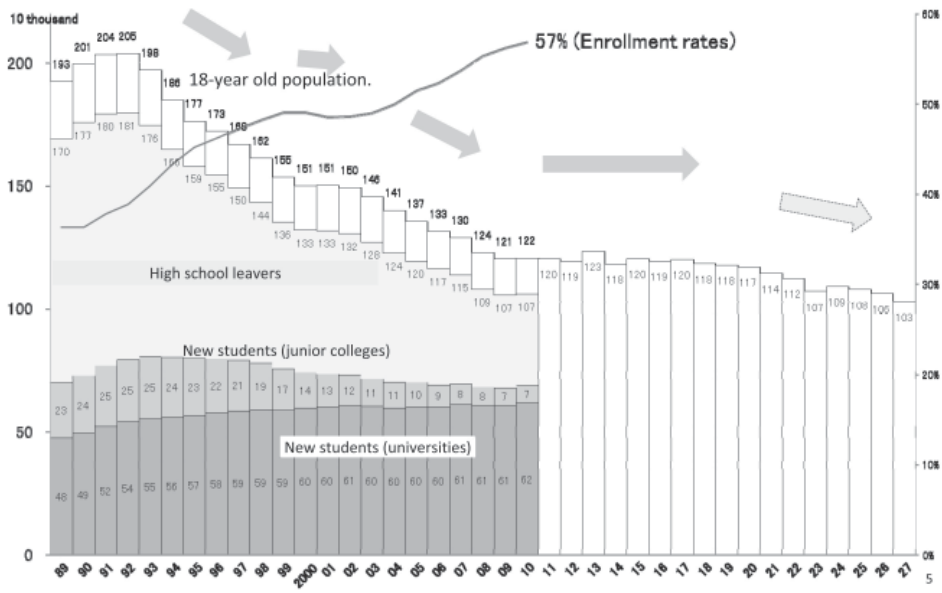
MEXT

18-year old population & enrollment rates



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Quantity

-The 18-year old population

1992: 2 million → 2010: 1.2 million

Issues

Not only 18-year old students,

+ matured students (now 2% compared to 20%)

+ international students

+ learning opportunities in the region

6

National Quality Assurance Framework

Up to 2003:

- Relatively rigid requirements for chartering

2004 onwards:

- Chartering deregulated
- External evaluation introduced

→ More universities

Quality has become an issue

7

National Quality Assurance Framework

Three components of the framework since 2004

SEU: Standards for Establishing (Chartering)
•Minimum requirements

Chartering (University Establishing Council)
•Degree-award power should be authorised by

External Evaluation
•Every 7 years, universities should be evaluated.

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Main Issues

from the Interim Report by University Council (Jan. 2011)

1 Quality of Education

2 Mission Differentiation / Partnerships

3 Management

From the Interim Report by University Council (Jan. 2011)

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1 Quality of Education

- Consistency of programmes/courses

- Quality assurance framework

- Globalisation

10

Quality

- Many concerns about the contents and standards.

- Universities have made efforts.

- Need to provide a sufficient response to the demands of society.

11

Three layers of QA activities

- Internal efforts by individual universities
- Cross-university activities
- Governments
  - Funding
  - National framework
    e.g. New regulation for information disclosure (2011 onwards)

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National Quality Assurance Framework

Issues under discussion in University Council

-SEU definitions (what is university?)
Should be clearer and less abstract

-Evaluation under the second cycle (2011 onwards)
Should be clearer, simpler and more encouraging

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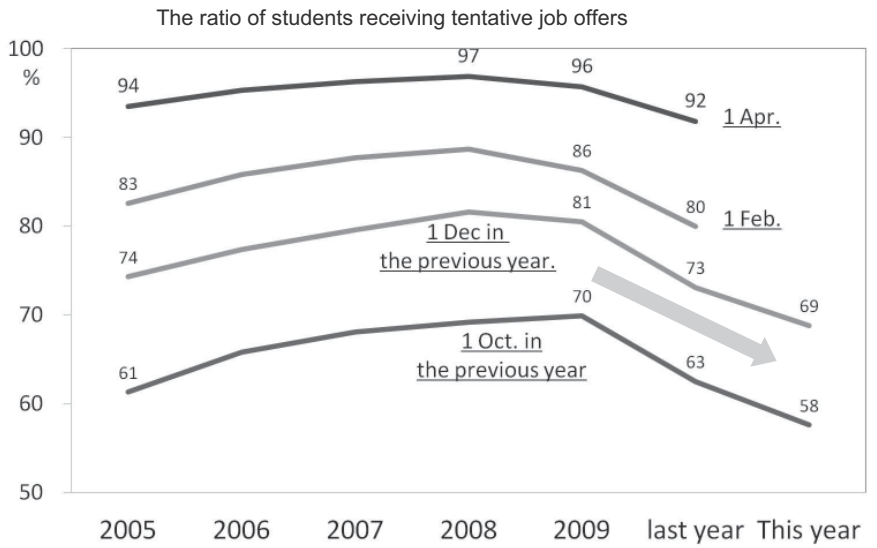
Students and job offer



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Education and employment

- Job offer rates decrease

→ Job hunting season starts earlier

(1 - 2 years before graduation)

→ Damages teaching & learning

- Needs relationship of trust

15

2 Mission differentiation / Partnership

(Universities have wide-ranging functions)

- Visualisation of education and research

- Assessment by function

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"Seven Functions of universities"
2005 Report by University Council

1) World-class research/education

2) Education for high-level professionals

3) Education for various professionals

4) Liberal arts

5) Designated fields (e.g. arts)

6) Lifelong learning

7) Regional contribution

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2 Mission differentiation / Partnership

- Consortia
- Credit transfers
- Joint degrees (e.g. veterinary science)
- Professional Development centres

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3 Management

- Funding arrangement
- Support for
  - “Independent development”
  - “Partnerships”
  - “Withdrawal”

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3 Management

During the last 10 years,

- National univ. 15 consolidated,
- Public uni. 11 consolidated,
- Private uni. 6 consolidated, and 9 discontinued.

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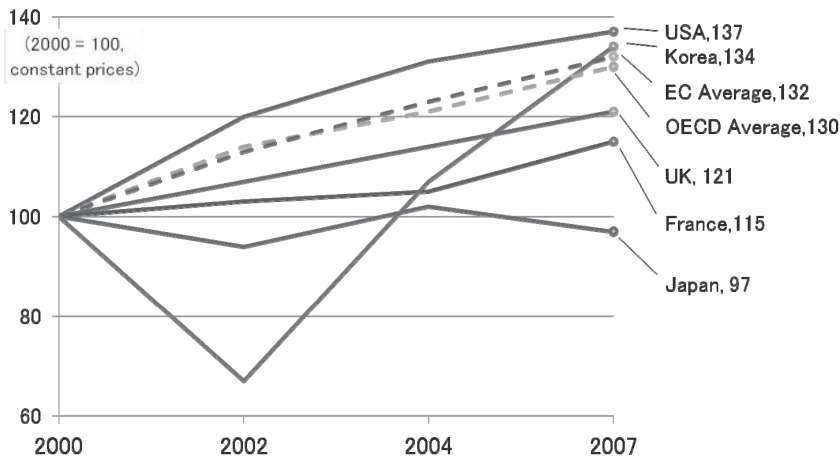
Transition between 2000 and 2007 in Public Expenditures for HEIs



OECD "Education at a Glance 2010" Table B3.3

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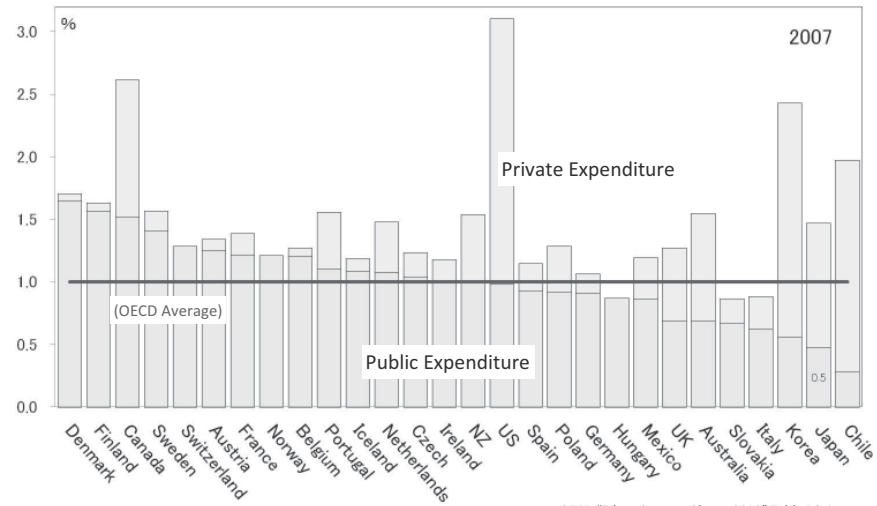
Expenditures for HEIs as a Percentage of GDP



OECD "Education at a Glance 2010" Table B2.4

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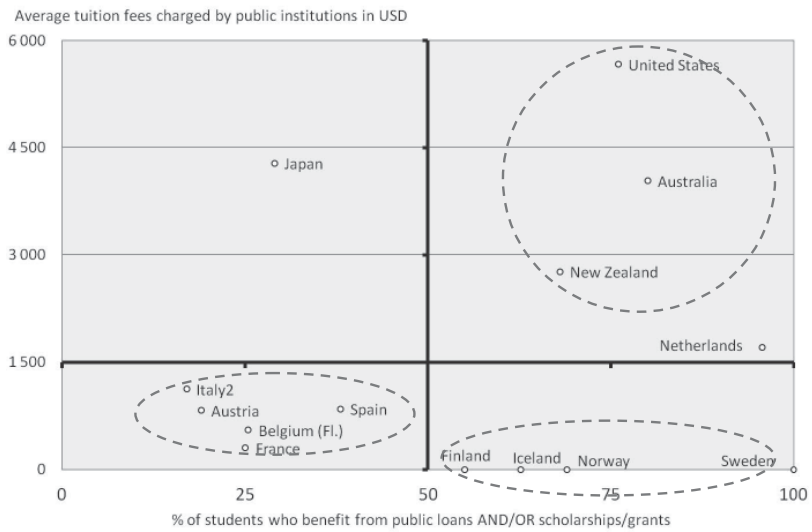
Average Tuition Fees & Proportion of Students Who Benefit from Public Financial Support



OECD "Education at a Glance 2010" Chart B5.3

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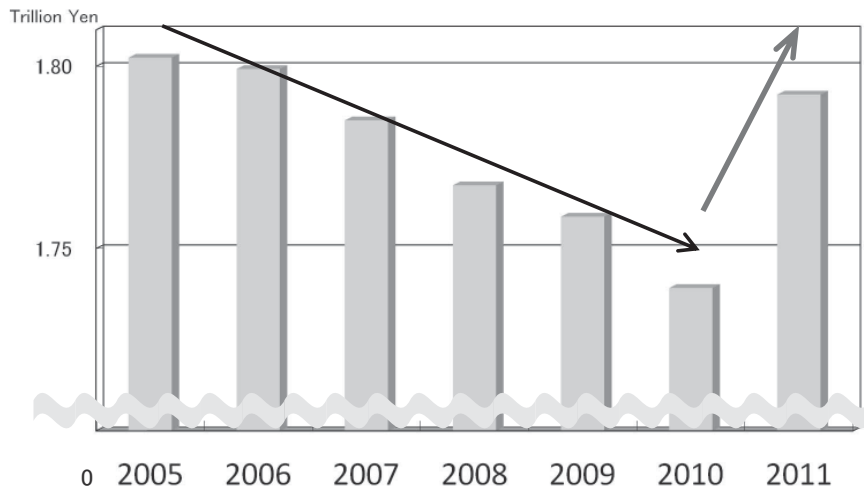
Major funding for universities



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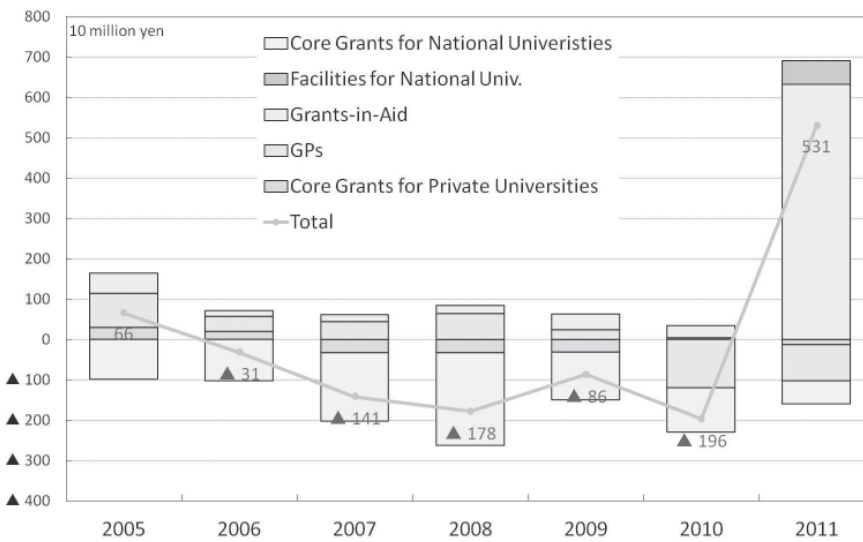
Transition of major funding for universities



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from the Interim Report by University Council (Jan. 2011)

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From the Interim Report by University Council (Jan. 2011)

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International Trends in the Academic Profession from a Japanese Perspective

Akira Arimoto*

Introduction

Recently, the academic profession worldwide has been rapidly changing in response to the volatile social environment around academia. The author of this paper has been committed to the following three surveys related to the academic profession for some twenty years since the 1990s:

(i) The international survey on the academic profession conducted by the Carnegie Foundation for the Advancement of Teaching (1992) (Altbach, Ed., 1996; Arimoto & Ehara, Eds., 2008)
(ii) The national survey on the changing academic profession in Japan conducted by the Japanese Research Project (2007) (Arimoto, Ed., 2008)
(iii) The international survey on the changing academic profession in the world conducted by the CAP Project (2007) (Arimoto, 2008, 2009a; Arimoto, Ed., 2011)

Related to the CAP project survey, the Japanese Research Project consisting of "An International Comparative Study of Construction of a 21st Century Type of Academic Profession" (directed by Akira Arimoto, 2006-2010) and "An International Comparative Study of Development of a 21st Century Type of Academic Profession" (directed by Akira Arimoto, 2010-2014) conducted three international conferences in 2008, 2009, and 2010, and published their proceedings (RIHE, 2008, 2009, 2010).

These surveys, conferences and proceedings suggest that the academic

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profession has transformed itself or evolved from its traditional structure to a 21st century type of structure over a period of fifteen years in Japan as well as elsewhere in the world. There are likely to be similarities and differences in the changes in the academic profession in Japan and elsewhere in the world. The existing similarities may reflect the fact that the academic profession conducts the same kind of work all over the world while the differences may reflect the control of the profession's traditions, culture, and climate by individual systems, irrespective of the nature of academic work. From the former perspective, it is said that the academic community is small and unified; and from the latter perspective, that it is large and diversified.

Needless to say, a primary goal of an academic organization is to contribute social development by way of the research, teaching and service that constitute academic work. Equally, a primary goal of the academic profession, and one that belongs to the academic profession, is to pursue the same vision as the academic organization. In particular, qualitative enhancement of research and teaching, two vehicles of academic work, must be most important to all. Specifically, much weight must be put on the enhancement of academic productivity, which consists jointly of research productivity and teaching productivity. This kind of goal is likely to be adaptable more or less to academies and academics all over the world, but even so it is undeniable that productivity output depends on systems to a considerable degree.

Similarities and differences are identifiable in any comparison of the regions in the world whether it be Europe, North America, South America, Asia, and Africa, or individual countries. In this sense it is interesting to make a comparison of the academic profession in the world from an Asian and particularly a Japanese perspective in order to enquire and illuminate current situations and problems.

This keynote paper intends as its first step to undertake a comparison of the academic profession worldwide from a Japanese perspective. The data to be used are mainly based on those of the CAP Project (2007).

1. Framework of study

This study attempts a consideration of the main subject, "International trends of the academic profession" from a Japanese perspective. The CAP survey embraces the academic profession in eighteen countries (the US, Canada, the UK, Germany, Italy, Portugal, Norway, Finland, Mexico, Brazil, Argentina, Australia, Japan, Korea, China, Hong Kong [strictly not a country but a region],

Malaysia, South Africa) (INCHER-Kassel, 2009).

Figure 1 illustrates the framework for this research with a focus on knowledge, academic work, and a research-teaching-study [R-T-S] nexus. Knowledge is fundamentally important in the sense that it is the basic component of academic work (Clark, 1983; Becher & Trowler, 1989). In academia, knowledge means advanced knowledge, as codified in academic disciplines, such as mathematics, physics, biology, economics, sociology, psychology, and education. The function of knowledge requires understanding of knowledge, discovery of knowledge, dissemination of knowledge, application of knowledge, and control of knowledge, translated as learning, research, teaching, service, and management and administration respectively.

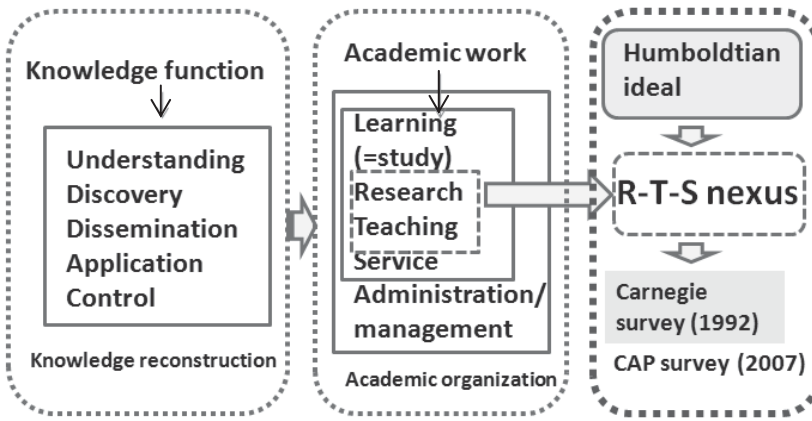
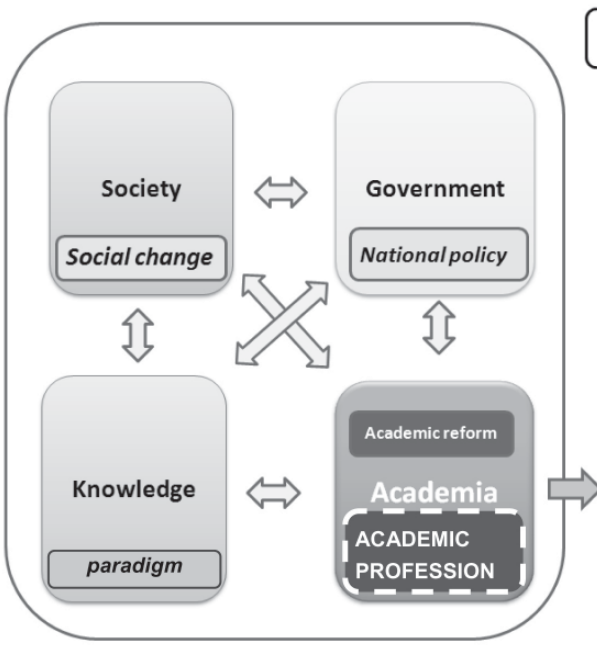


Figure 1. Framework for this research: knowledge, academic work, and R-T-S nexus

The main task of the academic organization in which the academic profession exists is academic work, consisting of learning (or study), research, teaching, service, administration and management, among which research and teaching are most important as the two primary vehicles. From the standpoint of scholarship, as discussed by Ernest Boyer, we have to pay attention to the relation between research and teaching (Boyer, 1990). In addition to this, from the standpoint of the Humboldtian ideal, the relation among research, teaching and learning is worth paying attention to as it is from this ideal that the concept of the R-T-S nexus is derived (von Humboldt, 1910; Clark, 1997; Ushiogi, 2008). As we discuss later, this nexus presents one of the most important problems in the Carnegie survey in 1992 and the CAP survey in 2007.

As Figure 2 indicates, the basic framework related to Figure 1 is the notion that the academic profession exchanges stimuli with the social environment. The social environment of the academic profession consists mainly of society, government, knowledge, and academia, and these provide mutual interactions. For example, enforced changes in academia arise from social changes, from a government's higher education policy, and from the knowledge paradigm's transformation, since it is defined by society, government, and knowledge. In this regard, the social condition of academia necessarily shapes the existence of and change within academia, while at the same time academia affects society and social change by the social function of its work such as research, teaching, and service. Through these processes, every country participating in the CAP survey is now creating a 21st century type academic profession.

The academic profession that belongs to the academic system through this structure defines its consciousness, behavior, and characteristics by its interaction with the academic system. Accordingly, it follows that the academic profession directly and indirectly effected by the demands of the larger environment as well as those of academia to the extent that it is confronted by change.



21st century type academic profession

Region	Country
North America	U.S.
	Canada
Europe	U.K.
	Germany
	Italy
	Portugal
	Norway
	Finland
Latin America	Mexico
	Brazil
	Argentina
Oceania	Australia
Asia	Japan
	Korea
	China
	Hong Kong
	Malaysia
Africa	South Africa

Figure 2. Environmental changes and the academic profession

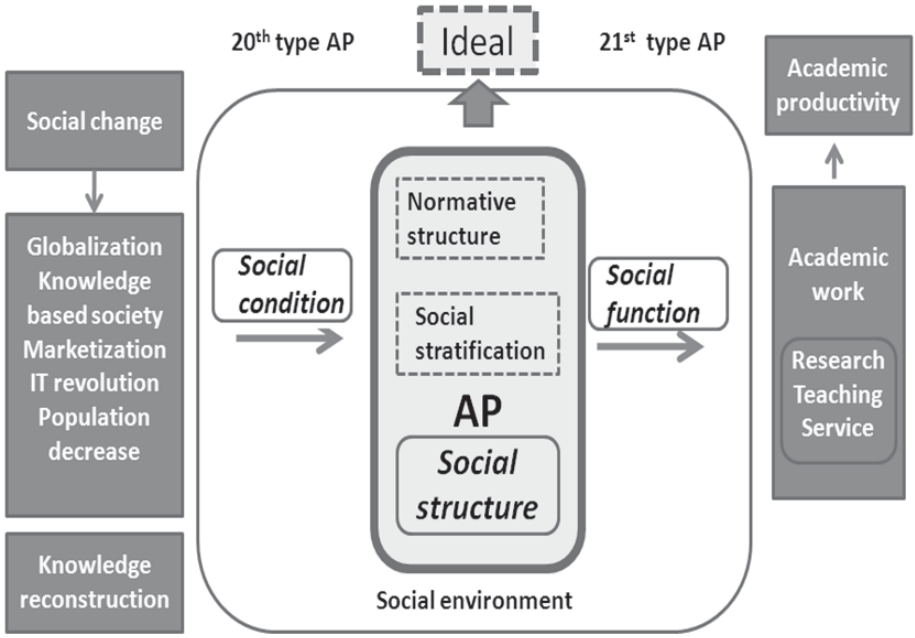


Figure 3. Social condition, social structure and social function of AP

As Figure 3 shows, the academic profession (AP) has a normative structure, a social stratification, and a social structure. Change to the AP is forced by environmental changes such as social change (*i.e.*, globalization, knowledge based society, marketization, IT revolution, and population decrease) and knowledge reconstruction. At the same time, the AP affects the larger environment by its social function consisting of academic work (*i.e.*, research, teaching, and service). One of the social function's typical effects is that it brings about social change by changes in academic productivity, that is in research and teaching productivity (Merton, 1973; Arimoto, 1996).

As mentioned above, the academic profession possesses a social structure derived from factors that include a normative structure, social class, age, gender, generation, position, and salary. Therefore, it is to be expected that the academic profession will change from the 20th century to the 21st century by a series of effects on social condition, social function, and social structure. For example, the academic profession was involved solely in teaching during the Middle Ages and early modern era, and in teaching and research together in the 20th century. Perhaps it is expected to be involved in teaching, research, and learning together, or separately, in the 21st century.

2. Changing the academic profession in the world

Any analysis over the past twenty years recognizes that various changes in society, science, policy, and academia have directly and indirectly affected academics' consciousnesses and behaviors to a considerable degree (Clark, 1987; Shinbori, 1965; Arimoto, 2008a). Especially, relevant are the many changes for academics related to academic mobility, academic funding, massification of students, and awareness of gender bias.

(1) Environmental changes

a) Globalization has accelerated cultural integration across national borders and slowed efforts to sustain each nation's culture and tradition. Mobility of human resources such as scientists, scholars, researchers, and students has extended well beyond national borders. As the CAP survey conducted in 2007 testified, academics in many countries recognized that numbers of international students have gradually increased. Especially, competition among countries is intensified in recruitment of prominent international students in an environment where many international students are inclined to seek to study at centers of learning (COL) (Ben-David, 1977), or centers of excellence (COE) in western universities and colleges. At the same time, mobility of scientists, scholars, and researchers, of course including academics, is increasing around the world's COLs.

In the context of these international trends, we can recognize a delayed globalization as well as internationalization in Japan owing to the fact that there are still no more than small increases in mobility of international students and academics. Researchers sent from Japan to other countries reached a peak of as many as 7,674 in 2000, but the number had declined to half of that figure, 3,739 by 2009, a symptom of "inward-direction" (The Asahi News Paper, 2010).

b) The Knowledge-based society valorizes innovation, learning, and management, causing academia worldwide to emphasize a number of issues: (i) technology transformation, venture business, and a university-industry nexus, (ii) teaching innovation with new teaching programs, (iii) research evaluation, administration and management, and funding resource allocation. The relation of knowledge to society is shifting from a "knowledge society 1", in which the scientific concept of CUDOS (Merton, 1973) works to provide an ethos for academics, to a "knowledge society 2", in which it does not work functionally due to the emerging borderless state between academia and society (Arimoto, 2009b, 2010a). The social changes from "knowledge 1" to "knowledge 2", and from "mode 1" to "mode 2" (Gibbons, *et al*., 1994), has necessarily caused

changes to academia and academics as well.

The increased importance of knowledge in society has established a knowledge economy that connects knowledge and society tightly, and in which efficiency and the effects of knowledge are linked intimately. Connected to national economic growth, the expectation is that academies should contribute significantly to that growth. To this end, increased efficiency and productivity is sought by reclassifying institutions into research universities and teaching universities. In this context, the Central Council of Education (CCE) proposed seven classifications of universities and colleges (CCE, 2005). With the increasing importance attached to values such as rationalization, relevance, and accountability, universities and colleges are required to shift from a knowledge *community*, respecting a series of values such as uselessness, redundancy, freedom, and autonomy, to a knowledge *enterprise*.

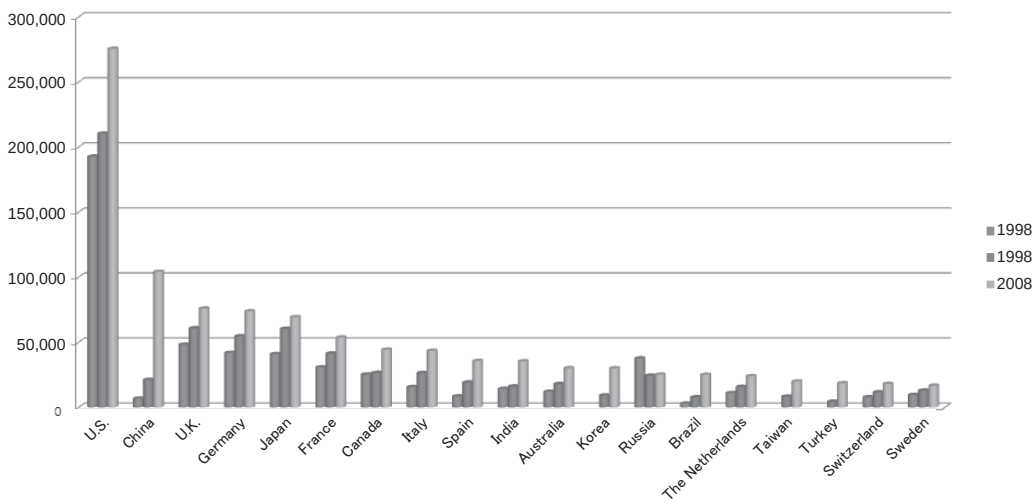
c) Marketization has brought about many changes in traditional universities and colleges. Market principles combined with the "law of the jungle" that has the stronger preying upon the weaker together with a differentiated society, in which there is severe competition for survival, is likely to continue. In the scientific community, priority competition and the Mathew effect operate, as discussed by R.K. Merton (Merton, 1973; Arimoto, 1987). One typical example is the world university rankings published since 2003 by agencies such as London Times and Shanghei Jeotong University (Kobayashi, 2005; London Times, 2008; Thomson Reuters, Ed., 2010). As a result, it is undeniable that their introduction and the serious response they have received have dramatically promoted the possibility of producing an internationally unified pecking order of universities and colleges.

According to the Kagaku Gijutu Seisaku Kenkyusho (NISTEP: National Institute of Science and Technology Policy) on the basis of Thomson Reuter's Web of Science, as shown in Table 1, the total number of articles in peer-reviewed scientific journals published worldwide amounted to 987,497 in 2008 (Table 1). The top ten countries are the U.S., China, the U.K., Germany, Japan, France, Canada, Italy, Spain, and India. Japan's articles increased about 1.7 times from 40,990 in 1988 to 69,300 in 2008. Irrespective of the increase in the absolute number of articles, however, Japan has fallen from second place in 1998 to fifth place in 2008. On the other hand, emerging countries have moved up: Brazil has risen from 20th to 14th place; Korea from 16th to 12th; India from 12th to 10th; and China from 9th to 2nd (Table 1).

Table 1. Publication of articles by nation and region (top 25 nations & region)

1988		1998		2008	
U.S.	192,730	U.S.	210,357	U.S.	275,625
U.K.	48,107	Japan	60,347	China	104,157
Germany	41,818	U.K.	60,789	U.K.	75,914
Japan	40,990	Germany	54,632	Germany	73,849
Russia	37,631	France	41,367	Japan	69,300
France	30,701	Canada	26,467	France	53,707
Canada	25,214	Italy	26,399	Canada	44,379
Italy	15,630	Russia	24,316	Italy	43,528
India	14,219	China	21,098	Spain	35,716
Australia	11,975	Spain	19,126	India	35,437
the Netherlands	10,989	Australia	17,945	Australia	30,085
Sweden	9,546	India	16,066	Korea	30,016
Spain	8,468	the Netherlands	15,742	Russia	25,166
Switzerland	7,756	Sweden	12,925	Brazil	25,061
China	6,742	Switzerland	11,577	the Netherlands	23,981
Israel	6,109	Korea	9,105	Taiwan	19,882
Poland	5,710	Belgium	8,358	Turkey	18,623
Belgium	5,411	Taiwan	8,221	Switzerland	18,061
Denmark	4,568	Israel	7,912	Sweden	16,633
Czech	4,138	Brazil	7,683	Poland	14,885
Finland	3,682	Poland	7,169	Belgium	13,386
South Africa	3,575	Denmark	6,561	Iran	11,171
Austria	3,479	Finland	6,008	Israel	9,956
Brazil	2,907	Austria	5,746	Denmark	9,421
Hungry	2,907	Turkey	4,409	Greek	9,353
World	560,724	World	666,982	World	987,497

Source: Kagakugijutuseisaku Kenkyusho



Source: CAP (2007)

Figure 4. Publication of article by nation and region

Such changes in the scientific community are likely to be echoed in the changing situation in the world's academic community. For example, results of two surveys clarify that Korea, situated in the emerging group fifteen years ago jumped up to the first place in the advanced group this time, while Japan went down from the top to second place (Arimoto, Ed., 2011).

d) In relation to market mechanisms, it is remarkable that competition has become more severe due to the quantitative increases accompanying massification. During the past fifteen years, massification of higher education has been promoted in universities and colleges worldwide so that increased enrollment of students has surpassed the available numbers of academic positions. In some countries, it is difficult to get permanent academic appointments to meet the needs of the increased numbers of students. As a result, the proportion of permanent academics has decreased, while that of part-time academics has increased (Arimoto, Ed., 2011). Ratios of permanent academics above 70 percent are still seen in Malaysia, the U.K., Mexico, Norway, Japan, and Canada, but ratios lower than 40 percent are found in Korea, Argentina, China, Hong Kong, Germany, and Finland. A high ratio of contract appointments (*i.e.*, fixed-term and usually part-time) of more than 40 percent is seen in Argentina, Hong Kong, Portugal, and Korea. Latin American countries had a high ratio of part-time academics in 1992 at the time of the Carnegie survey; this ratio has been lowered during the past fifteen years in Mexico and Brazil, though it is still extraordinarily high in Argentina because of a too rapid increase in students.

e) Academic reforms in research and teaching have been stimulated by the acceleration of innovation in Information Technology (IT). The generic application of IT to dissemination of information and its social application are included in information communication technology (ICT). Employment of ICT is rapidly causing changes in universities as well as societies. Information society, which has its roots in the electronic and computer developments of the 1960s, resulted from the enabled and accelerated growth of IT. In the emerging knowledge-based society in the 1990s, IT, comprising the computer, internet, mobile, and mobile information terminal system, has become indispensable for information gathering, communication, maintenance, and sharing.

Accordingly, academies and faculty members cannot escape from the power of IT. Rather it is necessary for academics to use its effectiveness as much as possible. Infrastructure rearrangement related to IT so as to pursue academic work is a major step for academics' survival as well as academia's survival. In this regard, the CAP survey questioned academics about their satisfaction with

provision of various facilities including teaching and research equipment. The responses show satisfaction is high in Hong Kong, Finland, Norway, and Germany, while it is low in Argentina, Japan, Korea, and Mexico (Arimoto, Ed., 2011). The former can be categorized as a group of technological haves and the latter, a group of have-nots. It is interesting to note that Japan finds itself among the have-nots, although it is deemed a country with a high GDP.

(2) Change of norm from closedness to openness

In recognition of the emerging value of modernization, countries and universities worldwide have adapted their social structures from closedness to openness, and similarly are changing their reward systems from ascription to achievement. The change from an ascription – oriented society, in which individuals are treated based on their imputed status, to an achievement oriented society implies that individuals are treated based on their levels of achievement. Modernization moves from the former closed society to an open society.

Academia seeks an achievement orientation: it undertakes research and teaching to advance the frontiers of the academic disciplines in order to lead modern society on the basis of achievement rather than ascription. The scientific ethos of CUDOS, which was pointed out by R.K. Merton (Merton, 1973), is that prevailing in the traditional society of "knowledge 1" and hence the universalism included there is apparently a counter culture against particularism. As Figure 5 shows, modernization is from a closed society to an open society, from III to I, in which value is realized in the shifts from particularism to universalism and also from ascription to achievement. Accordingly, as a result of consideration of these models, academia adapts its orientation to that of achievement and universalism rather than that of ascription and particularism, developing the former closed society to one of openness.

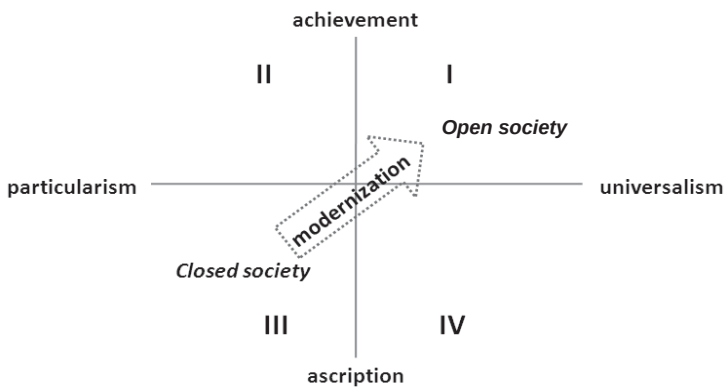
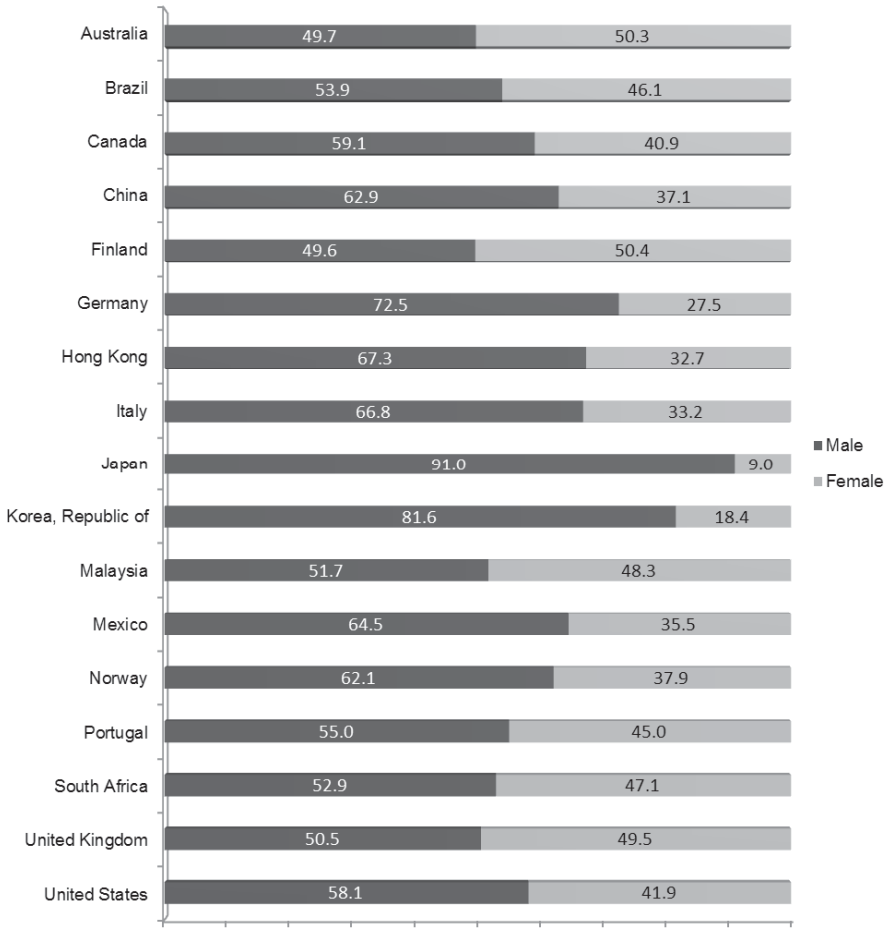


Figure 5. Pattern of modernization from closed to open society

a) Gender

In adaptation of the framework of norm change, the current CAP survey must deal first of all with a gender problem. It is understandable that the results of CAP survey show that the academic profession in the world is now moving generally towards dealing equally with the statuses of male and female academics as seen particularly in Argentina, Australia, Finland, Malaysia, the U.K., and the U.S., although there are still some quantitative and qualitative differences even among these countries. On the other hand, the treatment of female academics as seen in their small number and low status compared to their male counterparts in Japan is the worst of all the participating countries.



Source: CAP (2007)

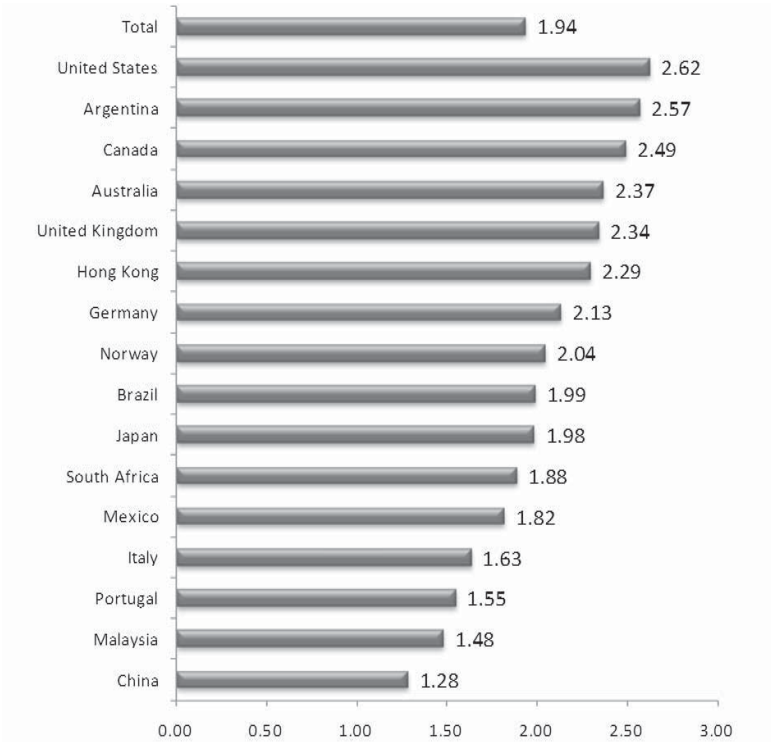
Figure 6. Gender by Country, 2007

As Figure 6 reveals, the proportion of female academics in Japan (9.0) is the smallest, followed by Korea (18.4), Germany (27.5), Hong Kong (32.7), and Italy (33.2) among the CAP respondents. Statistics for the whole academic profession in Japan show that the CAP sample is biased: the true proportion of female academics was about 18 percent in 2007 and 20 percent in 2010. Even so, the average proportion of female academics in the OECD countries is about 40 percent and so how to raise that in Japan to this level at least is an important problem for higher education policy. Of course, since 1998 there has been a national movement related to the gender problem when a law of a society of male and female partnership was enacted (Naikakuhu, 2009).

b) Mobility

Second, academics' mobility is considered to be an important element in the framework. Phenomena such as lack of mobility, inbreeding, and unchangeable status in the institutional hierarchy are apt to occur frequently in the closed society of the academic marketplace. As the current survey shows, mobility is increasing in Australia, Argentina, Canada, Hong Kong, the U.K., and the U.S.
As Figure 7 shows, academics, on average over the whole CAP sample, have been employed in approximately two (1.94) institutions during their academic careers. Those in the U.S. (2.62) have the highest average, followed by Argentina (2.57), and Canada (2.49), while China (1.28) has the lowest, followed by Malaysia (1.48) and Portugal (1.55). As for Japan, the average academic had been employed by only 1.5 institutions in the 1992 survey (Arimoto & Ehara, Eds., 1996), though the average had risen to 1.98 in the 2007 survey. Nevertheless, it is true that they remain at the middle in the international distribution.

Even though it has slightly increased during the past fifteen years, academics' vertical and horizontal mobility among institutions is a rarity in Japan. In addition, the problem of inbreeding in the prestigious institutions is still highly recognizable compared especially to the situation in the U.S. (Pierson, 1952; Shills, 1979; Shinbori, 1965; Arimoto, 1981, 2008; Yamanoi, 2007; Horta, Sato & Yonezawa, 2010). In this regard, it is said that the Japanese academic profession has been underdeveloped through maintenance of its traditional closed character.



Source: CAP (2007)

Figure 7. Average number of higher education institutions or research institutes in which academics were employed during their careers

(3) Implementation of top-down type administration and bureaucratization

With its increasing bureaucratization, the form of administration and management has been transformed from a "collegial type" to an "enterprise type" so that the academic profession has lost its traditionally constructed status.

a) First, the bureaucratization of administration and management which progressed to a considerable degree in western universities and colleges has extended to other countries including Japan in the past fifteen years.

b) Second, the relationship between administrators and academics has changed from one of a "community of knowledge" to one of an "enterprise of knowledge". The European continental type of university used to have a type of administration and management based on faculty autonomy, where chair holders elected their deans and rectors, while the American type of university used to have administration and management based on campus level autonomy, where a trustee committee selected and appointed presidents. The former can be called a rectorial type and the latter, a presidential type. Recently,

transformation from the former to the latter is progressing sharply and hence the conflicts within the academic communities have inevitably deepened (Arimoto, Ed., 2008).

In general, academic authority and decision making have shifted from faculty members to administrators and managers in the western countries since the 1980s. As Burton Clark pointed out, entrepreneurial universities and colleges have emerged and administration and management has shifted from the bottom-up type derived from the "academic guild" of the medieval universities to the top-down type derived from enterprises (Clark, 1998). Accordingly, it is natural that communication between academics and administrators have become worse. In the case of Japan, corporatization of the national universities took place in 2004 and since then many complaints have been noted among academics in the national sector, especially among those in the national non-research universities (Arimoto, Ed., 2008).

(4) Allocation of resources among institutions and academics by way of selection and concentration

At a time when international competition has increased among almost all countries, the importance of academia's contribution to economic growth has been recognized to the extent that the national governments are expected to devote much expenditure and resources to this sector. Yet investment and support have not necessarily been well implemented and in reality wide differences are noticeable among countries and among institutions.

a) According to OECD (2008), national expenditure on higher education is, on average, about 1.0 percent of GDP in the OECD participating countries, with a variation from almost 2% to only 0.5%. The figure for Japan is as low as 0.5% of GDP, close to that of Korea and the lowest among OECD countries (Table 2) (OECD, 2008, p.240).

Rich countries and poor countries are distinguishable even among the OECD countries. As far as these provisions are concerned, Japan belongs to the poorer countries, even though its GDP is third highest in the world.

It is difficult for poor countries to allocate much money evenly to all institutions. With increasing international competition to raise the peak of academic productivity in terms of individual institutions, it is natural for national governments to selectively support internationally competitive institutions in order to optimize the returns on their investment through selection and concentration. For example, in Asian countries, this kind of pattern is widely observable: COE and GP programs in Japan; Project 985 in China; Brain Korea 21 Project in Korea (Altbach & Umakoshi, Eds., 2004).

Table 2. Public expenditure on HE as a Percent of GDP by country (%)

Area	Country	Public funding
North America	USA	1
	Canada	1.4
Europe	UK	0.9
	Germany	0.9
	Italy	0.6
	Portugal	0.9
	Finland	1.7
	Norway	1.3
Oceania	Australia	0.8
Middle South America	Mexico	0.9
	Brazil	0.8
	Argentina	-
Africa	South Africa	-
Asia	Malaysia	-
	Hong Kong	-
	China	-
	South Korea	0.6
	Japan	0.5

Source: OECD (2008)

Table 3. Assessment of work environment by country (% Rating Facilities as "Excellent" or "Very Good"?)

Country	class room	laboratory	library	technology for teaching	computer facilities	telecommunications	teaching support staff
USA	51.7	38.3	59.9	61.9	62.5	71.5	32.4
Canada	51.1	31.3	63.4	61.3	55.1	71.4	32.5
UK	34.1	39.1	51.4	41.5	45.8	53	37.7
Germany	45.8	51.7	48.9	52.1	65.1	81.1	25.2
Italy	37.6	29.4	54.2	36.8	44.9	64.9	16.1
Portugal	52.6	38.6	51.8	51	46.8	61.1	25.6
Finland	73.9	54.9	72.9	71.9	70.7	81.2	42.6
Norway	57.9	43.6	74.3	59.8	74	85	19.9
Australia	47.8	43.7	78.7	51.7	64.9	71.5	29.7
Mexico	42.1	40	51.9	46.3	53.8	54.5	20.2
Brazil	50.1	39.8	46.8	41.3	44.1	52.5	31.6
Argentina	29.9	22.5	36.9	31.5	36.4	38.5	25.8
South Africa	38.9	35.9	65.9	37.8	57.8	68.7	28.2
Malaysia	44.4	37.9	53	45.5	55	56.4	29
Hong Kong	67.8	49.6	82.4	71.8	75.3	79.5	35.6
China	64.3	40.3	47.5	56	47.4	42.2	39.9
South Korea	48.1	25.5	43.1	44.3	50.4	73.6	13.7
Japan	33.1	25.4	39	32.1	37	53.2	9.2
Total	49.7	36.9	55.2	49.8	53.3	62.3	28.1

Source: CAP (2007)

b) Second, the differential public expenditures on higher education have caused a widening gap between rich and poor institutions as well as systems in terms of teaching and research environments. It is interesting that GDP and worsening teaching and research environments are highly correlated according to the CAP survey. Countries expending small proportions of GDP on higher education such as Japan, demonstrate a sort of poverty in their teaching and research environment, including provision for the classroom, laboratory, library, computer, telecommunications, and teaching support staff, that directly and indirectly affects academics' consciousness and behavior (Table 3) (Arimoto, Ed., 2011). In the case of Japan, for example, academics' complaints and stresses arising from the poor environment are among the highest in the eighteen countries (Arimoto, 2010d).

(5) Differentiation and fragmentation between research and teaching

The social function of the academic profession embraces a set of research, teaching, and service activities as its role, although research and teaching are the most fundamental. It can now be replaced by the importance of research, teaching, and learning, since teaching substantially consists of a combination of the teaching and learning processes. While a research orientation has prevailed for most of two centuries, the integration of research, teaching, and learning (R-T-S nexus) has become an ideal since the reforms in German universities originating with von Humboldt (Humboldt, 1910; Clark, 1997). Yet integration of research and teaching has not been realized, with the current situation being far from an R-T-S nexus. It becomes necessary for academics to face up to this situation and to seek a breakthrough.

a) First is the question of how to move beyond the research paradigm. The German type of research-teaching orientation dominated the CAP survey, although in the previous 1992 Carnegie survey the three types (German, Anglo-Saxon and Latin American) were all evident (Arimoto & Ehara, Ed., 1996). Based on this new research dominant trend, it can be said that there is clear indication of differentiation and fragmentation between research and teaching rather than their integration. Four factors are thought to drive this trend:

(i) Emphasis on research by higher education policies in many countries has led to the separation and differentiation between research oriented universities and teaching oriented universities.
(ii) The reward system has strengthened the emphasis on research functions in

the processes of recruitment and promotion of academics in universities and colleges.

(iii) Higher visibility of research than teaching has been operative in the academic marketplace.

(iv) International university rankings which appeared in the 21st century emphasize research productivity more than teaching productivity.

However, in the future when universalization of higher education will have become widespread, the importance of students' learning as well as academics' teaching ability will be of greatly increased significance and as a result innovation is necessary to remedy the existing situation.

b) Second, seeking compatibility for research and teaching is indispensable. In this regard, the possibility of compatibility depends on both the attitudes of individual academics and the environment in individual countries – both of which are already evident in some countries such as Argentina, Brazil, Korea, Mexico, and the U.S. According to the 2007 CAP survey, the proportion of academics who agreed with a statement that "teaching and research are hardly compatible" is 25.8 percent (Table 4). The proportion is highest in Japan (50.8), followed by China (42.6), Finland (37.0), Germany (31.1), Malaysia (30.5), and Australia (26.3). The responses in Japan, rejecting the idea of compatibility, are remarkably high. Conversely, only small minorities of academics in other countries accepted the statement: Argentina (6.3), Brazil (6.9), Korea (11.3), the U.S. (12.5), Mexico (12.5), Norway (13.8), and Italy (13.8). It is interesting that all Latin American countries in effect accepted that "compatibility is possible".

Despite the increasing ascendance of the research paradigm, the CAP results show that there must be a systematic mechanism at work to reconcile the concept of teaching to research at the levels of systems and institutions. The overall CAP response indicates that a large majority of academics reject the notion that teaching and research are not compatible.

The reason for low compatibility of teaching and research in Japan is possibly due to a lack of engagement at the system and institutional levels in establishing an adequate idea of scholarship. To replace the research orientation that has existed since the Meiji restoration, the national government emphasizes in its recent faculty development (FD) policy a teaching orientation (CCE, 2005, 2008). In this context, reconsideration of the Humboldtian ideal is needed, with a focus on the interrelationship of research and teaching orientations. Lack of compatibility at the level of national policy infuses

academics consciousnesses with its negative image of scholarship in a manner that is especially problematic for the younger generation. This is particularly relevant because these younger academics are expected to become the core of the academic profession in the 21st century.

Table 4. Percent of academics who responded that teaching and research are hardly compatible

Country	%
Japan	50.8
China	42.6
Finland	37.0
Germany	31.1
Malaysia	30.5
Australia	26.3
Portugal	25.8
Hong Kong	25.8
UK	25.5
South Africa	21.1
Canada	19.9
Italy	13.8
Norway	13.8
Mexico	12.5
US	12.5
Korea	11.3
Brazil	6.9
Argentina	6.3
Total	25.8

Source: CAP (2007)

In the case of Japan, it is true to say from a traditional perspective that a research orientation remains fairly strong, while the desired teaching orientation has yet to be established. To some extent, this is a problem widely shared. This is supported by the observation that at present educational conditions and environments, organizational efforts, and curriculum and contents are insufficiently developed in all the CAP participating countries. Ways of training teachers in graduate schools need to be improved in line with the provisions in the U.S., although in countries around the world improvements are beginning to occur (Arimoto, Ed., 2011).

Internationally, almost the same things are applicable to the fact that a great degree of improvement in faculty development and self-evaluation are now desired. As far as the relationship between research and teaching is concerned, it is to be emphasized that not only compatibility but also integration will

become an important problem to be resolved in the 21st century when universalization of higher education has developed widely in universities and colleges worldwide.

3. Traits of the academic profession in eighteen countries

Tables 5.1, 5.2, and 5.3 summarize the traits of the academic profession in the eighteen countries participating in the CAP survey.

The listed categories consist of twelve items:

(i) Academic productivity: research publications.
(ii) Mobility and fluidity: mobility; desire to transfer to other jobs and institutions; ratio of professorial positions to non-career-ladder position; establishment of a contract system.
(iii) Administration and management: top-down style communication between administrators and faculty members; collegiality; cooperation of academic and non-academic staff; academic freedom.
(iv) Evaluation: research evaluation by administrators; research evaluation by external examiner; self-evaluation: teaching evaluation by administrator; teaching evaluation by external examiner; self evaluation.
(v) Degree holders; proportion of doctoral degree holders; ratio of domestic to foreign degrees conferred.
(vi) Activity in disciplinary and professional associations: membership in academic societies; referees; academic meeting leaders
(vii) Gender and age: permanent employment; proportion of female academics; proportion of senior academics; proportion of tenured academics.
(viii) Income: salary of academics' own institution; total income.
(ix) Social class: father's graduation from college.
(x) Facilities and equipment: classroom; laboratory; library; teaching equipment; computer; information facilities (internet, network, telephone), support of secretariat; office room space; teaching support staff; research money; ratio of public expenditure for higher education to GDP.
(xi) Research and teaching: research orientation; research time; teaching time; compatibility between research and teaching; investment in teaching materials; teaching abroad.
(xii) Job satisfaction: work condition; discipline orientation; institution orientation; degree of psychological strain and stress; overall job satisfaction.

Table 5.1 Traits of the academic profession in 18 countries

Category		Item \ Country	AR	AU	BR	CA	CH	FI	DE	HK	IT	JP	KR	MY	MX	NO	PT	ZA	UK	US
Academic productivity		Research productivity	×		×		○		○	○	○	○	◎	×	×			×		×
Mobility and Fluidity		Mobility	○	◎		○	×			○	×	×		×	×		×		○	○
		Desire to transfer	●	○	○		×		○			◎		○	×				○	○
		Student-teacher ratio		○								×		◎	●		○		○	
		Contract system	◎	○	●			○	○	○		×	○	×	×		○	×	×	
Administration and Management		Top-down type	○	●	○					×		×		×		◎		×	×	×
		Communication	○	×	○				×			×	×	◎	○			●	×	
		Collegiality	○	×		○					●	○	×	○	◎			×		
		Cooperation with staff				○	○	×	×		●	◎	×				×	×		○
		Academic freedom	○			○		●	×			○			◎	×		×		○
Evaluation	Research	Administrator					○	×		○	×	○	◎			×	●			
		External examiner	◎			○	×			○		●					×		○	
		Self evaluation	×							○	×		×	○		×	●	○		◎
	Teaching	Administrator	○			○	◎	×	×	○	●	○	○						×	○
		External examiner		×		×			●		×		×							×
		Student			×	○				◎		●				○	×		◎	○
		Self evaluation		○							×		●	○	○		×	○	○	◎

Table 5.2

Category	Item \ Country	AR	AU	BR	CA	CH	FI	DE	HK	IT	JP	KR	MY	MX	NO	PT	ZA	UK	US
Degree	Doctoral degree	×			○	×	●	○	○		○	◎	×	×					○
	Domestic doctoral degree					○		○	●		◎	×	×				○		○
Activity at professional/ Disciplinary association meetings	Professional association member				○	●	×	×	○	○		◎		○				×	○
	Referee		○		○	●		×	○		○	◎		×					
	Disciplinary / Professional association leader			×	○	●				×	○	◎			×			×	
Gender and Age	Permanent employment	●		×	○	○			○	○	○	◎	○			○			○
	Female representation	◎	○				○	×			●	×	○					○	
	Senior academics	×	●		○		×	×			◎	○	×				○		
	Tenure	●				×	×	×				●	○	○			○	◎	
Income	Salary	×		×	○	×			◎		○		×	●			×		○
	Total income	×		×	○	×			◎		○		×	●			×		○
Social class	Father graduated from college				○	○			×		○		●	×	○				◎

Table 5.3

Category	Item \ Country	AR	AU	BR	CA	CH	FI	DE	HK	IT	JP	KR	MY	MX	NO	PT	ZA	UK	US
Facilities and Equipments	Classroom	●				○	◎		○		×							×	
	Laboratory	●					◎	○	○		●	×							
	Library	●	○						◎		×	×			○				
	Teaching equipment	●			○		◎		○	×	×						×		○
	Computer	●		×			○		◎		×				○				
	Information technology facilities	●		×	×		○	○							◎				
	Secretariat	×	×	○	○	×	◎	○	○		×	×	×		●				○
	Size of office	●	○	×		×	◎	○			×			×	◎				○
	Teaching support staff					○	◎			×	●	×						○	
	Research money	×			○			○	◎	●	○	×	○	×		×	○	×	
	Public expenditure in GDP	–			○	–	◎		–	×	●	×	–		○		–		○
Research and Teaching	Research orientation		○			×	○	○		○	○		×	×	◎		●	○	×
	Research time	◎					○	○		○		○	×	×	○		●	×	×
	Teaching time	×	×	○		○	×	●					○		×	○	◎		
	T-R compatibility	◎		○		×	×	×			●	○	×	○					○
	Teaching materials		◎		○	●		×			×							○	
	Teaching abroad			×		×	◎				●						○	◎	
Job satisfaction	Working conditions	○	×			◎		×		×	×	○	○	○				●	
	Discipline orientation					×				●			○	◎	○	×			
	Institution orientation	○	×					×					○	◎	×			●	
	Job stress	○	×	○		×				○	×	●	○	○		×	○	×	
	Job satisfaction		×		○	×	○				○	○		◎		×	×	●	

Note 1: AR: Argentina, AU: Australia, BR: Brazil, CA: Canada, CH: China, Fl: Finland, DE: Germany, HK: Hong Kong, IT: Italy, JP: Japan, KR: Korea, MY: Malaysia, MX: Mexico, NO: Norway, PT: Portugal, ZA: South Africa, UK: United Kingdom, US: United States

Note 2: ◎ ranked at top, ○ ranked at upper level, × ranked at lower level, ● ranked at bottom

Signs in all the tables indicate a relative standing among the participating countries in the survey, specifically, ◎= ranked top; ○= ranked at upper level; ×= ranked at lower level; ●= ranked at lowest level. An order of ranking is made arbitrarily by assigning 2 points to the top position (◎), 1 point to upper level positions (○), 0 point to intermediate level positions (no mark), −1 point to lower level positions (×), and −2 points to the lowest position (●). In general, upper level suggests positive positioning and lower level suggests negative positioning.

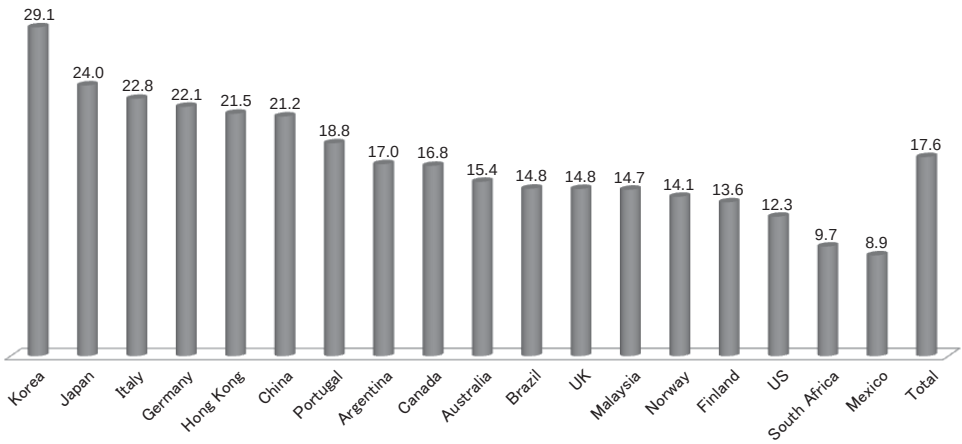
The traits of all countries are summarized in Tables 5-1, 5-2, and 5-3. At a glance, there are countries with many ◎ and also ● marks. Among the

former is Finland with eight, followed by Korea with seven, Hong Kong with six, Argentina and Mexico with five each, Norway and Japan with four each. Among the latter is Argentina with ten, followed by Japan with eight, Italy with five, China with four. Hong Kong is superior to other countries in regard to perceptions of facilities and equipment and, in contrast, Argentina is perceived by its respondents often to be worst on those items and is followed by Japan.

4. Construction of a 21st century type academic profession

(1) Main characteristics seen in the international trend

Constructing a 21st century prototype of the academic profession should be based on emerging characteristics. Based on the previous considerations, the following seven characteristics are relevant.



Note: Total score of research productivity is calculated by giving the following points to each item: an authored book=5; an edited book=3; an article=1; a research report=2; a paper presented at a research conference=0.5; a professional article written for a newspaper or magazine=0.2; a patent=3; a computer program=3; an artistic work=0.5; a video or film =0.5.

Figure 8. Average research productivity by country

(a) A quantitative analysis of "research productivity" on the basis of various publications including authored book, edited book, article, research report, patent, computer program, etc. indicates that the overall average of the eighteen countries is 17.6 publications over a 3-year period (Daizen, 2011) (Figure 8). Seven countries have high research productivity, *i.e.* are above the group mean: Korea, Japan, Italy, Germany, Hong Kong, China, and Portugal. Four Asian

phenomenon perhaps foreshadows the so-called "Asian age" of the 21st century. On the other hand, low research productivity countries are as follows: Mexico, Portugal, Malaysia, Brazil, the U.S., and Argentina. Half of them are countries in Latin America. A great deal of difference is recognizable in research productivity among participating countries.

(b) Factors defining research productivity consist of complicated functions that must include facilities and equipment, research and teaching orientations, mobility, administration and management, and evaluation. In general, in advanced countries, academics have a lot of research time in addition to a high research orientation and a high level of competitiveness is structurally institutionalized in the process of recruitment and promotion.

For example, in Korea, which leapt to the top position from 11th in fifteen years, both the ratio of professorial positions to associate and assistant professor positions and that of senior professors to junior professors are lower than those in Japan. Although the two countries share some traits, in Korea, competition is much more severe in the recruitment of academic staff and their promotion; the administrators, such as deans, participate in top-down type evaluation of research and teaching; and not only a research orientation but also a scholarship of compatibility between research and teaching is well recognized. In the case of academics in Japan, while top-down type evaluation is similar to their counterparts in Korea, competition is not so severe as shown by the fact that there are many professorial posts and also many senior professors. But Japan differs most from Korea in the compatibility of teaching and research – which is the lowest among eighteen countries.

(c) Universities and colleges are now transforming from their traditional traits to new traits shaped by massification and diversification in accordance with an emerging "tertiary education". The proportion of permanent positions has declined due to a decrease of tenured appointments and an increase of contract, fixed term appointments and of part-time positions. In the U.S. and Canada, the traditional academic career pattern, in which graduates from universities and colleges, especially from graduate schools, are dominant, is declining, while new patterns in the form of an "accidental type" and a "hybrid type" are increasing (Finkelstein, 2010). In the EU countries, Italy and Portugal in southern Europe hold to a traditional academic career structure, while Norway and Finland in northern Europe retain their civil servant and union carer foundations. The U.K. and Germany have made major changes. Brazil and Mexico have improved their part-time employment systems to a considerable degree, though Argentina has not. In Japan, part-time

employment surpassed permanent employment recently.

(d) Market mechanisms, which were observed in the West fifteen years ago, have spread all over the world and as a result the rationalization and bureaucratization of academia and top-down type of administration and management structures have become increasingly firmly established. The U.S. has acquired the status of the leader in terms of rationalization, market mechanisms, and bureaucratization, demonstrating high academic mobility and yet also retaining academic freedom. While similarly retaining academic freedom, the U.K., reflects difficult conditions accompanied by high psychological strain, the worst working conditions, and also the worst job satisfaction.

Similar difficulties are observable in other Anglo-Saxon countries such as Australia and Hong Kong; so, market mechanisms prevail. But more widely, difficulties are also observable in Japan, Malaysia, and South Africa. In contrast, they are less apparent in countries in northern Europe, such as Norway, or in Latin American countries, such as Argentina and Brazil.

In the midst of the international trend of shifting from a "knowledge community" to a "knowledge enterprise", an extreme shift to dominant market mechanisms brings about many harmful constraints for the academic profession as well as academia, because of their impact on its chief ideal and vision, that of contributing to the scholarship and academic productivity required for social development.

(e) There are many differences with regard to the perceptions of facilities and equipment provided by each country. Some countries, such as Finland, Hong Kong, Norway, and Germany, are seen to provide abundant environments, while others, such as Argentina, Japan, Korea, and Brazil, offer only poor environments. By and large, those countries that have public expenditures in excess of 1 percent of GDP provide an abundant environment. In this regard, Japan, together with Korea, show the worst level among the OECD countries, and this fact is obviously reflected in their poor physical environments.

(f) Today, the role of the academic profession has become more and more confused and it is important to chart an appropriate direction. However, there is no question related to this problem in the questionnaire used in the CAP survey so any discussion in this context has to be speculative. As far as ideal of the academic profession is concerned, compatibility of research and teaching has become problematic. According to the CAP survey, high compatibility between research and teaching is recognized in Argentina followed by Brazil, Korea, Mexico, and the U.S. This can be interpreted as saying compatibility is

high in the countries of Latin America and in the countries of low research productivity, with the exception of S. Korea.

Low compatibility is seen in Japan followed by China, Finland, Germany, and Malaysia, all of which, except Finland, are countries with high research productivity. On the other hand, it is interesting to note that compared to the result of the 1992 Carnegie survey conducted fifteen years ago, the majority of countries reporting "incompatability" between teaching and research are countries characterized by a high research orientation. This fact is thought to be a great change in the sense that compatibility between research and teaching is being hampered by the extent that separation and fragmentation of research and teaching are increasingly proceeding all over the world. Enhancing the nexus and integration of the two basic components or elements of academic work is likely to be keenly connected with enhancing productivity of research and teaching. This is probably related to a vision proper to the academic profession as well as universities and colleges for about two centuries since the rise of modern universities and colleges. Considering these facts, we are now confronting a great turning point.

(g) The directions in which the academic profession proceeds in the 21st century, is from the value of ascription to that of achievement, from value of particularism to universalism, and from value of closedness to openness, according to the framework previously described. Generally speaking, universities and colleges worldwide are now developing more or less in these directions. Mobility beyond national borders is increasing through the effects of globalization, and rationalization and bureaucratization are increasingly developing from the effects of market mechanisms. Totally, the transformation from knowledge communities to knowledge enterprises is accelerating. Functions of discovery, dissemination, application, and control of knowledge are increasingly differentiated and fragmented by the effects of the knowledge-based society. Tertiary education, which is emerging and competing with traditional universities and colleges, is one of the new forces challenging them for the future.

The academic profession in confronting such situational changes has to seek creatively its own professional identity so as to develop academic productivity on the basis of academic work in research, teaching, and service.

(2) The 21st century type academic profession from an international comparison of ideals, openness, and prestige

Based on the viewpoints previously discussed, this part of the discussion addresses tentatively a vision of the academic profession which academics are

now trying to construct. Table 6 draws an international comparison about the following items: ideals (productivity, discipline orientation, compatibility of research and teaching, academic freedom, self-evaluation of teaching), openness (social class, mobility, the ratio of female academics, the ratio of full professors to associate and assistant professors, the contract system), and prestige (doctoral degree holders, the leaders at academic meeting, and salary).

Table 6. Ideals, Openness, and Prestige

	Item \ Country	AR	AU	BR	CA	CH	FI	DE	HK	IT	JP	KR	MY	MX	NO	PT	ZA	UK	US
Ideals	Research productivity	×		×		○		○	○	○	○	◎	×	●			×		×
	Discipline orientation					×				●			○	◎	○	×			
	T-R compatibility	◎		○		×	×	×			●	○	×	○					○
	Support for academic freedom	○			○		●	×			○			◎	×		×		○
	Student's teaching evaluation			×	○				◎		●				○	×		◎	○
	Self evaluation		○							×		●	○	○		×	○	○	◎
	(Total)	2	1	-1	2	-1	-3	-1	3	-1	-2	1	0	4	1	-3	-1	3	4
	Ranking	5	7	11	5	11	17	11	3	11	15	7	10	1	7	17	11	3	1
Openness	Social class (father's educ)				×	×			○		×			○	×				●
	Mobility	○	◎		○	×			○	×	×		×	×		×		○	○
	Percent female	◎	○				○	×			●	×	○					○	
	Percent full professors		○								×	×	◎	●		○		○	
	Contract system	◎	○	●			○	○	○		×	○	×	×		○	×	×	
	(Total)	5	5	-2	0	-2	2	0	3	-1	-6	-1	1	-3	-1	1	-1	2	-1
	Ranking	1	1	15	8	15	4	8	3	10	18	10	6	17	10	6	10	4	10
Prestige	Percent doctoral degree				○	×	●	○	○		○	◎	×	×					○
	Leader in disciplinary associaitons			×	○	●				×	○	◎			×			×	
	Salary	×		×	○	×			◎		○		×	●			×		○
	(Total)	-1	0	-2	3	-4	-2	1	3	-1	3	4	-2	-3	-1	0	-1	-1	2
	Ranking	9	7	14	2	18	14	6	2	9	2	1	14	17	9	7	9	9	5

Source: CAP (2007)

An order of ranking is made arbitrarily by assigning 2 points to the top position (◎), 1 point to upper level positions (○), 0 point to intermediate level positions (no mark), −1 point to lower level positions (×), and −2 points to the lowest position (●). In the case of the item of "research productivity" in the category of "ideals", for example, Korea is the highest (◎=+2), followed by the second group (○=+1) such as China, Germany, Hong Kong, Italy, and Japan, the

third group (no mark= 0) such as Australia, Canada, Finland, Norway, Portugal, and the U.K., the fourth group (×=−1) such as Argentina, Brazil, South Africa, and the U.S., and finally Mexico is the lowest (●=−2). So, for example, among the overall scores for "ideals", the U.S. and Mexico are ranked at the top (+4); the U.K. and Hong Kong are ranked at the upper level (+3); Finland, Portugal, and Japan are ranked at the lower level (−3 and −2, respectively). Anglo-Saxon countries except Australia occupy the upper level. For "openness", Argentina and Australia are ranked at the top; Hong Kong, Finland and the U.K, are ranked at the upper level; Mexico, Brazil and China were ranked at the lower level; Japan was ranked at the lowest level. Anglo-Saxon countries are also ranked at the upper level. For "prestige", Korea is ranked at the top, followed by Japan, Canada and Hong Kong at the upper level. These countries show that the academic profession carries high status and prestige.

On the other hand, Mexico, Finland, and Malaysia are ranked at the lower level, and China is ranked lowest. It is remarkable that Asian countries such as Japan, Korea, and Hong Kong occupy the upper position, while Latin American countries occupy the lower position.

Totally, Japanese academics have a high score in "prestige" (ranking 2) but low scores in "ideals" (ranking 16) and "openness" (ranking 18). Taking into account that the transformation from closedness to openness is an indicator of modernization, the construction of a 21st century academic profession has been delayed in Japan. On the other hand, it is interesting to point out that the U.K. and the U.S., both showing low research productivity, are well advanced in modernization and the U.K. has also progressed in openness.

Among the countries with high research productivity, only Hong Kong occupies a top position in "ideals", "openness", and "prestige", constructing a sort of top-runner-status in the academic profession. Korean academics lag somewhat in "ideals" and "openness" though not to the same extent as Japanese academics, even though they are strong in "prestige". Chinese academics seem to linger at a pre-modern stage, since they are delayed in "ideals" and even more delayed in "openness" and especially in "prestige". Academics in Latin American countries still remain at the developmental stage of the academic profession, although this is a tentative analysis on the basis of the above framework. Their rankings are generally rower as seen in the following results: as for ideals, Argentina (ranking 5), Brazil (11); as for openness, Brazil (15), Mexico (17); as for prestige, Argentina (9), Brazil (14), and Mexico (17).

Construction of the 21st century type of academic profession can usefully be considered from the perspective of an axis based upon the "ideals" Figure 9

represents a spiral enhancement toward the professional ideals by way of exercising academic freedom, establishing openness, and promoting prestige

As the data in Table 7 show, by using the same arbitrary procedures as in Table 6, the U.S. and Hong Kong are ranked at the top, Korea and Canada are ranked at the upper level, Brazil, Italy, Portugal, and South Africa are ranked at the lower level and China and Finland are ranked at the bottom. All Asian countries except China are ranked at the upper level. Japan which is ranked as low as 11th has a high score in "prestige" but an extremely low score in the establishment of "ideals". In this regard, it is clear that Japan has obviously been significantly delayed in establishment of "ideals" compared to other countries such as Hong Kong, the U.S., the U.K., Argentina, Canada and Korea. Therefore, much serious effort is urgently required in Japan so as to construct a 21st century type academic profession.

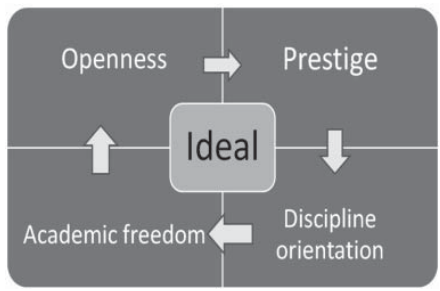


Figure 9. Formation of the Academic Profession

Table 7. Stages in the Formation of the 21st Century Type Academic Profession

	AR	AU	BR	CA	CH	FI	DE	HK	IT	JP	KR	MY	MX	NO	PT	ZA	UK	US
Discipline orientation	0	0	0	0	-1	0	0	0	-2	0	0	1	2	1	-1	0	0	0
Support for academic freedom	1	0	0	1	0	-2	-1	0	0	1	0	0	2	-1	0	-1	0	1
Openness	5	5	-2	0	-2	2	0	3	-1	-6	-1	1	-3	-1	1	-1	2	-1
Prestige	-1	0	-2	3	-4	-2	1	3	-1	3	4	-2	-3	-1	0	-1	-1	2
(Total)	5	5	-4	4	-7	-2	0	6	-4	-2	3	0	-2	-2	0	-3	1	2
Ranking	2	2	16	4	18	11	8	1	16	11	5	8	11	11	8	15	7	6

Note: Each score is based on score given to each position at Table 6 as follows: ◎(top) +2; ○(upper) +1; no mark (intermediate) 0; ×(lower) −1; ●(bottom) −2

5. The Japanese academic profession in comparative perspective

As discussed above, the academic profession has been changing greatly throughout the world so that many problems have accumulated and need urgent resolution. Such problems have occurred in the areas of social conditions, social structure, and social function. Specifically, there are problems in each individual area: a problem of academics' responses to various environmental changes in the area of social condition; a series of problems such as the norms of the academic profession, the methods of administration and management, the allocation of budgets and resources in the area of social structure; a problem of academic work, especially the compatibility of research and teaching, and the need for realizing the R-T-S nexus.

The Japanese academic profession, like all others, is undergoing change; it is confronted with its own internal changes as well as changes similar to those occurring internationally. Accordingly, a comparative speculation on the objectives to be reached in the 21st century may demand Japanese academics adopt the perspective necessary for constructing a "profession" rather than merely for membership on an academic staff. In this context, some viewpoints will be discussed in the following section.

(a) First, there is the problem of openness related to social change as a part of the social condition, especially modernization.

(i) The extent of fluidity in the Japanese academic marketplace has remained low during the past fifteen years, though it has been improving somewhat recently. This is not enough to satisfy the need for social change that demands academics as well as academia to show a more open orientation in connection to various trends like globalization, knowledge society orientation, and marketization. Of course, in this regard Japan is not unique: there are other countries, for example, Mexico, China, and Brazil, which share a similarly low fluidity.

But even so, it is clear that the present situation in Japan is more closed than in Australia, Argentina, Canada, Hong Kong, the U.K., Finland, and Portugal. For example, "inbreeding" – a barometer symbolizing such closedness – is still very high, remaining at more than 70 percent in prestigious universities such as Tokyo, Kyoto, Waseda, and Keio (Yamanoi, Ed., 2007), compared to their counterparts in the U.S. such as Harvard, Yale, and Princeton.

(ii) There is an associated problem of "competitiveness" which is related to globalization and marketization all over the world. Considering the

international trend toward increasingly competitive processes of academic recruitment and promotion, it is undeniable that we can recognize a weaker competitiveness in such processes in the Japanese system.

As Michiya Shinbori pointed out some forty years ago, in the West the low ratio of full professorial positions to associate and assistant professors creates a pyramidal academic structure in their universities. In Japan, a much more equal ratio of positions yielded an academic structure more like a chimney (*entotsu-gata*) in the universities, which suggested that promotion of Japanese academics to a full professorship was relatively easier than in the West (Shinbori, 1965). Even at that time (1965), Shinbori recommended replacing the chimney-type by a pyramidal type. However, as Morikazu Ushiogi pointed out recently, such change as occurred accentuated the Japanese structure by forming an inverted pyramid type rather than the western pyramid type (Ushiogi, 2009) with an increased number of full professorships. This clearly implies that academic promotion to a full professorship occurs almost automatically without competition by way of the so-called *Tokoroten-shiki-shounin* (literally, *gelidium* jelly type promotion, or conveyor-belt fashion promotion).

Certainly, there are exceptional cases elsewhere, for instance in Mexico, where the proportion of full professors is greater than that of associate professors, but even so a lack of competition as in Japan with its inverted pyramid is highly unusual in most countries where the pyramidal structure prevails. The number of full professorial positions has increased greatly over the period of forty years, and at the same time tools for quality assurance in promotion procedures have retrogressed to the extent that academic staff, recruited originally as lecturer (*koshi*) or assistant professor (*jokyo*), can to be almost automatically promoted to full professors before their final retirement.

The contract system (*i.e*, fixed term appointment) has only recently been introduced into Japan and has yet to become fully institutionalized. A selective-contract system, which was instituted legally in 1996, was applied mostly to younger academic recruits, such as *jokyo* (it is usually translated to assistant professor) and *koshi* (lecturer) but much less at more senior levels such as *jun-kyoju* (associate professor) and *kyoju* (full professor). In time it may well contribute to reform of automatic promotion but as yet it has had little effect on stagnation. Under the inverted pyramid type expansion it is common knowledge that the

unemployment of younger academics, particularly post-doctoral researchers, has increased manifestly.

(iii) Related to the above arguments, the phenomenon of the inward directionalism of the younger generation is a matter of concern from the perspective of constructing the future academic profession. Thus, among 666 international students at Harvard University in 2010, there are 42 from Korea, 36 from China, 22 from Singapore, 20 from India and 5 from Japan (Asahi Newspaper, 2010). Harvard, ranked at the top of the world university rankings, is where graduates are supposed to qualify as future leaders in the world. In this context, the fact that the Japanese younger generation is largely absent from this kind of international network will surely not improve the competitiveness for national development at least in comparison with other Asian countries.

(b) Second, there is a problem of university policy, which during these years has promoted the following trends: various kinds of educational reforms and faculty development (FD); competitive allocation of resources among institutions; shared male and female participation in society; top-down type administration and management; extension of university and college enrollment.

(i) In the case of educational reforms, it is important that FD policy is promoted as a part of quality assurance of academics with a focus on teaching (Cook, 2002). However, greater emphasis on teaching was achieved at the expense of separation and fragmentation of research and teaching instead of their compatibility and integration, leading to a discrepancy between the policy's emphasis on a teaching orientation and academics' conscious emphasis on a research orientation (CCE, 2008). As a result, it is natural to say that compatibility between research and teaching remains most difficult in Japanese academics among their counterparts in the participating eighteen countries of the CAP survey (Arimoto, 2004a, 2004b, 2005, 2008).

(ii) Academic funding has shifted to the rational fashion of "selection and concentration" and necessarily accelerated differentiation within and among universities. It has turned out to cause an increase of academics' complaints about the funding reductions and research budget cuts in universities and colleges all over the country, especially in the non-research universities. These problems also became the cause of psychological strains and the incentive for many academics to leave their institutions.

(iii) The institutionalization of a society in which male and female share participation equally was legally enacted in 1998. However, we have to pay attention to the fact that the proportion of female academics in Japan is about 20 percent whereas elsewhere in OECD countries it is about 40 percent. In an international context, the situation of Japanese female academics has hardly been improved thus far.

(iv) Internationally, a large majority of academics register no problem with the compatibility of research and teaching; the situation in Japan is different in that problems are seen by half of the academics, and even those that see no problems provide little support to students, although the expansion of enrollment in the universities and colleges demands that academics change their attitudes toward students. Trends of emphasizing teaching as well as teaching evaluation are seen in countries such as Hong Kong, the U.S., Norway, and Canada. However, it cannot be denied that in Japan, where super-diversification of students is actually proceeding, the gulf between academic staff and students has hardly been reduced thus far.

(c) Third, academic organization, focused on the social structure of the university and college, have implications for the academic functions notably in regard to administration and management, allocation of research money, working conditions, time available for domestic life, income and salary, and psychological strain and stress.

(i) Various reforms were initially affected by the series of policies with respect to administration and management already mentioned in the discussion of implementation of top-down type administration and bureaucratization, for example, and were actually conducted through revamping the control of academic organizations. The trend toward rationalizing administration and management was recognized early in western universities and colleges in order to concentrate power on the president and trustees rather than the faculty (Arimoto & Ehara, Eds., 1996; Slaughters & Leslie, 1997; Ehara & Sugimoto, Eds., 2005). In Japan, MEXT has changed its policy from direct control of universities and college to the management of them, which produced a structure in which presidents and trustee members became MEXT's agents (Arimoto, 2010d).

This trend is functioning, in relation to the allocation of research monies (discussed below) toward the disorganization of the "knowledge

community" and the construction of the "knowledge enterprise" that in effect brought about hostility and fragmentation among academics.

Academic communities retaining faculty autonomy continue to exist in substance in Norway, Argentina, and Brazil. However, a top-down type of administration and management is prevalent in Australia, the U.K., the U.S., Hong Kong, Malaysia, South Africa, and Japan. Overall, a trend of deepening tensions between bureaucratization and autonomy is progressing in many countries. Such a trend has been increasing in Japan, although there is seemingly a sort of balance sheet, or Japanese cultural response, at work consisting partly of a signal of deepening conflicts between administrators and faculty members, and partly of a signal of cooperating faculty members and supportive administrative staff members.

(ii) During the past fifteen years, the changed distribution of research monies has been advantageous for the research universities with their strong research productivity and disadvantageous for the non-research universities as well as for the teaching-oriented universities and colleges. This trend has differentiated institutions into "haves" and "have-nots." The former are found in the natural sciences while the latter are commonly located in the fields of humanities and social sciences less able to attract such funding.

In this respect, it is worth noting that countries devoting a higher proportion of GDP to support universities provide a better environment for academic work through better facilities and equipment, according to the results of the CAP survey. Countries such as Finland, Hong Kong, and Norway are countries that show the benefits of such a better environment; Argentina and Japan lack these benefits. Japan's poor environment needs to be improved urgently up to at least the average level of OECD countries. Inferior environments seen at the national universities in the 1980s were mocked as the "coffin of knowledge"; by extension, today's situation can be considered to be the "grave of knowledge" (Arimoto, Ed., 2011).

From the middle and long term perspective, devastation of facilities and decreases of support must invite quite a few negative aftereffects to the nation's development because deterioration will result in worsening effects upon not only academia but also directly on individual academics.

(iii) The weekly work time allocation reported by respondents in the eighteen

countries of the CAP survey indicates that they are working more than 40 hours *per* week. On average, they spend 20 hours on each of research and teaching during semester periods, and 30 hours for research and 5 hours for teaching during vacations. During the past fifteen years, the time allocation has increased in the areas of administration and management, service, and teaching, but decreased in research in some countries, especially in the U.S., the U.K. Mexico, Malaysia, and Japan. Such a reduction of research time is apparent across sectors, disciplines, and academic ranks.

The reduction in time for research seems to have caused an alienation in Japanese academics in the face of their strong research orientation; and, in fact, it largely accounts for one of the highest reported levels of psychological strain among academics worldwide.

(iv) Academic salaries and income show great differences across countries. Internationally, the level of salary is substantially determined by research rather than teaching performance, even though salaries are nominally paid for teaching. Salary and income tend to be high in countries with high research productivity. The average income of academics in the eighteen CAP countries is $51,050, or ¥4,339,000 Yen (1$= 85Yen, 2011). The amount of income is higher in Hong Kong, Japan, and Canada, but lower in Mexico, China, Argentina, South Africa, Malaysia, and Brazil. However, there are many countries that report a diminution of research time regardless of their salary and income levels.

(d) Fourth, with regard to the social function, there is a problem of academic productivity including both research and teaching productivity. As the social contribution of academics and academia may be considered to take the form of their research and teaching, enhancement of academic productivity is substantially important. Accordingly, examination is necessary of all aspects of productivity including the quality of research productivity, the conflicts between research and teaching, and its evaluation. Japanese academics' research productivity achieved the top ranking in the Carnegie survey fifteen years ago and in the current survey it retained a high ranking position at least in terms of quantitative indicators. Other countries such as Korea, Italy, Germany, Hong Kong, and China also occupy the upper levels in the ranking.

Of course high research productivity can be affected by many individual factors: discipline; gender; age; institutional type; amount of research money; the environment for research, provision of facilities and equipment; student quality;

the level of participation in academic societies; interest in research and teaching orientation. In general, high research productivity has a positive relationship with the following factors: the disciplines of natural science and engineering; a male gender; an age of more than 45-years old but less than 55-years old; a research university setting; abundant research money and privileged research facilities and equipment; students of high scholastic achievement; a high participation ratio in academic societies; much research time; a high research orientation.

It is also true that differences in research productivity can be attributable to various social or supra-individual factors. It is defined socially, in addition to personal ascription including age, gender, and ability, by factors such as discipline (differences among disciplines and activities in academic communities), higher education policy (differences of universities and colleges, gender bias, competitive allocation of research money, deterioration of research time, decline of student achievement), and institutions (national, public, and private sectors, research and non-research institutions, research facilities and equipment).

In order to enhance research productivity, it is necessary to identify a cluster of COE institutions sitting on the top of a country's ranking by introduction of the "selection and concentration" policy, which has become popular among many countries. At the same time, it is necessary to raise many institutions sitting at the bottom of the ranking by the investment of monies and resources through lifting the proportion of GDP spent on higher education, which in Japan is known to be particularly low.

The importance of teaching, which is one of the two components of academic productivity is expected to acquire even greater significance in the 21st century when universalization of accesses predicted to increasingly develop. The fact that teaching time is increasing internationally may well imply that teaching is perceived to be of increasing importance, though the decrease in research time accompanies an increasing research orientation internationally. Among three orientational types (research, equally research and teaching, and teaching) only the research orientation expands. In accordance with the promotion of globalization, the knowledge economy, and marketization, the research paradigm, the reward system, and a competitive orientation are dominant.

This trend is related to the form of the university world rankings. In this regard, the fact that the research paradigm is working explicitly in the university world ranking explains that France has not been ranked in the upper levels

despite its Napoleonic teaching heritage. Ideally, indicators used in a world university ranking ought to be elaborated carefully to identify components that will become critical in the 21st century, such as the compatibility between research and teaching, rather than those related to the economic development criteria of the 20th century. For example, quality assurance of the teaching and learning process including admission, curriculum, and diploma policies of undergraduate and graduate courses.

There is a paradox that a research orientation is an inevitable component of a knowledge-based society but one which precipitates a fragmentation between research and teaching; yet a knowledge-based society requires more and better equipped graduates who can only be produced by an increased teaching orientation to educate the super-diversified students at a time of universalization of higher education. It appears that this paradox can only be resolved by integration of teaching and research. The alternative appears to envisage academia and the academic profession becoming reconciled to academic staff and academia being swallowed by the expanding tide of "tertiary education". The rejection of such a solution is needed if the academic profession is to rebuild itself. In this respect, achieving compatibility between research and teaching is more difficult for academics in Japan than for their counterparts in Western countries. This constitutes a fundamental structural fault in the Japanese academic profession and academia. At the policy level, it is urgently necessary to review FD policy emphasizing teaching from a perspective of constructing R-T-S nexus.

Concluding remarks

Based on the previous arguments, some conclusions can be drawn. The following reforms are needed to enable the academic profession to be transformed from a closed structure to an open structure.

(i) Control of the proportion of full-professorships is necessary to transform the inverse pyramid type of professional structure in Japan to a pyramidal type.
(ii) The contract system has to be introduced to all stages of academic careers from assistant professor to full professor in order to break through the present closed situation.
(iii) Inbreeding at the prestigious universities should become out-breeding to promote a more open structure of the academic marketplace.

(iv) The retirement system should be reviewed in addition to the seniority and permanent employment system – an issue to be discussed in greater detail in future articles.

(1) The following reforms are necessary to deal with problems of academic policy.
  (i) Increase public expenditure on higher education to at least one percent of GDP to equal the OECD's average.
  (ii) Seek compatibility between research and teaching rather than their separation.
  (iii) First raise the budget allocation to increase its minimum level and then use "selection and concentration" to provide meaningful maximum levels to promote upward movement in the international rankings.
  (iv) Aim to achieve a ratio of not less than 30 percent of female academics to at least equal the average level in OECD countries.

(2) Counteract the current tendency to increasing bureaucratization with the top-down pattern of management in order to build an effective knowledge-based community with a bottom-up pattern.

(3) Construct a new type of profession by creatively introducing a student-based viewpoint to accord with universalization of higher education and the development of tertiary education.

(4) Increase recruitment and training of younger academics so as to better prepare the next generation of the academic profession for the needs of the future.

(5) Reform of the academic organization is required in the following areas.
  (i) Replace administration and management of the top-down type, which was introduced to the national universities in 2004, with a bottom-up type.
  (ii) Secure an adequate provision of research time especially for younger academics to enhance their internationally competitive research ability.

(6) The following reforms are demanded from a perspective of academic productivity and evaluation.
  (i) Seek an integration of research and teaching so that the core components of academic work can function optimally.
  (ii) Establish a viewpoint of scholarship for a 21st century type of academic profession through an R-T-S nexus.

(iii) Systematically enhance graduate education so as to construct a fully effective academic profession.

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The Rise of Asian Research Universities: Focus on the context

William K. Cummings*

Introduction: The tilting earth hypothesis

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

The popular version of recent trends is the Flat Earth perspective (Friedman, 2005), *i.e.*, that increasing amounts of U.S. secondary science and technology are being shipped off-shore. Friedman argues that this trend was eased by the reduction of trade barriers of the 1990s; but the internet revolution of the late 1990s enabled a significant acceleration. General Motors has an India branch for its car design. IBM has major research laboratories in India, China, and Japan. Following on the export of secondary science and technology, the new beneficiaries are projected to increase their capability in primary science and technology. And thus the primary (as well as secondary) science and technology world will become flat, or at least there will be a more equitable distribution of peaks and valleys in science and technology across the more or less flat earth.

While it may be that the earth is becoming flat, the particular variant I wish

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to explore today is the *Tilting to Asia* hypothesis[1]. For a variety of reasons, Asia is beginning to catch up in science and technology − and if forward projections can be trusted, Asia could easily surpass the U.S. in 15 years. And as science and technology wages in most parts of Asia are relatively modest, Asian firms may be less inclined to off-shore their research and development work. Thus, as a consequence, the world may gradually tilt upwards to Asia.

The beginnings of Asian higher education

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

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

Japan is one Asian system that avoided colonial dominance, and it was the first to take major steps towards a distinctive higher education system. Within a few short years of the Meiji Restoration (1868), a new leadership emerged in Japan that declared its determination "to seek knowledge throughout the world" and to accept Western Science at the same time as they reaffirmed Eastern Morality (Bartholomew, 1989). At first, the Japanese focus was on knowledge

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

imitation. A new institute was established to translate foreign knowledge and other new institutes specialized in engineering, ship-building, armaments and other technological areas; subsequently several were consolidated in Tokyo University which was in 1886 re-christened as the first Imperial University. Over the next decades, numerous other public and private higher educational institutions were founded, most with a focus on Western science, technology, law, and languages. By the 1920s, increasing emphasis was placed on knowledge innovation, and from the 1970s onward, Japan began to place a stronger emphasis on knowledge creation (Cummings, 1990). Some of the themes underlying this shift were drawn from the West, and especially from the United States. But as we argue below, Japan has also fostered some new strategic directions (Kodama, 1991).

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

The context

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

A rich and distinctive intellectual tradition

The Asian region is the site of some of the world's greatest civilizations that have added immensely to the world's stock of knowledge and, at the same time, the site of some of the world's most primitive peoples. India has given birth to

the great religions and philosophies of Hinduism and Buddhism that include profound insights into the nature of the cosmos; and China is the home of the Confucian political and social philosophy as well as an extraordinary tradition of scientific and technological discovery that superceded the accomplishments of the West at least through the sixteenth century (Needham, 1956).

The strong intellectual traditions of these two civilizations provide an important part of the base for contemporary developments. As Shigeru Nakayama (1984) observes, Asia in these early times developed a distinct mode of inquiry, the *documentary tradition*, which stands in sharp contrast to the Western rhetorical tradition. The documentary tradition trains the mind to build a strong foundation in basic principles, to carefully assemble all of the relevant information, and to take small first steps in discovery as the foundation for a later stage of boldness. The subsequent exposure to Western rhetorical modes of inquiry complemented the Asian documentary tradition.

Colonialism stunted the development of educational development and knowledge production

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

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

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

Asian states treasure their autonomy

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

The process of state formation led to the emergence of societies that varied widely in terms of ethnic-cultural diversity. For example, India and Indonesia both include many religious and national-ethnic groups whereas Japan and S. Korea are more homogeneous. In between are nations such as Thailand and Malaysia that favor one group by stressing the cultural assimilation of their minority groups. Occasionally the cultural differences within particular Asian nations become a source of conflict as in the recent protest of the Muslim minority in southern Thailand. When domestic tensions appear in an Asian nation, most Asian nations view this as an internal matter and restrict their criticism. Myanmar's neighbors, for example, have tolerated its repressive system for decades without exerting notable pressure for reform.

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

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

Asian states place a high priority on economic and social development

Partly as a result of the post-colonial history of political struggle, many of

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

Overtime, several of the Asian states have become more politically inclusive, though usually within a framework of firm political leadership focused on economic development. Increasingly, these states have focused on knowledge production as an important key towards furthering national development. Of course, the differences in context outlined above have influenced their respective approaches to knowledge production.

Asian states view human resources as the foundation of development

Most Asian states recognize the importance of a well-educated population for the realization of development goals, and thus stress universal basic education of high-quality with considerable opportunities for further education up through graduate studies. In most Asian school curricula, science and mathematics is featured from the earliest grades, and as demonstrated repeatedly in international studies of academic achievement, Asian young people do exceptionally well. For example, in the Third International Mathematics and Science Achievement Survey, the average achievement scores of young people from Singapore, S. Korea, Japan, Hong Kong and China were ranked at the very top among some forty countries (IEA in NSB, 2004, chap.1, p.13). Science and mathematics is featured in the secondary and tertiary levels of Asian education with the result that China, India, and Japan graduate a larger number of first degree holders in science and engineering than does the United States or Russia, let alone the Western European countries. The strong foundation in human resources means that the Asian research and development enterprises have a substantial reserve of candidates when they seek to staff new entities.

Asian states vary in their development priorities

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

Defense-related knowledge production is not a priority

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

The scale of Asian nations varies

Asian nations vary immensely in geographic scale from massive China and Australia, on the one hand, to tiny Singapore, on the other. Of even greater importance for the execution of research and development programs are the wide differences in population size. Without a critical density of researchers in a particular area of inquiry, it is difficult for a nation, on its own, to foster major discoveries in research and development. To a certain degree, a high allocation of resources can compensate for small size as is demonstrated by Finland and Switzerland and possibly by Singapore. Also, small size leads a nation to buy brains (expatriate researchers) and ideas (technology licensing) alongside energetic efforts at home-grown science and technology. Even so, large nations

such as China and India have a natural advantage, as the sheer human scale of their research and development enterprise enhances the probability of identifying native talent and nurturing home-grown discoveries.

A new focus on knowledge creation

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

However, from at least the late 1960s, Japanese policy-makers came to recognize that Japan was pressing on the upper edge of imported technology utilization and thus that the future prospect for low-cost borrowing of technology was bleak. Thus it would be necessary for Japan to place increasing emphasis on the autonomous development of technology. Just as Japan began to make this policy shift, other Asian nations came to the same conclusion: S. Korea and Taiwan in the mid-80s; Singapore, Malaysia, and Australia in the early 1990s. An example is Malaysia's vision 20-20 (Sarji, 1993) which, among other innovative concepts, proposes the development of a new information highway and to that end a range of new programs aimed at fostering a wide range of home-grown information technologies.

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

The purpose of science and technology

From the earliest days of Japan's Meiji era (1868-1912), increased

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

Out of this sober reflection, Japan began to envision a new role for science involving not only the economic prosperity of the nation but also the improvement of the natural and social environment. This vision has been reflected in the subsequent development of Japanese science and technology policy. Official descriptions of Japanese science and technology policy are notable for their humanistic emphasis on such topics as environmental preservation, improving the quality of urban life, and creating a more comfortable setting for older people.[2] The allocation of government science and technology resources by purpose in Japan places far less emphasis on defense-oriented science than does the U.S. or the UK and far more on other areas such as energy, industrial applications, planning of land use, and university research. The allocations in S. Korea, the only other Asian nation for which comparable data is available, tend to follow the same pattern as Japan − relatively small allocations on defense, more on civilian priorities (including agriculture and land use) and university research.

A distinctive strategy for knowledge production?

While science and technology have played a major role in the development

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

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

> … there is a perverse law governing research: Under the pressure for immediate results, and unless deliberate policies are set up to guard against this, *applied research inevitably drives out pure.*
>
> The moral is clear: It is pure research which deserves and requires special protection and specially assured support. (Bush, 1945, p.103)

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

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

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

The role of the universities

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

In the interactive model that tends to characterize the approach of several Asian nations, the university shares the responsibility for basic research with the other sectors and thus has relatively less funds to support research and recruit research assistants. However, the universities, especially those in the public sector, have a critical role in the development of human resources for the other sectors. The overall levels of access to higher education in Asia are higher than in other regions of the world (NSB, 2004, pp.1-46), and for those young people pursuing higher education the 1st and 2nd degree training is heavily skewed to science and engineering. For example, in Japan and S. Korea's public sector, approximately 40 percent of all first degrees are in science and engineering. In China, over 50 percent are in these fields. By virtue of this science and engineering emphasis, the university systems of Japan, S. Korea, and Taiwan each graduate a larger proportion of their college age cohort in the natural sciences and engineering than does the U.S (NSB, p.2-35 - p.2-39). In terms of the total number of first degree science and engineering graduates, China, Japan,

and India produce about the same number annually as does the U.S. – with S. Korea not far behind.

Recent efforts to stimulate creative research in the academy and elsewhere

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

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

grants adjusted by ranking (and other criteria such as total number of students or faculty). China several years ago spoke of focusing central funding on the top 100 universities. In 2001, Minister Toyama of Japan spoke of focusing funding on the top 30 Japanese universities. In fact, no government has actually implemented these proposals. However, a related principle has been to rank the component units of the many universities in a system and use these unit rankings for preferential funding. Over the past several years, Japan has experimented along these lines with its "Centers of Excellence" program.

- *Peer review of research proposals.* In the state-regulated university it was customary to allocate research funds on an equal basis to each academic unit regardless of their productivity or potential. A "new" approach is to require those units and individual professors who desire research funds to prepare a research proposal for anonymous review by a committee of peers. This approach is presumed to elicit more careful development of research programs and to channel funds to those researchers most likely to realize innovative results.
- *Increased support of large and medium-scale projects of longer duration.* When research funds were limited, there was a tendency to annually distribute small allocations across the university system. As units could expect to get the same modest amount year after year, this approach did facilitate multi-year research agendas. In keeping with the modest funding, these agendas tended to focus on small problems. But in recent years, R&D policy makers have come to understand that big research breakthroughs require big efforts. Thus in several of the Asian systems new funding opportunities are emerging which encourage large ambitious multi-year projects. In some instances, these are awarded to individuals or groups who work in the conventional academic units. Parallel to these conventional awards, many new and generously funded research institutes are also being established.
- *Trial periods for prospective researchers.* In many Asian systems, universities were inclined to recruit new staff from among the top students of their recent graduating classes and, in keeping with the spirit of "civil service" appointments, to offer these new employees the equivalent of lifetime tenure. While this personnel policy guaranteed the loyalty of new recruits, it did not always result in the best choices. As many candles burned out as continued to shine brightly. Recognizing the weight of deadwood, many systems (or particular universities within the respective

systems) have introduced a trial period for initial appointments.

- *Efforts to reclaim drained brains.* Asian universities "lose" many graduates to the research and development entities of the U.S. & Western Europe. (NSB, 2010, pp.3-52). The quality of first-degree training in Asian universities, especially in the sciences and engineering at the top-ranked universities, is quite high. Thus graduates from these institutions tend to be successful when they apply for graduate education in the West. And many who complete graduate education in the West tend to stay on for post-doctoral and other employment opportunities. China and India are numerically the largest suppliers of foreign talent to the knowledge industries of the West, though not an inconsiderable number of young knowledge workers migrate from other Asian countries such as Japan, S. Korea, Malaysia, and Singapore. But in recent years, as the research conditions in the Asian region improve, this trend may be changing. There is evidence that more Asian students are electing to stay home for graduate studies and post-doctoral opportunities. After two decades of steady growth in the number of Chinese young people seeking overseas graduate education, their numbers appear to be leveling off since 2001.
- *Opening the doors to foreign talent.* Additionally, Asian universities are experiencing greater success in recruiting foreign students for their graduate school and postgraduate fellowship opportunities. For example, in Japan in 2001, foreign students make up 8 percent of all Japanese graduate student enrollments in engineering, 10 percent in the natural sciences, and 20 percent in the social sciences (NSB, 2004, pp.2-38). Asian universities, especially those in the smaller countries that have limited indigenous pools of knowledge workers, are increasing their efforts to attract established professionals from other countries. Most Japanese and S. Korean universities now have numerous positions available for overseas visiting professors and researchers, and in Singapore, higher education institutions advertise internationally for virtually every academic opening. According to a recent study, Japan in 1999 attracted 240,936 high skill immigrants, an increase of 75 percent over the 1992 figure (Fuess Jr., 2001). Singapore has been able to attract many outstanding researchers to its laboratories, including recently a noted biochemist who is a Nobel laureate.

Asian science and technology is gaining international prominence

The Asian region's new commitment to research and development is

beginning to show results. The most obvious indications are in the application of science and technology for commercial purposes:

- Asian countries, most notably Japan and S. Korea, have steadily increased their numbers of domestic patents over the past two decades as well as their applications for patents in foreign markets.
- Asian countries, especially Japan, S. Korea, and China, have shifted substantial proportions of their industrial production towards high-tech products. Currently, S. Korea reports a higher proportion of its industrial production is in high-tech areas than is the case for the U.S.
- Asian nations are also beginning to increase their share of high-tech production in the service industries, a market formally monopolized by the U.S.
- Finally, over the past two decades China and the Asia-9 (S. Korea, Malaysia, Singapore, Taiwan, India, Indonesia, the Philippines, Thailand, and Vietnam) have been expanding their share of the global market for high-tech products. This combination of countries was supplying less than 8 percent of global high-technology exports in 1980 compared to 30 percent for the U.S. By 2008, China and Asia-9's share had increased their share to 48 percent and the U.S. share had dropped to 14 percent. During this period, Japan's share dropped from 25 to 8 percent.[3]

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

Related to the emerging strength of the Asian region in knowledge products is the parallel emergence of a more active and creative academy. One illustration of this new creativity is the increasing prominence of articles written by Asian scholars in internationally refereed journals. Focusing on articles in the science and engineering fields, both Japan and other Asian countries have shown rapid gains in the number of referred articles over the past twenty years, a doubling in the case of Japan and a quadrupling in the case of other Asian countries. By way of comparison, the volume of articles written by U.S.

[3] This percentage drop is in the context of a major global increase in the volume (as measured by the value of sales) of high tech products. Japan's actual volume of high-tech products slightly increased.

researchers has been stable over this 20 year period and the volume written by Western European scholars has increased about 65 percent. As a result, in 2007, Japanese scholars alone were publishing 7 percent of the world's total, China (including Hong Kong) 7.5 percent, and Asia-9 an additional 7.3 percent. While the Asian region total of 22 percent is less than the U.S. share of 27.7 percent, the Asian proportion has steadily gained in recent years and shows every sign of maintaining that trajectory. While growth in Japan and S. Korea may slow down, other countries in the region are likely to surge forward.

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

An indication of the relative quality of academic research is the frequency with which it is cited by other scholars, including citations by scholars in other countries. For the advanced countries, the relative frequency of citation is roughly in line with the relative frequency of publishing articles. Citations for U.S. authored articles (first author from the U.S.) made up 43.6 percent of all citations in 2001 followed by UK articles with 8.2 percent and Japanese articles with 7.3 percent of all citations. Relative to the above science and engineering giants, articles authored by researchers in other Asian countries were not numerous nor frequently cited. However, their likelihood of being cited had sharply increased between 1992 and 2001: "citation of literature from East Asian authors in China, Singapore, S. Korea, and Taiwan more than quadrupled in volume during this period, with the collective share of these countries rising from 0.7 percent of the world's cited literature in 1992 to 2.1 percent in 2001."

(NSB, 2004, pp.5-49)

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

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

Obstacles to academic knowledge production

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

Practical bias

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

Difficult to change academic field coverage of academic sector

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

Legalism

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

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

Difficult to build relations between academia and the private sector

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

Shortage of qualified researchers

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

Obstacles of these kinds can be found in any academic system, and as their

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

Conclusion

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

The academy plays an important role in Asian knowledge production but so do other sectors of society. A relatively greater proportion of Asian research and development funds comes from the corporate sector than is the case in the West and a smaller proportion comes from government. We have suggested that the more even distribution of R&D funding across sectors in the Asian region suggests a distinctive interaction model of knowledge production. Nakayama (1991) adds that civil society might be added as another component of the Asian model along with the universities, the corporate world, and government. He notes, for example, that civic groups have provided the leadership in promoting environmental research and halting defense-related research. In a sense, the civic groups are encouraging a humanistic dimension in Asian knowledge production that may be more muted in the West.

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

The role of the universities in increasing the prominence of Asian

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

An interesting line of speculation would be to propose that the different academic systems of the Asian region might develop distinctive directions of excellence in the decades ahead. Japan appears to have strength across the board. China is notable for its achievements in space and in computer-related areas. The Philippines is notable for its training of doctors and other health personnel, and with an infusion of increased resources might show promise in the health-related sciences. Agriculture and horticulture are strong throughout the region and lend support to future breakthroughs in biotechnology. This is a region of great academic promise and it is destined to claim an increasingly central position on the world's stage.

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Is There an Asian Academic Profession? Common and Diverse Features in Comparative Perspective

Ester Ava Höhle* and Ulrich Teichler**

1. Introduction

Many comparative projects in the social sciences take for granted that the political entity "country" is the appropriate unit of analysis for a "society" or for a "system". This holds true for most analyses in the area of higher education research, where we talk about the "Japanese higher education system" and – in the case of the theme of this conference – about the "academic profession in Japan".

As a consequence, most publications on the results of the research project "The Changing Academic Profession" (CAP) hitherto have addressed either individual countries or drawn comparisons between various countries. Actually, the CAP project was undertaken by a consortium of scholars from 18 countries who raised funds for their country-specific project nationally. To be precise, Hong Kong is participating in the study as one entity – an entity which can be described as a "society" of its own without the status of an independent country.

At times of increasing supra-international interaction the global reach of concepts, it is natural to raise the question in this project whether the academic profession in certain supra-national entities has so much in common that this is a more salient level of analysis than that provided by specific national features. In the search for supra-national commonalities, we have various options for

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sub-dividing the globe:

- A *cultural* distinction between "West" and "East" has often been applied in distinguishing the cultures of Europe and economically advanced countries as closely linked on the one hand from the cultures of China, Japan and neighbour countries on the other hand.
- The same words, *i.e*. "West" and "East" have served as a *political* distinction for some decades. From about 1950 to 1990, market-oriented economically advanced countries were called the "West", while the Soviet Union and the countries politically linked to the USSR were called the "East".
- A primarily *economic* distinction has been drawn between the "North" (economically advanced countries) and the "South" (middle-income countries and low-income countries). Often, the member states of the Organization for Economic Co-operation and Development (OECD) are seen as synonymous with economically advanced countries, though not all experts would agree.
- Countries can be sorted as well by *geographic region*, *i.e*. Africa, America, Asia, Australia and Europe. One has to bear in mind, though, that some countries are partly located in Europe and partly in Asia (*e.g*., Russia and Turkey). Moreover, often sub-divisions are made between the Northern part of America and either "South America" or "Latin America".
- In the framework of international organisations, we often observe a *geo-political* grouping of countries. For example, UNESCO divides the globe into Europe and North America, Latin America and the Caribbean, Sub-Saharan Africa, the Arab States as well as Asia and the Pacific.
- Finally, we could group national higher education systems according to similar "concepts" and "models" of higher education, *e.g*. the Napoleonic University, the Humboldtian University, the Anglo-Saxon University, the U.S. model or similarly.

In looking at higher education systems or, as in our example, at the academic profession in neighbor countries, *one does not necessarily have predominantly common features in mind*. For example, in the invitation to this conference on the academic profession in Asia, distinct features of the academic profession in Asian countries are more strongly underscored than similarities. Similarly, the cooperation of scholars from European countries in analyzing the academic profession "in Europe" is not based on the assumption of prevailing commonalities; rather, student mobility in Europe became so much a popular

feature in this region because it is seen as a valuable means to "learn from contrasts" in the geographic and political neighbourhood.

Yet, nobody would convene a discussion of the "academic profession in Asian countries", if one wanted to demonstrate merely thee differences between a few of the Asian countries. At least, it seems worthwhile to examine the extent and nature of similarities in this geographic neighbourhood. Therefore, this presentation will concentrate on the similarities among Asian countries in addressing the basic question: Is there an *Asian* academic profession? This possibility will be considered in comparison to all other economically advanced countries (Canada, US, Finland, Germany, Italy, Norway, Portugal, the UK and Australia) and to all other "emerging countries" (Argentina, Brazil, Mexico and South Africa) included in the CAP project.

We should bear in mind, though, that Asia is represented in the comparative study "The Changing Academic Profession" only through Japan, Korea, Hong Kong, Malaysia and China, *i.e*. primarily through East Asian countries and additionally through a single South East Asian country; South Asian countries, Central Asian countries and Mid-East countries are not represented in the CAP study.

The CAP study also has to consider the extent to which it is appropriate to treat academics active at institutions of higher education in a country as a single entity. We know that there is a substantial divide between senior academics and junior academic staff in many countries, and we know that academic life is different at institutions more or less oriented equally to research and teaching, on the one hand, from that at institutions primarily oriented to teaching, on the other. Therefore, in the subsequent analysis, the academic profession is sub-divided into four groups: (a) senior academics ("professors", in the CAP study, *i.e*. persons equivalent to "full professors" and "associate professors" in the U.S.) at "universities" (*i.e*. institutions both more or less equally in charge of research and teaching, in some countries informally called "research universities"), (b) junior academics (or "academic staff") at "universities", (c) senior academics ("professors") at other institutions of higher education (*i.e*. institutions primarily oriented to teaching no matter whether they are officially called "universities" or not), and (d) junior academics at other institutions of higher education.

The proportions of these four subgroups among all countries surveyed (*i.e*. full-time academics at institutions offering study programs leading to at least a bachelor degree) vary dramatically. In Table 1 the five Asian cases are compared to the U.S. and Germany. Obviously, junior staff at universities and other institutions of higher education in Korea and Japan are scarce. Moreover,

according to definitions chosen in the individual countries, the sector of "other institutions of higher education" is relatively small in China and Malaysia.

Table1. Percent respondents in Asian *vs.* other countries by rank and institutional type

Institution	Rank	Asian countries					Other countries	
		CH	MY	HK	KR	JP	US	DE
Universities	Seniors	36	23	34	14	17	18	12
Universities	Juniors	48	57	66	4	4	50	68
Other HEIs	Seniors	5	16	.	55	62	17	17
Other HEIs	Juniors	11	4	.	27	23	15	3

Source: CAP Survey (May 2010 data set)

The differences in the ratios of junior academics to senior academics can be explained by the fact that higher education institutions in some countries employ many young academics for research and teaching, while in other countries either few young academics are active at universities or are counted as doctoral students, auxiliary staff or staff directly paid via research funds without any employment status in the university. The differences in the ratio of academics at "universities" to those at "other institutions of higher education" are partly due to real different ratios of the research and teaching-oriented sector versus the teaching-oriented sector; unfortunately, however, some of the differences are explained by the fact that the researchers of the different countries involved in the CAP project did not always choose the same dividing line between the two sectors. For example, "universities" in Japan and Korea in the CAP data set are only those institutions with a strong research role, whereas more teaching-oriented universities are included in the group "other institutions of higher education"; in the Chinese CAP data, however, "universities" comprise all institutions officially called universities, even if their research role is limited. In sum, the data set is not ideal in terms of the comparable distribution of academic subgroups across countries. This notwithstanding, the subsequent analysis does not compare the academic profession as a whole across the five Asian societies included in the CAP data set, but rather four categories of academics sub-divided by rank and by type of higher education institution.

2. Socio-biographic background

The Changing Academic Profession included few questions related to the socio-biographic background of the academic profession. Rather, just a single

question was asked across all countries: *the percentage of women*.

Actually, Japan, Korea and Hong Kong are three of the four cases in the CAP study in which the share of women among university and non-university professors is exceptionally low. While this share is low both among senior and junior academics in Japan and Korea, the respective proportion is higher among junior staff in Hong Kong thus indicating an opportunity for change over time. In contrast, the share of women among academics in China and Malaysia is close to the average of emerging countries in most of the four categories displayed in Table 2. Indeed, among junior academics at other institutions of higher education in China, the percentage of women is one of the highest of all the countries addressed in the CAP study.

Table 2. Percent women among academics in Asian *vs*. other countries

Institution	Rank	Asian countries					Other countries	
		CH	MY	HK	KR	JP	Advanced	Emerging
Universities	Seniors	38	38	20	13	13	29 (18-39)	39 (33-46)
Universities	Juniors	52	49	43	20	14	48 (38-63)	49 (46-54)
Other HEIs	Seniors	35	21	.	19	17	37 (20-47)	39 (34-48)
Other HEIs	Juniors	55	47	.	17	23	44 (19-60)	44 (40-49)

Source: CAP survey (May 2010 data set)

3. The employment situation

Part-time employment is a rare exception among professors not only in the Asian countries, but in all countries surveyed except for those in Latin America. In the latter countries, we observe a long tradition of concurrent academic and other professional work (for example as a professor and a lawyer).

Among junior academic staff, part-time employment is also consistently very low or at least clearly below average in Asian countries. In contrast to a substantial number of countries participating in the CAP study, where the early years of an academic career are often not fully funded, embarking on an academic career in the Asian countries appears to be linked to full-time work.

Limited or fixed term contract employment among professors was a rare exception until recently in many countries of the world. The recent trend towards a policy even for professors of short-term appointments contingent upon performance or continued need – is also visible in Asian countries, as Table 4 shows.

Table 3. Percent academics employed part-time in Asian *vs*. other countries

Institution	Rank	Asian countries					Other countries	
		CH	MY	HK	KR	JP	Advanced	Emerging
Universities	Seniors	3	0	1	0	0	4 (1-6)	25 (3-75)
Universities	Juniors	2	1	10	0	7	22 (2-31)	30 (3-88)
Other HEIs	Seniors	2	2	.	0	0	6 (2-14)	25 (0-65)
Other HEIs	Juniors	2	0	.	0	1	11 (6-14)	51(16-86)

Source: CAP survey (May 2010 data set)

Table 4. Percent academics employed in limited or fixed term contracts in Asian *vs*. other countries

Institution	Rank	Asian countries					Other countries	
		CH	MY	HK	KR	JP	Advanced	Emerging
Universities	Seniors	21	10	27	23	13	11 (2-34)	23 (2-62)
Universities	Juniors	23	6	82	86	39	61 (29-82)	32 (6-68)
Other HEIs	Seniors	24	29	.	19	9	11 (2-16)	4 (*)
Other HEIs	Juniors	29	12	.	79	22	47 (12-75)	12 (5-20)

* Information available only for a single country
Source: CAP survey (May 2010 data set)

Table 5. Percent academics earning additional income in Asian *vs*. other countries

Institution	Rank	Asian countries					Other countries	
		CH	MY	HK	KR	JP	Advanced	Emerging
Universities	Seniors	2	1	2	7	8	9 (5-17)	14 (0-38)
Universities	Juniors	6	45	7	1	17	9 (5-24)	25 (0-45)
Other HEIs	Seniors	1	32	.	2	6	8 (2-22)	16 (0-32)
Other HEIs	Juniors	1	2	.	9	13	7 (3-20)	18 (0-37)

Source: CAP survey (May 2010 data set)

Fixed term employment among junior staff differs strikingly by countries. While in some countries, entry to an academic career almost guarantees persistence, entry to academic work is highly selective and risky in other countries. Korea and Hong Kong are among those cases with the highest proportions of fixed-term employment of junior academic staff, while the respective figures for the other Asian countries are below average.

The percentage of academics earning *additional income – i.e*. income from sources beyond the primary university employer – is presented in Table 5. Accordingly, an exceptionally high proportion of junior staff at universities and professors at other institutions of higher education have additional income. A sizeable percentage of junior staff both at universities and other higher education

institutions in Japan have report additional income but roughly on a par with their peers in the countries included in the CAP survey. Very small proportions of academics of all other categories from Asian countries report on average additional income beyond their institutional income salary.

We know that the causes for relatively high proportions of academics earning additional income are manifold: part-time employment, relatively low remuneration of the academic profession, and specific opportunities for side income in select fields and occupational areas. Certainly, we do not observe here any consistent "Asian" regional pattern.

4. The work situation

Academics in advanced countries rate their *facilities for academic work* (*e.g.* classrooms, office space, research equipment, *etc*.) on average more positively than academics in emerging countries. Surprisingly, though, academics at universities do not rate their work environment more positively than academics at other institutions of higher education. Table 6, first, shows that academics at universities in China have slightly more positive views of the facilities for academic work than the average of their peers in emerging countries. Table 6 also shows that academics at other institutions of higher education both, in Japan and Korea, rate their facilities quite negatively.

Table 6. Academics' mean* assessment of eight dimensions/aspects of their work facilities in Asian *vs*. other countries**

Institution	Rank	Asian countries					Other countries	
		CH	MY	HK	KR	JP	Advanced	Emerging
Universities	Seniors	2.8	2.9	2.2	2.7	2.7	2.6 (2.3-2.9)	2.9 (2.7-3.1)
Universities	Juniors	2.7	2.8	2.4	2.6	2.6	2.6 (2.2-3.0)	3.0 (2.8-3.5)
Other HEIs	Seniors	2.9	2.6	.	2.9	3.3	2.5 (2.3-2.7)	2.8 (2.5-3.0)
Other HEIs	Juniors	2.9	2.9	.	3.1	3.3	2.6 (2.3-2.9)	2.7 (2.5-2.9)

* Scale from 1 = Excellent to 5 = Poor

** Classrooms, technology for teaching, laboratories, research equipment and instruments, computer facilities, library facilities and services, office space, telecommunications

Source: CAP survey (May 2010 data set)

In response to the question *how many hours they work per week* – the data presented in Table 7 are weighed on the basis of estimates both for during the academic term and when classes are not in session – Korean professors from both types of higher education institutions report the highest numbers of working hours, and Korean junior staff seem to work more on average than their peers

from other countries. Also academics from Hong Kong and Japan belong to those with relatively high numbers of working hours. In contrast the mean working time of academics in China and Malaysia is only moderately above the average of emerging countries and below the average of advanced countries.

Table 7. Academics' average weekly working hours in Asian *vs.* other countries*

Institution	Rank	Asian countries					Other countries	
		CH	MY	HK	KR	JP	Advanced	Emerging
Universities	Seniors	42	43	53	52	48	47 (41-54)	39 (33-43)
Universities	Juniors	38	37	46	56	45	42 (33-49)	38 (29-46)
Other HEIs	Seniors	38	37	.	49	48	42 (38-50)	34 (34-34)
Other HEIs	Juniors	35	36	.	53	45	37 (32-45)	33 (**)

* Based on weighed responses: 60 percent for hours when classes are in session and 40 percent when classes are not in session
** Information available only for a single country

Source: CAP survey (May 2010 data set)

Table 8. Average percentage of work-time spent on teaching, research and other functions by academics in Asian countries

Institution	Rank	Asian countries					Other countries	
		CH	MY	HK	KR	JP	Advanced	Emerging
Universities	*Seniors*							
Teaching		38	31	26	25	30	30 (23-35)	40 (33-46)
Research		43	28	39	46	44	39 (34-46)	35 (27-42)
Other		19	41	35	29	26	31 (22-37)	25 (25-27)
Universities	*Juniors*							
Teaching		41	43	40	24	18	30 (21-41)	41 (35-44)
Research		35	24	36	51	42	45 (33-65)	34 (26-43)
Other		26	33	24	25	40	25 (14-31)	25 (22-31)
Other HEIs	*Seniors*							
Teaching		46	46	.	31	34	37 (26-51)	55 (*)
Research		27	28	.	42	40	31 (23-40)	23 (*)
Other		27	26	.	27	26	32 (24-38)	22 (*)
Other HEIs	*Juniors*							
Teaching		44	44	.	39	28	40 (12-57)	46 (*)
Research		31	18	.	40	38	34 (21-69)	21 (*)
Other		25	38	.	21	34	26 (19-39)	33 (*)

* Information available only for a single country

Source: CAP survey (May 2010 data set)

Table 8 shows that the proportion of work time spent on research on average is higher in advanced countries than in emerging countries. But even in comparison to other advanced countries, academics notably in Korea and also in Japan stand out with an especially high share of working time spent on research; this even holds true for academics at other higher education institutions in these two countries.

There are striking differences in the time spent on other activities (*e.g*. services and administration). University professors and junior staff from other institutions of higher education in Malaysia as well as junior academic staff from universities in Japan report especially large amounts of time spent in service and administration?.

Table 9. Preferences for teaching and research by academics in Asian *vs.* other countries (percentage of respondents)

Institution	Rank	Asian countries					Other countries	
		CH	MY	HK	KR	JP	Advanced	Emerging
Universities	*Seniors*							
Primarily in teaching		9	5	3	2	3	5 (1-13)	11 (3-14)
In both, leaning to teaching		41	39	22	23	13	23 (12-36)	36 (31-42)
In both, leaning to research		44	49	65	61	63	54 (40-67)	45 (37-53)
Primarily in research		5	6	10	14	22	18 (10-38)	8 (3-12)
Universities	*Juniors*							
Primarily in teaching		12	7	14	0	4	9 (2-33)	11 (5-18)
In both, leaning to teaching		43	52	31	17	13	23 (12-41)	36 (33-39)
In both, leaning to research		40	39	41	75	64	43 (34-60)	45 (38-51)
Primarily in research		5	2	13	8	19	25 (6-42)	8 (5-11)
Other HEIs	*Seniors*							
Primarily in teaching		19	2	.	4	6	20 (3-42)	13 (0-26)
In both, leaning to teaching		58	47	.	23	26	33 (16-49)	40 (33-48)
In both, leaning to research		22	48	.	59	55	36 (16-58)	23 (2-62)
Primarily in research		1	2	.	6	12	11 (0-26)	25 (4-67)
Other HEIs	*Juniors*							
Primarily in teaching		19	14	.	3	8	20 (5-49)	11 (0-21)
In both, leaning to teaching		47	42	.	28	24	27 (8-44)	65 (44-100)
In both, leaning to research		28	39	.	61	56	34 (11-51)	21 (0-32)
Primarily in research		6	4	.	8	12	19 (1-48)	3 (0-5)

Source: CAP survey (May 2010 data set)

Table 10. Commitment discipline, academic unit, and institution among academics in Asian *vs*. other countries*

Institution	Rank	Asian countries					Other countries	
		CH	MY	HK	KR	JP	Advanced	Emerging
Universities	*Seniors*							
My academic field/discipline		1.7	1.2	1.5	1.5	1.4	1.5 (1.3-1.8)	1.4 (1.2-1.5)
My department		2.0	1.5	2.1	1.7	2.3	2.3 (2.0-2.6)	1.8 (1.6-2.0)
My institution		2.0	1.4	2.3	2.0	2.3	2.4 (1.8-2.9)	1.7 (1.4-2.3)
Universities	*Juniors*							
My academic field/discipline		1.8	1.3	1.6	1.5	1.7	1.5 (1.3-1.9)	1.4 (1.2-1.5)
My department		1.9	1.5	2.0	1.4	2.4	2.2 (1.8-2.6)	1.8 (1.6-2.0)
My institution		2.1	1.5	2.4	1.8	2.6	2.4 (2.1-2.8)	1.8 (1.3-2.4)
Other HEIs	*Seniors*							
My academic field/discipline		1.8	1.3	.	1.7	1.5	1.6 (1.4-1.9)	1.3 (1.2-1.5)
My department		2.0	1.7	.	1.7	2.3	2.2 (1.7-2.6)	1.8 (1.4-2.0)
My institution		2.2	1.6	.	2.1	2.3	2.4 (1.9-2.9)	1.5 (1.3-1.8)
Other HEIs	*Juniors*							
My academic field/discipline		1.8	1.4	.	1.7	1.6	1.7 (1.5-2.1)	1.2 (1.0-1.4)
My department		1.9	1.7	.	1.7	2.3	2.1 (1.8-2.4)	1.8 (1.4-2.0)
My institution		2.1	1.8	.	2.1	2.4	2.4 (2.2-2.8)	1.6 (1.3-2.0)

* Mean of a scale of responses from 1 = Very important to 5 = Not at all important

Source: CAP survey (May 2010 data set)

5. Academic values

Two examples are presented here of the values of academics surveyed in the study "The Changing Academic Profession": their preferences as regards teaching *vs*. research as well as their level of commitment or loyalty to their discipline and to their institution – the latter at the level of their particular academic subunit and the higher education institution as a whole.

With respect to *preferences for teaching and research*, Table 9 shows that academics of all four categories both in Korea and Japan are among those leaning relatively heavily to research; the same holds true only for university professors in Hong Kong. It should be noted, however, that the proportion of those clearly putting a prime emphasis on research is not high in these countries, but rather the proportion of those appreciating both, teaching and research, but leaning more strongly to research. In contrast, respondents from China and Malaysia lean more than average to teaching.

In response to a question about the *importance of their discipline, department and institution*, academics from emerging countries express a somewhat higher commitment or loyalty to their discipline and additionally a clearly higher commitment to their department and their institution than respondents from advanced countries. Table 10 shows that academics in Malaysia are among those with the strongest sense of commitment to their department and their institution. Also Korean academics have a stronger sense of affiliation to their department and their institutions than typical of academics from advanced countries; they are in this respect more similar to the average of academics from emerging countries.

6. Select issues of teaching and research

The academics surveyed in the CAP study were asked whether they were involved in various types of teaching activities: not only in classroom lecturing, but also in individualized instruction, practice instruction, distance education, electronic communication, *etc*., and whether they played a role in curriculum development and the development of course material. Table 11 shows the average number of teaching-related activities beyond classroom instruction among nine listed in which academics reported involvement. Obviously, academics from China and Japan report being among the least involved in varied teaching activities. In both countries, junior academic staff are less involved in various non-classroom teaching activities than senior academic staff – a phenomenon holding true also for countries where involvement in varied non-classroom teaching activities is more widespread than in China and Japan.

The *research orientations* of academics in the Asian countries are extremely diverse. At one end, university professors in Japan describe themselves on average as more strongly oriented to basic research than professors in almost all other countries. Conversely, they describe themselves as less relevance oriented than professors in almost all other countries − whether that be in terms of emphasis on application and practice, commercial and technology transfer orientation or orientation towards social improvement and betterment of society. It should be added here that junior staff at Japanese research-oriented universities are more similar to the staff at other higher education institutions in Japan in putting less emphasis on basic research. However, they consider themselves as relevance oriented to the same extent as professors of research-oriented universities.

Table 11. Average number of non-classroom teaching activities reported by academics in Asian *vs*. other countries

Institution	Rank	Asian countries					Other countries	
		CH	MY	HK	KR	JP	Advanced	Emerging
Universities	Seniors	3.9	5.9	5.7	4.5	3.8	5.3 (3.6-6.2)	5.3 (5.1-5.8)
Universities	Juniors	3.3	5.9	5.0	3.8	2.7	4.8 (2.5-5.8)	4.9 (3.7-5.9)
Other HEIs	Seniors	3.8	5.3	.	4.3	3.9	5.6 (4.3-6.5)	5.2 (4.8-5.9)
Other HEIs	Juniors	3.4	5.7	.	4.5	3.4	5.2 (3.3-6.4)	4.3 (1.0-6.2)

Source: CAP survey (May 2010 data set)

Table 12. Importance attributed by academic to various research orientations in Asian *vs*. other countries*

Institution	Rank	Asian countries					Other countries	
		CH	MY	HK	KR	JP	Advanced	Emerging
Universities	*Seniors*							
Basically/theoretically oriented		1.8	2.3	2.4	2.2	1.9	2.4 (2.1-2.8)	2.5 (2.4-2.8)
Applied/practically oriented		1.7	1.9	2.1	2.0	2.5	2.3 (2.0-2.5)	2.2 (2.1-2.4)
Commercially/transfer oriented		2.6	3.0	2.3	3.5	4.0	4.0 (3.8-4.3)	3.9 (3.7-4.1)
Socially/improvement oriented		2.2	2.3	2.3	3.5	3.4	3.0 (2.5-3.5)	2.6 (2.3-2.7)
Universities	*Juniors*							
Basically/theoretically oriented		2.0	2.1	2.4	2.1	2.4	2.5 (2.3-2.8)	2.6 (2.5-2.8)
Applied/practically oriented		1.7	2.1	2.3	2.2	2.4	2.3 (2.0-2.5)	2.4 (1.9-2.7)
Commercially/transfer oriented		2.5	3.0	4.2	3.6	4.0	3.9 (3.8-4.2)	4.1 (3.7-4.4)
Socially/improvement oriented		2.3	2.3	2.8	3.6	3.3	3.0 (2.7-3.6)	2.7 (2.2-3.1)
Other HEIs	*Seniors*							
Basically/theoretically oriented		1.7	2.5	.	2.4	2.4	2.9 (1.3-1.8)	2.7 (2.4-3.0)
Applied/practically oriented		1.9	1.8	.	2.3	2.3	1.9 (1.5-2.3)	1.9 (1.5-2.1)
Commercially/transfer oriented		2.9	3.6	.	3.6	3.9	3.7 (2.5-4.4)	3.4 (2.5-3.9)
Socially/improvement oriented		2.1	2.9	.	2.9	3.3	3.0 (2.1-4.0)	2.0 (1.3-2.5)
Other HEIs	*Juniors*							
Basically/theoretically oriented		2.0	2.4	.	2.3	2.5	3.0 (2.3-3.8)	2.7 (2.5-3.0)
Applied/practically oriented		1.8	2.0	.	2.1	2.2	2.0 (1.5-2.5)	2.0 (1.9-2.2)
Commercially/transfer oriented		2.6	3.0	.	3.7	4.1	3.6 (2.5-4.1)	2.9 (1.0-4.0)
Socially/improvement oriented		2.3	2.7	.	3.1	3.6	3.1 (2.3-3.8)	2.3 (2.0-2.5)

* Mean on a scale of responses from 1 = Very important to 5 = Not at all important

Source: CAP survey (May 2010 data set)

Professors at Korean universities emphasize application and practice orientation more strongly than basic research and theoretical orientation, although they also put emphasis on the latter more strongly than the average for professors in the CAP study. Commercial and technology transfer-oriented research is also more strongly emphasized in Korea than in the average of the other countries. Altogether, junior staff at Korean research-oriented universities describe themselves mostly the same as their senior colleagues. Professors and junior staff at other higher education institutions put somewhat less emphasis on basic research and theory, but they differ from their colleagues at research universities to a lesser extent than is the case in most other countries.

Academics in Hong Kong are relatively close to the average on the majority of dimensions. As regards commercial and technology transfer orientation, we note a polarized situation. While junior staff at universities in Hong Kong are less oriented that way than their peers in almost all countries surveyed, university professors in Hong Kong emphasize commercial and technology transfer oriented research on average more strongly than professors of all other countries surveyed.

Academics in Malaysia emphasize all four dimensions of research orientation more strongly than the average for their outside peers. As one might expect, academics at other higher education institutions are less theory-oriented and more application-oriented than their colleagues at universities, but this difference is smaller in Malaysia than for all the remaining countries surveyed.

Finally, academics in China emphasize all these theory-oriented and relevance-oriented dimensions more strongly than their colleagues in the other countries surveyed. Thereby, we note on average hardly any difference by rank and by the type of their higher education institution. The most striking difference of academics in China from those of other countries is the relatively strong commercial and technology transfer orientation; one has to add only that a similarly strong commercial orientation is visible in non-university higher education in a few other countries.

Table 13 presents an index of the number of publications. In almost all countries, senior academics publish more than junior academics; also, as one might expect, academics at universities publish more than academics at other institutions of higher education. These findings are applicable as well for Asian countries. As Table 13 shows, academics in Korea and Japan belong − irrespective or rank and type of institution − to the three countries with the highest numbers of publications. Academics in Hong Kong also publish more

than the average. In contrast, academics in China and Malaysia publish less than the average for all countries included in the study − however more than the overall average for emerging countries. One exception has to be noted: Professors at other institutions of higher education in Malaysian average publish very much.

Table 13. Publications by academics in Asian *vs*. other countries (Index*)

Institution	Rank	Asian countries					Other countries	
		CH	MY	HK	KR	JP	Advanced	Emerging
Universities	Seniors	34	36	46	61	50	39 (27-56)	23 (14-29)
Universities	Juniors	16	17	20	36	45	19 (12-29)	16 (12-18)
Other HEIs	Seniors	25	59	.	30	30	23 (8-42)	14 (11-17)
Other HEIs	Juniors	12	14	.	36	20	11 (7-16)	10 (8-13)

* 3 points each for books published and edited, 2 points each for articles published in books and academic journals as well as research reports, and 1 point each for papers at conferences and publications in newspapers *etc*.

Source: CAP survey (May 2010 data set)

7. Overall assessment of the professional situation

Academics in Korea most often and academics in Japan second most often characterize their job as a "source of considerable personal strain" (See Table 14 below). Also Chinese academics report such personal strain more frequently than average for all countries and most frequently on average among academics from emerging countries. Academics in Hong Kong are less likely to perceive such personal strain than the average, as are academics from Malaysia.

Responses to the question about overall job satisfaction by academics of Asian countries vary substantially (Table 15). Academics in Korea, irrespective of rank and institutional type, express above-average satisfaction. Academics at research universities in Japan are more satisfied than the average, but academics at other institutions of higher education in Japan are less satisfied than the average. Academics in Hong Kong are close to the average in this respect.

Among the two emerging countries in Asia, the ratings are strikingly different: Academics at other institutions of higher education in Malaysia are among the most satisfied and at universities in Malaysia the degree of satisfaction is slightly above average for the countries included in the CAP study. In contrast, academics in China are among the least satisfied.

Table 14. Percent academics in Asian *vs*. other countries stating "My job is a source of considerable personal strain."

Institution	Rank	Asian countries					Other countries	
		CH	MY	HK	KR	JP	Advanced	Emerging
Universities	Seniors	59	23	39	64	61	44 (27-61)	28 (25-33)
Universities	Juniors	51	19	43	74	72	43 (35-56)	30 (3-88)
Other HEIs	Seniors	51	19	.	65	58	36 (30-45)	24 (21-28)
Other HEIs	Juniors	42	25	.	73	56	39 (27-56)	30 (20-39)

Source: CAP survey (May 2010 data set)

Table 15. Overall job satisfaction of academics in Asian *vs*. other countries*

Institution	Rank	Asian countries					Other countries	
		CH	MY	HK	KR	JP	Advanced	Emerging
Universities	Seniors	2.5	2.1	2.2	1.9	2.1	2.2 (2.1-2.6)	2.2 (1.8-2.6)
Universities	Juniors	2.5	2.3	2.5	2.2	2.2	2.4 (2.1-2.8)	2.4 (1.9-2.7)
Other HEIs	Seniors	2.4	1.9	.	2.1	2.4	2.3 (2.2-2.4)	2.0 (1.8-2.3)
Other HEIs	Juniors	2.6	1.8	.	2.1	2.6	2.6 (2.3-2.9)	2.0 (1.8-2.3)

* Mean on a scale from 1 = Very satisfied to 5 = Very dissatisfied

Source: CAP survey (May 2010 data set)

8. Concluding observations

The Changing Academic Profession study suggests that the situation of senior academics (full professors and associate professors in U.S. terms) in most of the 18 countries addressed in the study differs strikingly from that of junior academics. Professors, as compared to junior academic staff,

- are more often men,
- are seldom employed on limited term contracts
- work more hours *per* week,
- are involved in a greater variety of teaching activities,
- publish more, and
- are more highly satisfied with their job.

There are differences in most countries, as far as additional income is concerned and the proportion of time spent on teaching and research, but in these cases, directions of differences vary: In some countries, the additional income of professors is relatively high; in others, it is that of junior academic staff that is relatively high. In some countries junior academic staff is more strongly

involved in teaching than professors, in other countries less strongly involved. Moreover, there are many countries as well where junior academic staff are more often employed part-time than senior staff. In only five of the 14 themes addressed in this article were differences between senior academics and junior academics small. In sum, we note that senior academics differ from junior academics mostly in dimensions linked to career, but hardly in terms of academic values.

In some respects, the comparison between junior and senior academics in Asian countries elicits a different result from the typical pattern across all countries:

- In two Asian countries – Korea and Japan – the proportion of women among academics is almost equally low in junior ranks as in senior ranks, while otherwise women are more fully represented in junior ranks.
- Part-time employment is low among junior as well as senior academic staff in most Asian countries, while it is higher among junior than among senior academic staff in many other countries.
- There are more often differences in the preferences for teaching and research by rank in Asian countries than on average: In Malaysia and Hong Kong, junior staff lean more strongly to teaching than the senior staff, while the opposite is true for academics at Korean universities.

The CAP study suggests as well that differences between academics at (research-oriented) universities and other institutions of higher education are substantial in various respects. Academics at universities, as compared to their colleagues at other institutions of higher education,

- work more hours *per* week,
- spend a higher proportion of their work time on research,
- have a stronger leaning towards research in their general preferences,
- emphasize theory and basic research more strongly and applied research less strongly,
- publish more, and
- consider their job more often as a source of personal strain.

Altogether, the differences are directly or indirectly linked to the research function. In contrast, differences as regards employment and career seem to be relatively small.

Academics from Asian countries do not differ on average from this pattern.

There are only a few differences in the case of individual countries: Academics at other institutions of higher education in Japan work on average as many hours as their colleagues at universities. Academics from other institutions of higher education in Malaysia lean as much towards research as their colleagues at universities; moreover, they publish even more than their colleagues at universities. Academics in China from both types of higher education institutions are similar on average in their appreciation of theory and application in research. Finally, academics in both types of higher education institutions in China are equally likely to consider their job as a source of considerable personal strain.

In the search for common elements of the academic profession in Asian countries, we note only a single theme among the 14 countries addressed in this analysis: Academics in the five Asian societies analysed are rarely employed part-time; this holds true both for senior and junior academics.

If at all, we note substantial similarities of the academic profession in two Asian countries surveyed: the academics in Japan and Korea differ in some respects from most other countries (*i.e*. not only from other Asian countries):

- There are few women among them;
- they work many hours weekly;
- they spend a relatively high proportion of their working time on research;
- they publish a great deal, and
- they often consider their job as a source of personal strain.

Altogether, both, Japanese and Korean scholars view themselves as long-suffering, hard-working men strongly devoted to research.

In contrast, we note hardly any similarity between Korean and Chinese or Japanese and Chinese academics. One exception is noteworthy: both Chinese and Japanese academics are not involved in a wide variety of teaching approaches, but rather seem to adhere more than others to a classic lecturing approach.

Altogether, there are often differences between China and Malaysia on the one hand and Korea and Japan on the other hand which reflect *differences between the economically advanced countries and emerging countries in general*: Academics in emerging countries both in Asia and elsewhere, in comparison to their colleagues in advanced countries,

- assess their facilities less positively,
- spend fewer weekly hours on academic work,

- spend a higher proportion of their work time on teaching,
- have a stronger preference for teaching,
- are more relevance oriented in their research approaches, and
- publish less.

Hong Kong is in some instances more similar to economically advanced countries, and in a few instances similar to emerging countries. In some instances, Hong Kong does not resemble any of these groups, for example in the very positive assessment of facilities and in the broad scope of varied teaching activities in which they engage. In Hong Kong, we note in many respects a divide between the professors at universities who seem to be quite similar to those in advanced countries, and the junior academic staff. Altogether, there is hardly any similarity in the responses of academics from Hong Kong and those from Mainland China.

Academics in Malaysia are more similar to other emerging countries in some respects than academics in China: Academics in Malaysia more often report additional income, they consider their job less often as a source of personal strain, and those from other higher education institutions are more often satisfied with their job than their colleagues from economically advanced countries. In turn: academics in China differ from their colleagues in other emerging countries strikingly in having hardly any additional income, in considering their job often as a source of personal strain and as being less satisfied overall with their job. Finally, it is worth mentioning that academics from China show a strong devotion to all the orientations to research addressed here: to theory, application, to commercially orientated research and research intended to contribute to the betterment of society.

In sum, we can observe noteworthy similarities between junior academic staff as compared to senior academic staff, between academics at research-oriented universities as compared to academics at other higher education institutions as well as academics in economically advanced as compared to academics in emerging societies in various respects. Compared to these patterns of similarity hardly any similarity can be observed across all Asian countries as compared to other regions of the world. Obviously, there is no Asian academic profession. If at all, academics in Korea and Japan are similar in some respects as compared to those in other economically advanced countries and to those in other Asian countries as well.

Presentations

The Same Term but Different Connotations: Cultural and historical perspectives on studying the academic profession in Asia

Fengqiao Yan*

I. Perspectives on the study of academic profession in Asia

The academic profession has been a classic topic in higher education research. Many scholars have explored this topic, and relevant knowledge has been accumulated. In major encyclopedias and handbooks, the academic profession has been a topic (Enders, 2006; Rhoades, 2007). A survey of academic profession in the United States was sponsored by Carnegie Council on Policy Studies in Higher Education in 1969. Since then, two international surveys have been conducted worldwide. One, undertaken by the Carnegie Foundation for the Advancement of Teaching was in 1992, involving fourteen countries. The other was in 2007, involving eighteen countries. The study of academic profession has mainly focused on developed countries. This point can be illustrated by the bibliography listed in the book *The Changing Academic Workplace: Comparative Perspectives* edited by Philip G. Altbach (2000). In the 1992 survey, all fourteen countries were either middle-income or high-income countries. In Asia, Japan, S.Korea and Hong Kong participated in the project (Altbach, 1996). Another study led by Philip G. Altbach (2002) focused on the academic profession in developing countries. In *The Decline of the Guru*, Altbach highlighted the gap between developed countries and developing countries and identified the special challenges that the academic profession faced in developing countries. The problems and challenges are real

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and formidable, if not surprising. Nevertheless, the potential value of studying the academic profession in developing countries is not fully realized if we just focus on problems and difficulties. There are "upsides" as well. For example, the academic profession is highly respected in developing countries, and it can work effectively even in the deteriorating conditions.

In the survey conducted in 2007, five of the eighteen participating countries were in Asia. In addition to Japan, S.Korea and Hong Kong which also participated in the previous survey, Malaysia and the People's Republic of China (Mainland) were new participants. For purposes of comparison, almost identical questionnaires was employed across all countries, and about 24,000 questionnaires have been collected. Between 2005 and 2009, a few conferences were organized, and publications were made available from the study.[1][2][3][4]

From the survey in 1969 to the surveys in 1992 and 2007, a pattern has emerged for the study of academic profession. It has both strengths and weaknesses.

The proposed new project is entitled *The Changing Academic Profession in Asia*, headed by Hiroshima University and involves several countries in the Asia region. It is the first research initiative focused on the academic profession in Asian countries. At the moment, it is useful to think about the value of this new study. If the research strategy remains the same as before, the same instrument is employed or adjusted a little bit, with the only change being a new sample of countries and institutions, the potential value of the study cannot be fully achieved. But if we can place the study squarely within the political, economic, social, cultural and historical contexts of Asian countries, then a distinctively Asian perspective can be developed, and cross-cultural implications can be explored and underscored. Moreover, such a study can be expected to shed light on academic profession worldwide. There is no doubt that the new research strategy can be optimized only by creating an Asian perspective and implementing it effectively.

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[1] *Reports of Changing Academic Profession Project Workshop on Quality, Relevance, and Governance in the Changing Academia: International Perspective*, 2006, Research Institute for Higher Education, Hiroshima University.

[2] Maurice Kogan & Ulrich Teichler (2007) (Eds.) *Key Challenges to the Academic Profession*, Paris: UNESCO Forum on Higher Education Research and Knowledge.

[3] *The Changing Academic Profession in International Comparative and Quantitative Perspectives: Report of International Conference on the Changing Academic Profession Project*, 2008, Research Institute for Higher Education, Hiroshima University.

[4] *European Review*, 2010, vol. 18, supplement no.1.

II. Thinking outside the Western box

As an institutionalized field of study, higher education research emerged in China in late 1970s and early of 1980s. Since then, university faculty or the academic profession has been an object for higher education research. The specific topics are wide in scope and vary from time to time. They include social roles, turnover, structural profiles (academic degrees, ranks and titles, specialties, gender, ethnic, and age *etc*.), workload and performance, teaching quality, student-faculty relationships, research publications, salary, satisfaction, appointment terms and working conditions. However, these studies have been conducted without referring to relevant literatures and theories in the social sciences, such as sociology of the professions. Few studies are based on large-scale surveys. Consequently, no systematic comparison can be made between China and other countries (Zhang & Shen, 2007).

Mainland China first participated in the international survey of the academic profession in 2007. Professor Hong Shen from Huazhong University of Science and Technology conducted the survey and made related analyses. Her first paper deals with the academic profession's profile (Shen, 2006), and the second paper deals with doctoral education, which supplies candidates to the academic profession (Shen, 2007a). Afterwards, Shen and her students (Shen, 2007b; Gu, 2010) published a few papers and books either quantitative or qualitative.

I also participated in the 2008 Hiroshima CAP conference and a 2009 Turin conference, sponsored by Academia Europaea. My first paper (Yan & Chen, 2008) for the Hiroshima conference deals with the educational backgrounds and career paths of faculty in higher education institutions in the municipality of Beijing. I employed a specific concept in organizational sociology – *danwei* – and tried to make the data-analysis theoretically meaningful. My second paper (Yan, 2010) for the Turin conference placed the academic profession into the context of the government, organization and market "triangle" and tried to depict institutional constraints and dynamics[5].

Based on my observation of the literature review, I have the following comments on previous studies

Firstly, I am concerned about theory building – or its absence. Previous

[5] The author borrowed the "Triangle" idea from Burton Clark's work (Clark, 1983) The triangle framework put the academic profession at the core surrounded by a triangle consisting of government, organizations and markets. This means that the academic profession can only be studied explicitly by being related to government, university organization and the market.

investigators paid much attention to data collection and analyses of questionnaire responses, but not enough attention to theoretical interpretation and theory building. So far, the study of the academic profession has been insulated within the narrow confines of higher education research. No serious efforts have been made to learn from, and apply, theories in the social sciences, such as modernization theory, social capital theory, institutional theory, theory of the professions *etc*. Only a few exceptions can be found, such as the analytical quadrant defined by the dimensions of particularism-universalism, and ascription-achievement proposed by Professor Akira Arimoto (2008). He put Japan and US into the quadrant for traditional/modern comparison. I shall talk about it in more detail in the following section. Furthermore, intellectuals have long been a topic for study in both China and other countries. Historians and sociologists have studied the role and significance of this social group and published many interesting findings. But little reference to this literature on intellectuals has been made in the study of the academic profession.

Secondly, I am concerned about the methodology employed in previous studies. An assumption is made in a survey that each individual academic is an independent actor. Therefore, information is collected from each individual about his or her attitude and behavior. No interactions among individuals or beyond-individual-level analyses are taken into account. Due to employing identical survey instrument, particularities in social context are ignored to a large extent. Concrete behaviors and differences were carefully analyzed, but institutional and social factors were left behind. This strategy might be implicitly appropriate for Western countries which share similar academic institutions, but explicitly inappropriate for developing countries which are distinct from the Western countries in many respects. Under the circumstances, institutional contexts are prerequisite for interpreting individual behavior differences. Furthermore, all analyses concern the current situation, and historical analyses are largely forgotten.

Thirdly, I am concerned about the representativeness of the sample. Large higher education systems are complex and fragmented along divides such as public/private, research/teaching/vocational, national/local higher education institutions. The academic profession in a complex system shows wide differences among institutions of different types and localities and within the same institution among those in difference disciplines. If the sample size is not big enough and not randomly selected, findings based on the sample cannot be generalized to the country level.

In sociological terms, the academic profession is embedded in particular

social and historical contexts. In order to capture the characteristics of the academic profession, it is necessary to understand the contexts first. Without knowledge about the contexts, it is hard to interpret the data. This is particularly true for Mainland China, a very diverse and dynamic society.

III. Special features of Asian societies and their higher education systems

Just as Europe is not only a geographic, but also a cultural, concept, so, too, Asia has both geographic and cultural connotations. In order to study the academic profession in Asia, it is necessary to put it into the contexts of higher education systems and societies. Asia is the continent with the largest land area, population and most diverse culture. There existed three different cultures in ancient Asia: Arabic or Islamic culture in West Asia, Indian religion and Buddhist religion in South Asia, and Confucian culture in East Asia (He, 2010). Prior to the 16th century, the culture of East Asia led the world. After the 16th century, the center-periphery pattern was reversed due to the progress of Western civilization. In 1492, a new American continent was discovered. The Scientific Revolution started in Britain in the 17th century, followed by the Industrial Revolution and the Enlightenment in the 18th century. These events put Europe at the center of the world. Western Civilization spread out worldwide through colonization and broad dissemination of the Western canon. Consequently, Asian cultures were under attack by Western culture.

Modernization is an ongoing process, composed of material and technology, institutions and culture. Modernization has a positive impact on human development. However, some problems accompany modernization, such as deterioration of natural and ecological environments, colonization, misuse of scientific and technological inventions, ideological differences and cold war, conflict between cultures, and so forth. In essence, instrumental rationality is overemphasized, and value rationality is underemphasized. Most Asian countries are undergoing modernization. Can Asian countries avoid the problems of Western-style modernization? Can they maintain and even prosper within their traditional cultures? These are questions that Asian countries have to address. Efforts to explore the question can contribute to the general theory of modernization.

All cultures have experienced a great number of evolutions. Their value systems persist. Western culture, Hebrew culture, Islamic culture, Indian culture and Chinese culture all underwent successfully the test of modernization

(Yu, 1987). All civilizations cannot only coexist peacefully, but can also be integrated and cross-fertilized. This is quite conducive to the prosperity of human beings. Historically, the Christian religion benefited from Greek philosophy, and Confucian culture benefited from Buddhism. We hope that Asia can, again, contribute to the civilization of the world. In the 1990s, former Prime Minister of Singapore Lee Kuan Yew and former Prime Minister of Malaysia Datuk Seri Mahathir Bin Mohamad proposed the key elements of "Asian" value. In their words, Asian people value collectivity, social harmony, family ties, respect for authority, and emphasize discipline and social order (Li, 2010).

Is East Asian culture a facilitator or an obstacle to East Asian economic development? Different assessments have been advanced from different theoretical schools and at different times. In 1980s, while the economies of Japan and the "Four Small Dragons" (Singapore, S.Korea, Hong Kong and Taiwan) grew rapidly, their dynamism was attributed to East Asian culture. But when the financial crisis occurred in East Asia in 1997, its culture was blamed (Ruan, 2010). In China, there are two competing schools which interpret the economic progress of East Asia differently. The first school is market success or comparative advantage in the market system, which interprets Asian economic success as the result of its comparative advantage in labor supply and costs. The second school is the new-leftist, and attributes Asian economic success to "planning rationality" by the governments (Zheng, 2004).

By the same principle, there are two competing theories of modernization. The first theory assumes that modernization will lead the world to congruence, with the United States as the prototype that the world can follow. The second theory assumes that the world will maintain its heterogeneity, and there will be various paths to modernization (Tu, 2004). Cultural diversity is thought as a prerequisite for world prosperity (Hayhoe, 2003). King (2002, p.232) pointed out that globalization had arisen in the West to rediscover the particularity, locality and difference, and review modernity. If we only look at the 20th century, we might conclude that the theory of congruency is supported. But if we consider the long history of human development, we cannot deny that Eastern Civilization has made great contributions to the whole world. To name a few, India contributed to mathematics, Arabs played a crucial role in the inheritance of Greek civilization, and China made "Four Great Inventions" – papermaking, the compass, gunpowder, and movable type printing – that have had great impact on the world's civilization. In prospect, it is estimated that the biggest threat to the world in the 21st century is not economic and political but

cultural, *e.g*. the potential conflict between Christianity and Islam. Therefore, mutual respect and dialogue between cultures are quite necessary.

Almost every country has its own history of scholarship. However, the modern higher education system is a new worldwide phenomenon. It originated in Europe in the Middle Ages, and no country had maintained its own higher education system prior to that epoch (Altbach & Umakoshi, Eds., 2004). The formation of the academic profession resulted from modernization. No doubt, differences exist in the academic profession between West and East. Will the differences disappear or persist? As congruent or diverse arguments for modernization, one model or multiple models are arguably hypothesized for modernization of the academic profession. Asian countries have to face the dilemma that they have found it necessary to borrow Western theories to interpret indigenous practices. Under the circumstances, this can lead to idiosyncratic interpretation of indigenous innovation and ignore universal implications of indigenous practices, and even evaluate indigenous practices by Western theories, for example, the unidentified property right promoted the development of village and township enterprises in Asia. This is difficult to explain by the Western theory of property rights.

I advocate that an Asian perspective should be developed for the study of the "Asian" academic profession. In doing so, particularities should firstly be observed and studied by comparing the Asian countries with the rest; secondly, these particularities should not be dismissed casually, and efforts should be made to interpret them; finally, new theory might be developed by developing analytical models. Of course, a concrete Asian perspective cannot be developed promptly and easily. But from my point of view, the Asian perspective should take at least modernization and culture into consideration.

IV. Different interpretations of China's economic success

In ancient China, the concept of nation-state did not exist. Instead, the concept of heaven circumscribed the boundary of Confucian culture, which spanned several countries in East Asia, including Vietnam and S.Korea. The name of China means the center of the world. Thus, China has a long history of self-confidence in its cultural superiority. This situation was altered in the 16th century when powerful Western culture brought by missionaries met with Chinese culture. In the middle of 19th century, Chinese culture lost its superiority to Western culture in the Opium War.

Prior to 1978, when China adopted its reforms and "opening up" policy, she

had gone through five modernization movements. They are the Westernization Movement, Constitution Reform and Modernization, the Revolution of 1911, the New Culture Movement, and the Cultural Revolution respectively (King, 2010, pp.36-38). Similar to modernization in other nations, China's modernization has included the following transformations: from agricultural economy to industrial economy, from community to society, from ascription to achievement[6] (King, 2010, pp.61-62).

Culture is an ideal-type abstraction of the general characteristics of a particular country. It is also a historical construct, closely related to the tradition and evolving into the future. Cultural comparisons have been drawn between the US and China as follows (King, 2010, p.103): US culture is defined by capitalism, core or "nuclear" family, individualism, right (*vs.* obligation or responsibility) orientation, democratic political system, emphasis on science and technology; China's culture, by contrast, is defined by an agricultural economy, familism, an obligation orientation, ancestor worship, the art of human relations. In brief, fundamental characteristics of Chinese culture are art and ethics, and those of Western culture are philosophy and science (King, 2010, p.120).

China has entered a new epoch since 1978. It reformed her economic, political and social systems in a systematic way and made great progress in modernization. The success allowed the Chinese to recapture their cultural self-confidence. Nowadays, the Chinese model and Chinese experience have become buzz words (Zheng, 2010; Pan & Ma, Eds., 2010; Ding, 2011). To what can one attribute China's economic success? Two competing theories are available (Chen, 2010; Zheng, 2004). Neo-classic economists attribute it to the adoption of the free market system. Further development is suggested to deepen reform and establish an even freer market and legal system. By contrast, new leftists attribute it to Mao's legacy. A strong and centralized government has helped China to achieve rapid growth and overcome financial crises effectively. How should China deal with international trade rules? The new leftists argue that existing rules are created by Western nations, and they do not necessarily accrue to China's benefit. On the contrary, neo-classic economists argue that China must abide by international and universal rules for its wellbeing (Zheng, 2004, p.182).

In sum, China's modernization shares some similarities with other countries

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[6] "Community" refers to simple ties in villages, and "society" refers to complex ties in cities. "Ascription" refers to status related to family backgrounds, and "achievement" refers to personal education, skills, efforts and productivity.

but has its own particularities. If we can study these phenomena objectively and try to interpret them theoretically, we can expect to make contributions to both practice and theory.

V. Characteristics of China's academic system and academic profession

Universities are more influenced by history than other type of organization (Altbach & Umakoshi, Eds., 2004). Thus, Chinese universities will inherit its tradition, learn from international experiences and integrate them with local practices. Particularities in China's academic system and academic profession cannot be well identified without historical accounts. In the forthcoming book titled *Portraits of 21st Century Chinese Universities: On the Move to Mass Higher Education*, Professor Ruth Hayhoe and coauthors summarized some particularities of Chinese higher education. They pointed out that Chinese higher education is not simply the transplantation of a Western system, but is actually an integration of the Western system with Chinese culture. The cultural core is the key to interpret Chinese particularities. I believe that this is also a good proposition for the study of the academic profession in China. In Hayhoe's (2000) other book *China's Universities: 1895-1995*, she demonstrated from historical and cultural perspectives that Chinese higher education differs from its Western counterpart in both formality and content: it valorizes integration of knowledge and practice, no division between scholar and government official, epistemology on the basis of practice, and a wholistic view of knowledge.

"Shi Da Fu" is the term for a special social class in ancient China, who had both scholar and government official statuses. It has no exact counterpart in English-speaking countries. But its close English translation is scholar-official, scholar-bureaucrat, or literati and officialdom. In Western societies, scholar and official are separated from each other and categorized into different social statuses. Therefore, "Shi Da Fu" is a special phenomenon in ancient China (Yan, 2005).

There are many literatures that compare Chinese scholars with Western scholars. Two types of scholars can be identified in the West: those who interpret the world, and those who change the world. The former was typical in Ancient times, and the latter is a more recent phenomenon. We can observe the historical legacy in the contemporary West. By contrast, ancient Chinese scholars were characterized with inward transcendence of *Dao* (doctrine) (Yu,

2005). The purpose of scholarship was human or ethical in ancient China, and it was for the sake of knowledge *per se* in the West (King, 2010, p.125). The spiritual orientation of Chinese culture prioritized ethics over knowledge (Xu, 2005). Traditionally, Chinese intellectuals took human spirituality (ethics, human relationship) as the core value, but did not have religious beliefs in God and scientific spiritualities (logical speculation on the principles governing the "objective" world) (Qian, 2005).

The above descriptions are of ancient China. Has the tradition disappeared in the course of modernization? Or has it persisted in an apparent or hidden form? How is Chinese tradition integrated with Western influence and how do they jointly shape the current academic profession in China? Addressing these questions can add value to the study of the academic profession in China. In recent decades, little originality has been demonstrated in the study of Chinese social phenomena. In most cases, theories are borrowed from the West for the interpretation of Chinese phenomena. But as early as the 1920s and 1930s, a Chinese school of sociology was created by Chinese scholars, whose experience shed light on today's study. Chinese sociologist Wu Wenzhao and his colleagues undertook in-depth field work and tested Western sociological theories empirically against Chinese data. By doing so, they contributed to sociological theory (Li, 2008). Fei Xiaotong is another past Chinese sociologist who contributed to sociology as a discipline. In his book *Earthbound China*, (Fei, 1998) compared Chinese society with Western societies and identified some intriguing comparisons. For example, traditional China is a non litigation oriented society; by contrast, the West is a legally-oriented society. Traditional China is a society emphasizing status; by contrast, the West is a society emphasizing legal contracts. In his later work, he reiterated the importance of cultural self-consciousness.

VI. Some considerations for the study of academic profession in China

The modernization of Chinese higher education began in the late 19th century. In 1905, China abolished its Imperial Examination System (*Keju*[7]) and Academy (*Shuyuan*[8]) system, and adopted a school system from the West. As a

[7] Keju is an examination system by which feudal imperials chose government officials between the year 605 to 1905.

[8] Shuyuan is a non-governmental academy which existed from the Tang Dynasty to the late Qing Dynasty and became full-fledged in the Song Dynasty.

result, the social foundation for "Shi Da Fu" collapsed, and the academic profession in the modern sense emerged. Between 1949 and 1978 especially from 1966 to 1976, traditional Chinese culture was completely forsaken, and political intervention exerted a powerful impact on the academic profession. At that time, the social status of the academic profession was inferior to the working class. Political correctness was more emphasized than professional competency. In 1952, China adopted the former Soviet Union's higher education model, and the academic profession became overspecialized and practically-oriented. Since 1978, China has gradually adopted a market system. Market forces penetrate the academic profession − for better or worse. Beginning at the end of the last century, two remarkable trends have appeared in China's higher education. The first one is expansion and massification of higher education, a trend which will continue in the coming decades. The second one is the world-class university project (985 and 211 Projects). These two changes are basic contexts for the study of academic profession in China. These factors will shape the academic profession in both quantity and quality.

In the past decade, China's higher education and its academic profession have made great changes. But higher education is more difficult to evaluate than the economy. My personal observation is that foreign scholars tend to evaluate Chinese higher education more positively, but Chinese scholars tend to evaluate it more negatively. As mentioned before, we need to develop a distinctively *Chinese* perspective for the study of the Chinese academic profession. This perspective needs to take modernization and Chinese culture into account.

Based on modernization theory, I propose the following propositions or hypotheses for the study of the academic profession in Asia.

1. In his paper, Professor Arimoto (2008) proposed the following quadrants defined by two dimensions: particularism-universalism, on the one hand, and ascription-achievement, on the other. This is a useful tool that we can employ for empirical study. We can test whether and the extent to which the Chinese academic profession has moved from tradition to modernization. What are the characteristics of the transition process and why? How does *Guanxi*[9] (relation) culture influence the academic profession's modernization? What are similarities and differences between Chinese *Guanxi* and social capital theory?

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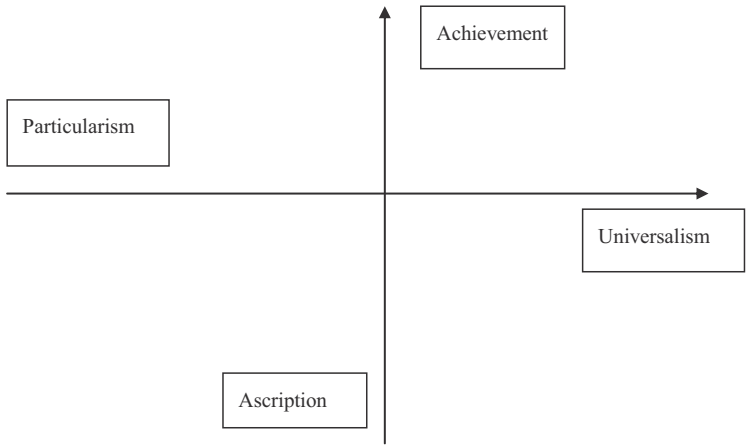
[9] *Guanxi* refers to an informal tie in Chinese social contexts.



Source: Arimoto (2008), p.16

Figure1. The shift from ascription to achievement, and from particularism to universalism characterizing modernization

2. Modernization has three components: materials and technology, institutions, and culture. When a country moves from its traditional stage to its modern stage, comparatively speaking, materials and technology are most easily advanced, culture is most difficult to advance and institutions are in between. Consequently, the phenomenon of cultural lag can be seen (King, 2010). Because the Chinese academic profession is going through modernization, there is assumed to be a cultural lag. Corruption is a typical example of cultural lag. What specific hypotheses can we propose?

3. While a country is moving from its traditional stage to a modern stage, three phenomena will inevitably occur: heterogeneity, formalism, and overlapping (King, 2010, pp.71-75). *Heterogeneity* implies that multiple types of academic profession coexist, and disparities are wide-ranging and apparent. *Formalism* implies that norms are evolving, and existing rules cannot be easily enforced. *Overlapping* implies that there is no a clear-cut division between administration and academic work. We can find many phenomena that are consistent with these hypotheses, such as huge disparities in salary, academic misconduct, bureaucratization of academic work *etc*. Specific empirical hypotheses can be developed for the study of academic profession in China. For testing the hypotheses, surveys should be combined with such methods as historical analysis, institutional analysis, case study *etc*.

In summary, at the outset of this paper, I raised the question: What approaches or strategies are of special value for research on the academic profession in China? Based on the limitations of previous, mostly Western-oriented research projects, and the cultural distinctiveness and traditions of Asia in general, and China in particular, I propose identification and assumption of a distinctively Asian and Chinese perspective for the new research initiative entitled *Changing Academic Profession in Asia*. The perspective can be developed by taking into account modernization and cultural components. Specific hypotheses can be deduced from theories, such as modernization theory. More importantly, particularities can be highlighted, and theoretical implications can be drawn. To achieve this objective, multiple methods, instead of only questionnaire, must be employed. By doing so, the study of the Asian academic profession is expected to make a unique contribution to the relevant knowledge base on the global academic profession.

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The Academic Profession in East Asia: Changes and realities

Futao Huang*

Introduction

While the term *East Asia* can be defined from various perspectives, in this article it refers to China, Japan and Korea (South Korea after the end of WWII). The three countries were chosen for several reasons. First, they share considerable cultural and educational similarities. Their traditional education activities, including the academic activities, were essentially affected by Confucius' philosophy and ideals. Second, the academic professions of the three countries arose in the later part of the 19th century via the introduction of foreign models or were influenced by other countries. Third, although there existed considerable differences in the shape of the academic profession in the three countries by the 1980s, since the 1990s, increasing similarities could be. Finally, and most importantly, by undertaking international and comparative studies, we may discover distinctive aspects of the changing academic profession in the three countries and gain insights into how their academics have responded to emerging domestic and international challenges.

In the last decades, much research has been done on the academic profession focused on different aspects, countries and regions. However, the vast majority is concerned with the academic profession in European and US contexts. Except for a very few books and articles (Eggins, 2007; Kim, 2001; Marginson, 2010), little study has been made of the academic profession in East Asia; and there are many fewer accounts of the changing academic professions in the three major countries in East Asia most recently.

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This article begins with a brief historical overview of the academic profession in China, Japan and South Korea, and then touches on the recent higher education reforms and the similar challenges facing the academic profession in the three countries. The article will mainly address the changes which have occurred in the academic profession, and how it responded to these challenges. The article concludes by addressing some issues facing the academic profession in the three countries.

The formation and traditions of the academic profession

It is widely recognized that there had been a long-standing history and tradition of educational and academic activities in China, Japan and Korea. As early as the Han Dynasty in 135 BC, there appeared a national higher learning center in ancient China. Especially since the 6th century, the development of political and economic systems, as well as cultural and academic activities − including language and education systems − in both Japan and Korea had been significantly affected by the Chinese model. Though there are huge differences among the three countries, the impact of Confucius's ideals and beliefs on the development of the academic and educational activities is crucial. However, it must be remembered that all these traditions and ancient conventions bear little connection with the establishment of modern universities in the three countries in the late 19th century. As indicated by earlier research:

> All of the higher education systems considered here have Western roots and use basically Western models. In Asia, as in the rest of the world, the contemporary university is a basically Western institution, tracing their roots to the medieval European universities and shaped by the particular Western power that was the colonial ruler. In the case of Japan, China and Thailand, foreign influences were chosen with independence, but the models were foreign nonetheless. (Altbach & Selvaratnam, Eds., 1989)

The same is true of academics in the three countries. Compared with Japan in which there is no colonial heritage, China experienced a semi-colonial development of its academic system, while Korea was significantly influenced by the Japanese pattern after it became the colony of Japan in 1910.

China

From the late Qing and early Republic period (1911-1949) in the latter part of the 19th century through the first decade of the 20th Century, influences from

France, Germany, Britain, the US and even Japan shaped China's academics and the development of its modern academic systems. In the era of the Republic of China, which was founded by the National Party from 1911-1949, the basic structure of the academic and educational systems were essentially modeled on the American patterns, though some reforms, which were based on the Humboldtian ideal, were implemented in Peking University in the early 1920s.

Beginning in 1949 when the People's Republic of China was established through the mid-1950s, the watchword in China was "to learn from the Soviet Union" in all aspects, including the academic system – an example of the national "lean on one side" policy. As a result, during the 1950s and early 1960s, many Soviet educators and specialists in various fields came to China. They helped restructure China's higher education system, train university faculty members and carried out teaching and research activities at Chinese campuses and research institutes. Similarly, a lot of Chinese university students, young scholars and academics were dispatched to the Soviet Union for the purpose of pursuing further study and undertaking research activities. For example, In August 1951, the first group of Chinese students was sent to the former Soviet Union for study. By 1960, the number of students sent to the former Soviet Union constituted approximately 90 percent of all Chinese students overseas. However, the Culture Revolution from 1966 to 1976 interrupted academic development in China. As stated by Pepper, since the latter half of the 1950s, China attempted to search for a more rural-oriented "Chinese way," with deregulation on an unprecedented scale. The Soviet Union was dropped as an overt model but seemed to provide continuing "internal" reinforcement through a de-regularization exercise of its own which occurred at the same time (Pepper, 1996).

Over "the 10-year turmoil" period (The Great Proletarian Cultural Revolution, commonly known as the Cultural Revolution, was a socio-political movement that took place in the China from 1966 through 1976), as both foreign models and traditional Chinese academic conventions were criticized and abandoned, the Revolution aimed at building up China's own educational and academic systems. As we now know, it not only ended in failure, but also greatly damaged the development of China's academic system, and in particular its academic profession.

Only after 1978 when the open-door policy and economic reform were implemented has China once again sought foreign models and undertaken various initiatives to re-develop its educational and academic systems. However, China's approach to the introduction of foreign academic patterns or

models since 1978 differs fundamentally from earlier practices. While importing elements of various foreign models, especially from the US, China came to emphasize national character and identity and protecting Chinese values through government legislation and policy. Moreover, China has never given up exploring its own approach to establishing a distinctive academic and educational system to suit Chinese national needs.

Briefly speaking, since the 1950s, academic staff in China's universities were mainly involved with teaching activities and focused on socialist construction prior to the early 1990s. By the early 1990s, while still affected by the former Soviet model, a special emphasis had been placed on training professional manpower through specialized education for industry and the proportion of students in engineering institutions expanded quickly.

Japan

Beginning in the late 19th century, the Meiji government of Japan made a number of attempts to modernize Japan by absorbing Western educational ideas: inviting foreign faculty for short periods and introducing university curricula from Western countries (Ebuchi, 1997). For example, in the early Meiji period, the central government dispatched many students abroad, mostly to Germany, France, and the USA. At the same time, the government also hired many excellent foreign scholars to work in the Japanese national universities and other higher education institutions. In 1876 alone, there were 78 foreign faculty members who were involved in professional and language teaching activities, in most cases teaching in foreign languages other than Japanese (MOE, 1992). However, in contrast to China, when Japan sought to establish modern universities, it looked to the University of Berlin as a model, although there were significant differences in mission and internal academic organization between the former Japanese imperial universities and the German research-oriented universities (Huang, 2006).

Since the 1930s, academic activities in Japan were basically dominated by nationalism and militarism. Except for a very few fields in medicine and engineering, Western academic standards, including English language teaching, were forbidden in Japan. Meanwhile, the Japanese educational model and conventions were exported to Korea, Taiwan and some South-Asia countries as one measure for imposing colonial control in these countries. In contrast to an introduction of Western academic standards in the previous phase, by absolutely denying all the Western academic norms and conventions, especially those of the U.K. and the U.S., Japan's higher education during this period took its major

focus as exporting Japanese academic values and standards to other Asian countries and areas. Under rigid regulation and control of the central government, academic freedom and institutional autonomy were greatly curtailed.

After the Second World War during the Occupation period the Japanese higher education system, influenced by American models, was fundamentally reorganized. Over the past 60 years, while the pre-war German origins were still maintained, considerable American influences stimulated tremendous changes in the roles and characteristics of the academic profession in Japanese higher education institutions. One of the big changes was the widespread growth of interest in research and establishment of various academic societies: in particular academic faculty became more research-oriented, engaging in both pure research and applied research (Cummings & Amano, 1977).

By the early 1990s, due to the original German Humboldtian influence as reinforced by the American model, the vast majority of faculty members in the Japanese universities, especially in the national sector, are expected to facilitate the advancement of basic and applied scientific research. In contrast, a considerable number of private institutions are more market-oriented and teaching-centered.

Korea

Since the early 19th century, Western missionaries began to exert influence on Korea. Since the first U.S.-Korea Treaty in 1882, American missionaries decisively shaped the development of Korean higher education and academic systems. Specifically, they introduced Western curriculum and methods of instruction, and more importantly, during the process, spread the democratic ideology of freedom and independence and the philosophy of democratic education (Lee, 1989). However, it should be noted that prior to the Japanese occupation in 1910, the modern Korean academic system had not been fully developed, as it had in both China and Japan. During the colonial period (1910-1945), only one university − the Imperial University (Kyung Sung Imperial University) − was established by the Japanese colonial government in 1926 – although a few small-sized private institutions existed which were not officially considered as part of higher education system. However, since this Imperial University mainly catered to the needs of Japanese residents in Korea for university education, the largest number of Korean students were enrolled in the private sector. Moreover, except for a very few Korean faculty at a junior academic rank, the vast majority of academics in the university were Japanese,

mostly graduates from Japanese universities. The Japanese pattern dominated the development of the Korean academic profession until the end of the Second World War in 1945.

One of the most notable changes in the postcolonial period is that the academic profession came to consist mainly of Korean nationals because of the use of Korean as the uniform medium of instruction in university education (Kim, 2001, p.182). However, after 1945, the American occupation forces once again imposed American ideas on Korea. Especially in the 1950s and early 1960s, with military, economic and financial support from the US, the Korean educational system was restructured. Though some vestiges of the older Japanese pattern could still be found in contemporary Korean culture and educational activities, the impact of the US on the development of Korean academic and educational systems has become increasingly profound. With respect to the formation of the academic profession, a considerable number of Korean professors have been educated in US universities. Instead of Japanese, English has become the major academic language and the most important medium of instruction among lectures offered in foreign languages. Like Japan, even today, the development of the Korean academic profession remains primarily affected by American academic developments.

Apparently, there exist substantial similarities in the academic profession between Japan and Korea, because in the process of shaping the academic profession, Korea has been impacted by both the Japanese model and the American pattern. One of the typical examples is that there is a similarly clear division of labor in the academic profession among different sectors and types of higher education institutions conforming to a hierarchical structure.

Challenges for the academic profession

Affected by a combination of domestic socio-economic factors and international as well as global trends, tremendous changes have occurred in higher education, including the academic profession, in the three countries especially in the past 15 years. Though there are diverse challenges facing the academic profession in the three countries when viewed more broadly in comparison to the countries in North America and Europe, these three countries of East Asia are distinguished by their huge growth in higher education, their increasing marketization, decentralization and privatization of higher education, and the accelerating effects of globalization on higher education.

First, there has been continual growth in the number of students in higher

education institutions in the three countries. In China, since 1999 when the Chinese government decided to expand higher education, enrollment has shown a rapid and substantial increase. Between 1999-2009, gross enrollment increased from 9.3 percent to 23.3 percent of the 18-24 year – old age-cohort, indicating that China's higher education has evolved into "mass" stage according to Martin Trow's definition (Trow, 1973). From a comparative perspective, as late as 2004, enrollment in China was still much lower than that of Japan − where it constituted 47 percent of the age-cohort. What is noteworthy, however, is that the total number of students in Chinese higher education institutions has already reached approximately 19 million, far more than in Japan and even surpassing the number in the United States. The process was accelerated by a rapid increase in the number of students attending private institutions. For example, by 2009, the proportion of both private students and private institutions in regular higher education institutions had made up of approximately one third of the total students and all the regular higher education institutions respectively (MOE, 2011). In Japan, the dramatic expansion of higher education was really initiated in the late 1950s when Japan started its New Long-Term Economic Plan with the purpose of doubling its citizens' income. By 2009 the gross enrollment in higher education institutions rose to 79.1 percent of the age-cohort. It suggests that Japanese higher education had evolved from the stage of mass into near universal access (MEXT, 2009). In Korea, due to the policy of deregulation since the mid-1990s, there has been a massive growth in higher education. As of 2009, the percentage of higher school graduates who go on to post-secondary education stands at 90.5 percent (MEST, 2011).

A related trend common throughout East Asia is the greater intrusion of market forces on higher education. As early as the 1980s, impacted by neo-liberalism and the policy of privatization by the Thatcher's Administration in the UK, there emerged a rapid and unstoppable marketization of higher education in the UK and other Commonwealth countries. Since the mid-1990s, though the nature and pace of marketization varies substantially among the three countries, it is clear that market-driven mechanisms have been gradually introduced into higher education in China, Japan and Korea. Clear examples can be found at both the policy and institutional levels. Major documents and legislative acts indicate that the traditional model of higher education institutions almost totally controlled by government in a planned economic system, has become more responsive to society and internationally competitive. For example, all the national universities both in China and in Japan were changed into corporate bodies in 1995 and 2004, respectively. In China, individual

corporations are encouraged to be more entrepreneurial in undertaking activities, including generating diverse revenue sources, competing for research grants, and operating university companies. Financially, the incorporation of the Chinese public sector is a closer approach to privatization. In Japan, with the deregulation of Standards for the Establishment of Universities in 1991, and especially since the incorporation of national universities in 2004, national university corporations have been granted more freedom to provide new programs and decide their own tuition fees even at the undergraduate level. At the same time, they are required to be more vigorous in recruiting new entrants through their admission policies. With respect to academic research and scholarship, the university sector, including national university corporations, is expected to compete for research project grants and establish more linkages with industry and other sectors to diversify sources of funding (Huang, 2011). Similarly, since 1994, by setting up the Education Reform Committee, the Korean government implemented various reforms which could be described under the rubrics of liberalization, diversification, and specialization. Based on the policy of liberalization, the central government deregulated the standards for the establishment of higher education institutions. Therefore, each individual institution, especially in the private sector, has more freedom to recruit new entrants, to design and implement curricula according to their own missions, goals and objectives. For example, the private sector accounts for over 70 percent of the total student enrollment in Korean higher education and the operation of a huge majority of these private institutions is exclusively dependent on tuition and fees.

Another recent phenomenon emerging across the three countries, with considerable implications for the academic profession, is the increased attention to the impact of globalization on higher education. One of the obvious strategies adopted by the three countries is to facilitate the internationalization of higher education. In addition to the traditional patterns of internationalization of higher education, such as mobility of students, faculty, as well as researchers across borders, new trends in the internationalization of higher education are seen widely among the three countries. They include an introduction of English-language products into local campuses and provision of joint or transnational programs in partnership with foreign institutions. Another important strategy for promoting the internationalization of higher education in East Asia is to support several selected universities or disciplines with enlarged budgets with the aim of becoming world-class universities, or world-reknown center of excellence. To illustrate, in November 1995, two years after the issue

of the *Outline*[1], the former SEC (State Education Commission) implemented *Project 211* to enrich the financing of Peking University and Tsinghua University with the purpose of enabling the two universities to reach world-class status. In December 1998, the Ministry of Education articulated objectives and principles in the *Action Plan*. The *Action Plan* emphasizes that within the next 10 or 20 years, some Chinese universities and key areas of study should reach a world-class level and be internationally recognized. Afterwards, *Project 985*[2] − which means that the idea of *Project* was first mentioned by the former Chairman Jiang Zemin in May 1998 − was immediately implemented. In June 2001, the Japanese government set up the goal of fostering the "Top 30" Universities towards attainment of the highest global standards. Later, the program was changed into a scheme of cultivating 'Centers of Excellence in the 21st Century' (COE21). The central government is supporting selected units among the national universities with an expanded budget. It is hoped that the quality of research activity in Japanese higher education can be considerably enhanced and increased international dimensions can be integrated into campus research activities. Clear evidence can also be found in Korea. In 1999 the Korean government started The Brain Korea 21 project for the purpose of building world-class graduate schools and nurturing the development of research personnel. Based on the "choice and concentration" principle, the government has allocated a special budget to the project. From 2006, the second stage of BK 21 has been implemented. By 2012, more efforts will be made to strengthen the research focused university system and to foster expert personnel (Kim, 2008).

Apparently, these changes did not impact all the three countries in this region to the same degree and in the same way. For example, the restructuring of university visions and missions of the academic profession in China are particularly affected by a massive expansion of higher education, a shift from a planned economic system to market-oriented mechanisms, and the progress of globalization. From the international and comparative perspectives, the policy to deregulate the "Standards for Establishment of Universities" and the policy of incorporation of national universities have directly influenced the changes in the academic profession in Japan. In Korea, it seems that issues arising from a

[1] In 1992 the Outline of the Educational Reform and Development in China was approved in the 14th National Meeting of the Chinese Communist Party and it became effective in 1993.

[2] In the Project 985, 98 means the year of 1998 while 5 refers to May in English. The Project 985 was developed based on the speech by the former Chairman Jian Zemin in May 1998.

radical transformation from mass higher education to the near universal access and pressures resulting from globalization have more profound influences on its academic profession.

To sum up, though there remain some differences in degree and form among the three countries, the distinctive characteristics of higher education in China, Japan and Korea as influenced by their heritages and recent driving forces, can be practically identified as follows:

First, differing from most countries in Europe and the USA, the central governments of China, Japan and Korea still exercise strong supervision on individual university corporations and private institutions in terms of approving or closing corporate entities. Moreover, currently the amount of budgeted funding from government still constitutes the major source of revenue of individual corporations or national universities, though there has been a steady decline in the sum of appropriations over the last decade. In essence, transformation from direct control of the national universities by Ministry of Education, Culture, Sports, Science and Technology (MEXT) into mandating various evaluations does not imply restriction of the powers of the government, but expansion of its authority in a different form.

Second, it is clear that the private sector constitutes a large proportion of all institutions in terms of numbers of both students and institutions, especially in Japan and Korea. Similarly, clear data reveal that the massification of Chinese higher education was mainly driven by rapid enrollment increases in private institutions. It is reasonable to assume that the trend will continue in the future. With respect to the division of labor between national and private sectors, normally, among the three countries, national universities are more research-intensive institutions while private institutions are more teaching-centered. To illustrate, in the case of Japan, the legacy of the pre-war hierarchical and privileged higher education system and post-war development of higher education have left two distinct groups of Japanese universities: the national, public sector and the private sector. While the national and public sectors are more directly controlled by government, the private institutions tend to be more market-oriented. Moreover, the national universities are expected to facilitate the advancement of basic, applied and large-scale scientific research, to provide students from different backgrounds with general and professional education, and to provide higher education opportunities for the community. In contrast, except for a very few private institutions, the vast majority are teaching-centered, with more students in social sciences and humanities. The difference between national universities and private institutions can also be seen

in the allocation of public grants and the ratios of faculty members to students. Normally, approximately 70 percent of Grants-in-Aid for Scientific Research were allocated to national universities and only 15 percent of these grants were assigned to private universities. More importantly, due to the fact that national and public sectors are intensively financed by central government or local authorities, students are charged lower tuition and fees than those in private sector.

An added characteristic is that the higher education institutions conform to a hierarchical structure. This is evident not only in the wide gap in the allocation of funds from government between the national and private sectors, but is also reflected in universities and junior colleges at different levels even in the same sector. Normally, a small number of national universities, together with many fewer private universities in Japan and Korea, which were founded in the pre-war period, enjoy the highest academic and social status. Below them are numerous national, public and private universities which were located in the metropolitan areas or big cities. A plurality of provincial public and private universities seem to hold much lower positions than those located in big cities, but they are generally considered to be more prestigious than junior colleges, especially the private sector which only offers short-cycle programs.

Changes in the academic profession

In response to these varying challenges, the academic profession in the three countries is undergoing considerable and progressively striking changes, too.

One of the most direct and obvious outcomes of the continual expansion of higher education is a gradual increase in the number of faculty members in higher education institutions. Particularly in China, in parallel with the rapid growth in student enrollments, the number of full-time faculty in regular higher education institutions[3] alone grew over three-fold from 404,471 in 1997 to 1,363,531 in 2009. In Japan, over the period 1995-2007, there was a much more gradual increase in the total number of full-time faculty − from 171,472 to 183,111. In Korea, there had seen a steady growth in the number of full-time faculty as well, from 57,632 in 2000 to 73,072 in 2008 (MEXT & KEDI, 2008).

[3] Regular higher education institutions refer to those institutions in which only full-time, degree seeking students are accepted. Therefore they differ in mission and academic programs and internal arrangements, *etc*. from degree-granting higher education institutions for mature students or adult higher education institutions.

In parallel with the expansion of student enrollments, the faculty body was also undergoing tremendous changes in China and Japan in particular. For example, the proportion of the full-time faculty in China who were female grew from 37.4 percent in 1999 to 46.0 percent in 2009[4] while in Japan it increased from 15.4 percent to 20.3 percent during the same period[5] (MEXT, 2010). Though little relevant data could be found for Korea, in 2008 the proportion of full-time female faculty employed in Korean universities grew from 13.8 percent in 1990 to 17.7 percent in 2008 (Oh, & Pang, 2005)[6].

Furthermore, with the largest share of the increase in enrollment in the private sector, there has been a notable and enormous growth in the proportion of faculty employed in the private sector. In China, the proportion of full-time faculty who were employed in the private sector increased from 3.4 percent in 2002 to 15.6 percent in 2009 (MOE, 2011).

However, as indicated in Table 1, 2 and 3 below, the ratio of students to full-time faculty among the three countries seems to be relatively high. Especially in China, compared with both Japan and Korea, the number of students *per* full-time faculty rose steadily from 1995 to 2009. In the private sector the ratio of students to faculty was 1:19.65 in 2009 in regular higher education institutions. Moreover, though little data is provided, the ratio of students to faculty in Japan is much higher in the private than in the national and public sectors, while in Korea the ratio of students to faculty in both industrial universities[7] and junior colleges are particularly high.

In response to the increased marketization and privatization of higher education, the faculty in the three countries has become involved in more diversified teaching and research activities. In terms of teaching activities, academic staff are developing curricula that are more closely related to students' interests and more responsive to changes in the labor market. With respect to research activities, faculty are asked to obtain competitive grants, to undertake research projects focused more on community, society and industry. Furthermore, as national quality assurance systems and national evaluation agencies have all been established in the three countries, faculty now face

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[4] Only in regular higher education institutions.

[5] Only in universities, junior colleges and colleges of technology.

[6] However, according to the data from the international survey which were carried out in the three countries as part of the Changing Academic Profession project, the proportion of the full-time female faculty is 37.1% in China, 9.0% in Japan, and 18.7% in Korea.

[7] They refer to those institutions in which adult, non-degree students are enrolled, and their educational programs are more relevant to industrial needs and skills and specifications which are required in various occupations.

compulsory external evaluation by third-parties and interested stakeholders in addition to self-evaluation, peer-review, and evaluation by students. In most cases, these activities are concerned with curricular development, delivery of courses, the quality of teaching and research and so forth. In relation to the pattern of internal governance and management, in the name of enhancing efficiency, transparency and accountability, recent trends show that more power has been placed in governing bodies at the institutional level with a reduction in the autonomous prerogatives residing in faculty meetings. Moreover, non-university external experts are also expected to be involved in internal governance and management. This is especially evident in Japan, although not in China.

Table 1. Student – full-time faculty ratio in regular higher education institutions in China, Selected Years, 1995-2008

Year	All	University	Junior colleges
1995	9.8	9.7	10.2
2000	16.8	16.0	17.7
2005	16.9	17.8	14.8
2008	17.2	17.2	17.3

Source: MOE (2009). *Educational Statistics Yearbook of China*, People's Education Press, p.17. (in Chinese)

Table 2. Student – full-time faculty ratio in Japan, selected years, 1995-2007

Year	All	National	Other Public	Private
1995	18.5	10.4	10.2	26.0
2005	17.7	10.3	10.9	23.6
2006	17.4	10.4	10.9	22.8
2007	16.9	10.3	11.0	21.8

Source: MEXT (2008). S*tatistical Abstract 2008 edition*, National Printing Bureau, Japan. (in Japanese)

Table 3. Student – full-time faculty ratio in Korea, selected years, 2000-2008

	All	University	Industrial university	Junior colleges
2000	43.9	31.8	48.8	51.2
2005	39.3	29.5	44.4	44.1
2006	42.0	28.6	53.0	44.5
2007	40.7	28.3	49.4	44.5
2008	39.4	27.7	48.8	41.6

Source: MEXT & KEDI (2008). *Brief Statistic on Korean Education*, Korea, p.32
Note: 1) The number of students *per* full-time faculty member = Number of students/Total number of faculty (president & dean＋full-time faculty).
2) Figures for university and industrial university include the number of full-time faculty and

students in graduate schools attached to university. But the number of students in graduate schools attached to university, which is included in the number of students in industrial university in 1990, is the number of enrolled students.

The effect of globalization on the academic profession cannot be overestimated, for it has not only diversified academic staff demographically, but also led to increasing differentiation in activities undertaken by faculty. One of the most remarkable examples is that the number of foreign faculty in universities has risen steadily in each country. Between 2004-2008, in the Chinese universities which are founded and administered by the Ministry of Education alone, the number of foreign experts and faculty members with long-term and short-term contracts has nearly doubled, increasing from 14,898 in 2004 to 24,634 in 2009 (MOE, 2005, 2009. In Japan, over the period 1995-2010, the total number of foreign faculty increased by 1,589 (Table 4). Though there was a reduction in the number of foreign faculty in junior colleges, there was a big rise in the number of foreign faculty in universities. In Korea, the overall number of full-time foreign faculty employed is smaller than in Japan; however, there had been steady and continual growth between 1990 and 2008 (Table 5).

Table 4. Numbers of foreign full-time faculty in Japan, 1995 and 2010

Type	1995	2010	Changes (%)
University	3,858	5,931	+53.7
Junior college	705	221	-68.7
Total	4,563	6,152	+34.8

Source: MEXT (2010). S*tatistical Abstract 2010 edition.* Retrieved November 26, 2010 from http://www.mext.go.jp

Table 5. The number and percent of foreign faculty in Korea, selected years, 1990-2005

Year	Total No. of foreign faculty	Percentage of all faculty
1990	402	1
2000	1,373	2.4
2005	2,131	3.2
2006	2,540	3.7
2007	2,919	4.1
2008	3,432	4.7

Source: MEXT & KEDI (2009). *Brief Statistics on Korean Education*, Korea, p.32.
Note: 1) Foreign faculty rate = (Number of foreign faculty/total number of faculty) × 100
2) The number of total faculty is that of president, dean, and full-time faculty of the entire

higher education institutions.
3) The number of foreign faculty is that of the president, dean, and full-time faculty of foreign nationality in the entire higher education institutions.
4) The number of faculty for university and industrial university includes that of the faculty in the graduate schools attached to the university.

Table 6. Journal articles published and research rankings by country, selected years, 1988-2008

Year	China		Japan		Korea	
	No. of articles	Rank	No. of articles	Rank	No. of articles	Rank
1988	6,742	15	40,990	4	—	Below 25
1998	21,098	9	60,347	2	9,105	16
2008	104,157	2	69,300	5	30,016	12

Source: MEXT (2009). *2009 White Paper on Education, Culture, Sports, Science and Technology*, online information at http://www.mext.go.jp/b_menu/hakusho/html/ (Retrieved on 23 November 2010). MEXT (2010). *Secrets of an Education, Powerhouse 60 years of Education in Korea: Challenges, Achievement and the Future*. Korea. p.9.

In relation to teaching activities, with increases in the number of incoming international students and reform of the curriculum, faculty members in some universities in the three countries have been asked to provide English language programs with a further emphasis on internationally recognized professional programs and certificates rather than those of the language/culture-oriented type, *i.e*., programs concerning language, history or traditions and culture. Moreover, as small numbers of universities in China, Japan and Korea have begun to establish branch campuses in foreign countries, cross-border programs have become part of the teaching activities for some faculty members − though the numbers are small.

Another big change in the academic profession is the increasing emphasis placed on the importance of research. Since the latter part of the 1990s, with the intent of building up "world-class" universities, governments in the three countries selected a few universities for intensive funding. In all three countries, these designated "national" institutions have a long history and enjoy high prestige and social position. More importantly, the faculty in these universities is essentially research-oriented. As the number of publications included in the Science Citation Index (SCI) and Social Science Citation Index (SSCI) database is a good representation of a country's strength in research, in addition to the provision of lectures, the faculty from these universities is particularly encouraged to publish scientific papers in major international journals. Table 6 suggests that although there had been a steady increase in

publications in all the countries, China has had the most rapid growth among the three countries, followed by Korea. By 1998, the number of the articles published by Japanese scholars surpassed that of all other countries except for the USA, but dropped to top 5 in 2008. By contrast, within 20 years, the ranks of China and Korea rose from "top 15" and "low 25" to "top 2" and "top 12," respectively.

As a result several changes have taken place in the academic profession in the three countries. While there was growth in the number of foreign faculty, much evidence indicates that there have been new pressures for the academic profession in East Asia to be involved with developing the internationalized university curriculum, including English-taught programs, promoting cross-border higher education activities, and undertaking research activities in a more competitive international environment. This differs essentially from the challenges of internationalization of higher education for the academic profession prior to the 1980s in particular.

Concluding remarks

Based on their traditions, the academic professions in China, Japan and Korea have made great efforts to respond to various new challenges – in the process re-shaping themselves. Prior to the 1980s, it is clear that the former Soviet model had affected the Chinese faculty significantly. In contrast, the American pattern had considerable direct influence on the academic profession in both Japan and Korea, though the latter still maintained some elements of the Japanese model. Since the mid-1990s, however, the academic profession in China, Japan and Korea are confronting many similar challenges resulting from massive growth in student enrollments, increased market forces, and the internationalization of higher education in this era of globalization.

In response to these challenges, radical changes have occurred in the academic profession in the three countries. They include a quantitative increase in the number of faculty members and, more importantly, a qualitative change in many aspects of academic work. In a major sense, we have seen an increasingly diversified academic profession on both vertical and horizontal dimensions. On the vertical dimension, in parallel with the massification of higher education and near universal access, more differentiated faculty subgroups have taken shape those who are employed in top or leading universities; those who are working in local or provincial universities; and those who are recruited in junior colleges and so on. On the horizontal dimension, in

terms of nationality, there has been growth in the number of foreign academics. In terms of gender, the increase in the number of female faculty is remarkable. In terms of the major activities that are undertaken by the academic profession, it is clear that the division of roles has become much wider, *e.g*. some prefer to do more research-oriented activities while others tend to be more involved with teaching activities. With respect to the faculty appointment system, it has come to be more flexible and differentiated, too. For example, the introduction of the fixed-term system in Japan, the implementation of the contract-based employment system on Chinese campuses and the wide use of part-time faculty in Korean private institutions.

It is evident, however, that many problems remain to be addressed by the academic profession in China, Japan and Korea. First, the academic marketplace in Japan and Korea is strongly male-oriented: the proportion of women is extremely low, especially by international standards. Second, despite a trend toward internationalization of higher education, the academic marketplace in the three countries is not fully open to the international academic community, so few foreign faculty members are recruited in comparison with the USA and the UK. Third, the ratio of students to faculty in the private sector seems to be relatively high, especially in China and Korea. Fourth, the growing hierarchical structure has not only led to a wide gap in the allocation of funds from government between the elite public and private sectors, but also increased disparity in income, working conditions, prestige and social status of the academic profession in universities and junior colleges and at different levels even within the same sector.

Additional issues that remain to be addressed include: how to strengthen the role of central government playing the role of a "wise actor" with a useful mix of benevolent intervention and guardian angelship for the academic profession; how to establish a wider regional network and stimulate further international cooperation; how to enhance the quality of the teaching and research activities in individual countries, and how to imbue the academic profession in individual countries with its own distinctive and character.

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The Academic Profession in Japan: Work, careers and scholarship

Hideto Fukudome*

Introduction

There is much discussion on higher education reform in Japan. Most of it is closely related to the work of the academic professions who are the core constituents of colleges and universities. This paper discusses the most critical contemporary issues of the academic profession in Japan. These issues are essentially related to three areas; work, career development and scholarship. How Japanese academics carry out their work? How do they develop their careers? How do they sustain their academic lives and values. These are the main research questions which I will discuss in this paper.

First, I will review some survey data on Japanese academic professions. Mainly, I will refer to working conditions and initial career formation such as employment conditions, workloads and experienced difficulties in their work. Through them, we can review the reality of the contemporary Japanese academic profession compared with that of early 1990s and also with that of academics in other countries.

Then, based on these findings, I will discuss two topics: graduate education and conceptions of academic work. I will focus on graduate education in terms of the period of research training, which reflects the culture and tradition of academics in each country. So, it will be interesting to compare data from different countries. Even though some important shifts in Japanese graduate education are discernable, we can still find essential differences between Japan and other countries.

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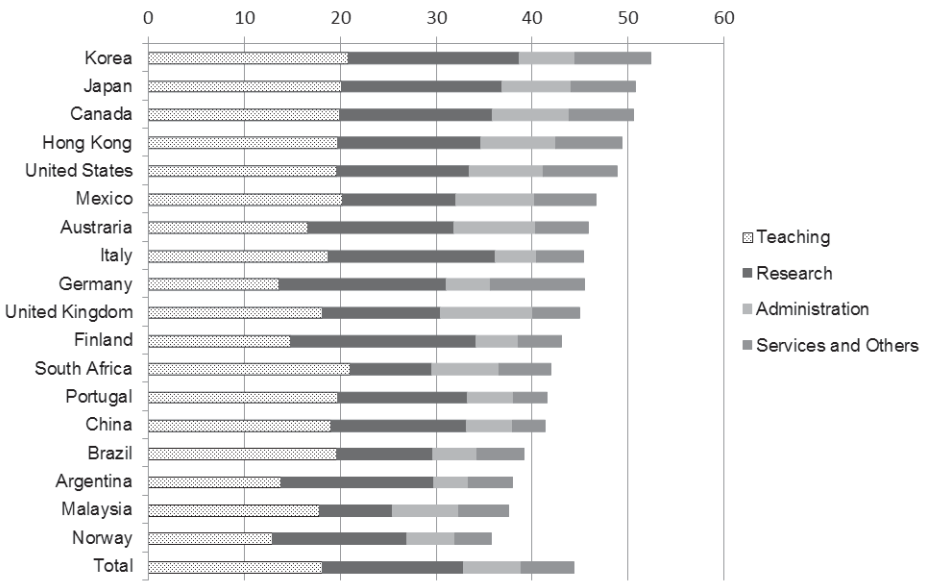
Finally, I will refer to some conceptions of scholarship; some important thoughts which enhance our approach to the work of the academic professions. I will pick up some discussions in the United States. I think their ideas are closely related to the critical issues of the characteristics and specialties of contemporary academic professions, not only those of the United States but also the academic professions in Japan and other countries.

Working conditions

Work time

Figure 1 shows the work time of faculty members in each country which participated in the Changing Academic Profession (CAP) survey (the numbers report respondents' average working hours *per* week when classes are in session). The data shows that Japanese faculties spend more time in teaching, research and other work activities than most faculty members in other countries. The total working time of Japanese academics (51 hours) is the second longest next to Korea (52 hours).

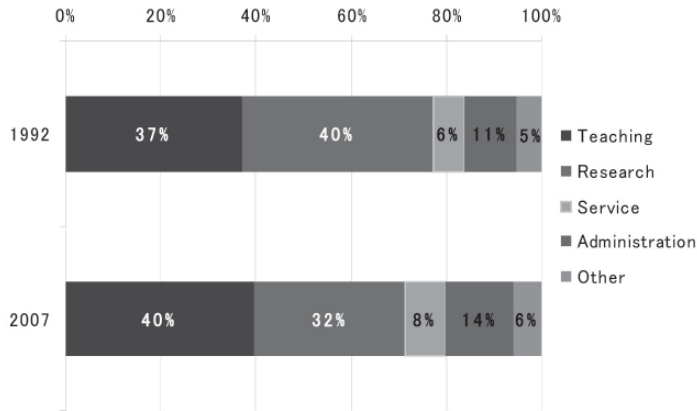


Source: CAP Survey (2007)
Note: Average working hours per week when classes are in session.

Figure 1. The distribution of work time by country

Figure 2 shows how the time distribution over various work activities has changed in Japan in 15 years since the 1992 Carnegie International Survey.

Most notable is the decrease of time for research. On the other hand, the time for teaching, administration and service increased a little. This decline in research time can be viewed as one of the main trends in the working conditions of Japanese academic professions after the 1990s. In another survey, Kato (2005) reported that Japanese faculties overwork themselves. Particularly, he indicated that the time for research is invaded by the time for meetings and miscellaneous duties. Of course, it is necessary for faculty members to get involved in the administrative work of their own institutions to govern the academic institutions properly. However, the serious problem is that Japanese faculty members become busier while losing time specifically devoted to their academic work, particularly research.



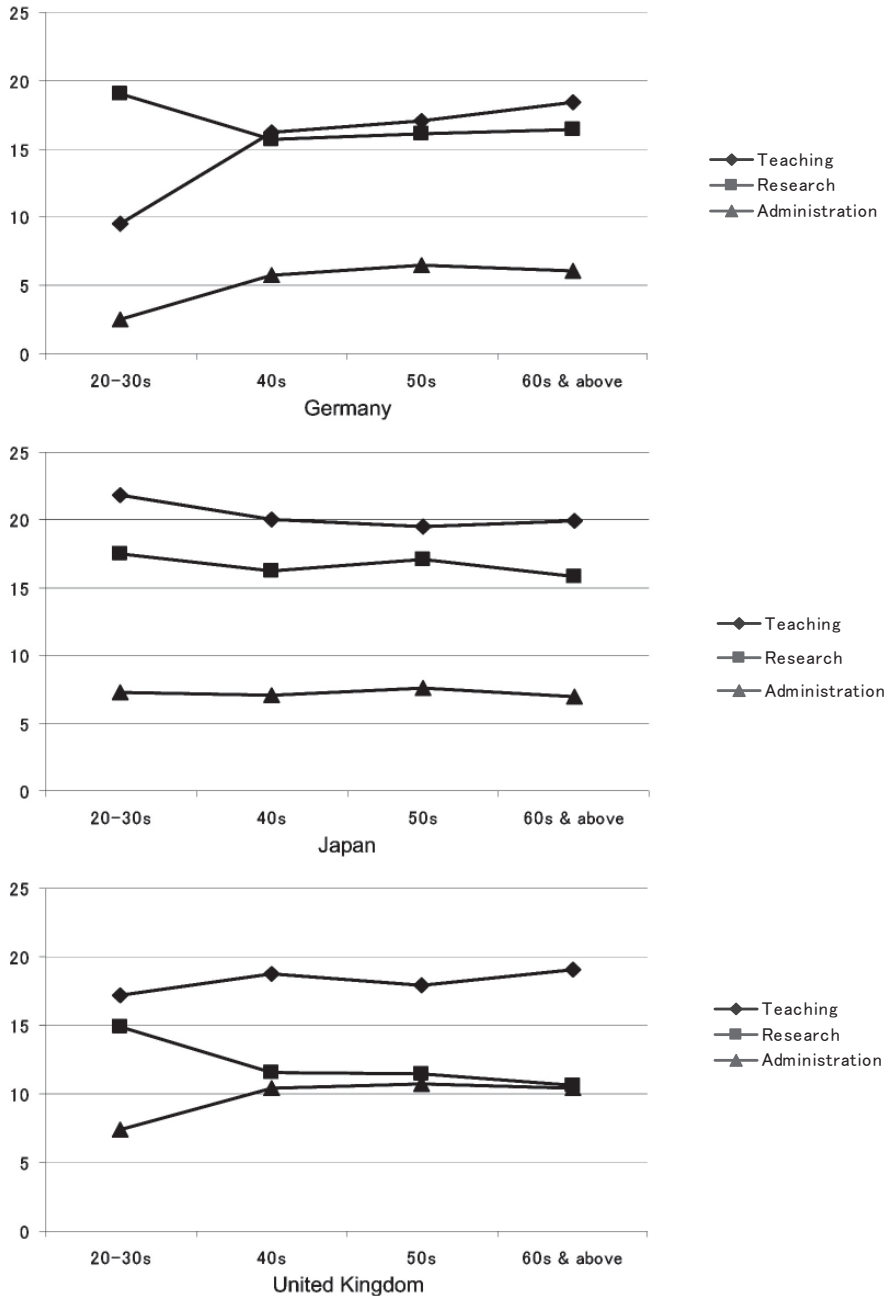
Source: Carnegie Survey (1992), CAP Survey (2007)
Note: Average working hours per week when classes are in session.

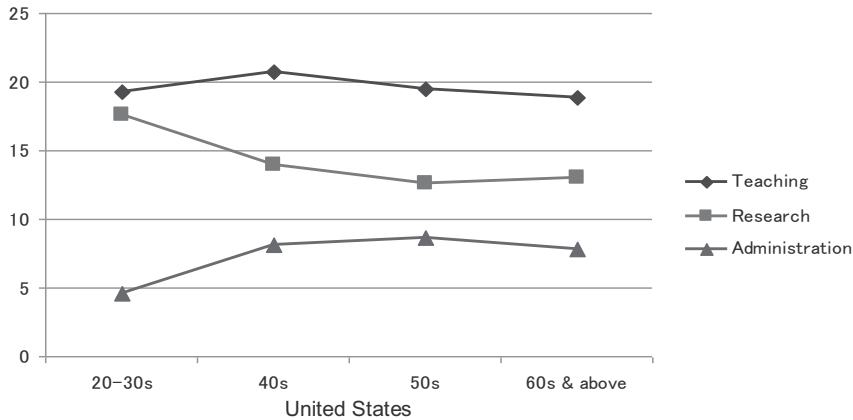
Figure 2. Distribution of work time, 1992 and 2007

Figure 3 shows the differences in work time distribution by age cohort for academics in Germany, UK and US, compared to Japan. The data suggest the following:

- In Japan, faculty in their 20-30s spend a little more time on research than other age cohorts, but the difference between age cohorts is insignificant. Instead, young people spend more time on teaching than other age cohorts, and almost the same amount of time on administration. Therefore, disparities in time distribution between age cohorts is very flat in Japan.
- In the other three countries (Germany, UK and US), young faculty spend more time on research than other age cohorts. In these countries, the time spent on teaching and administration start to increase in their 40s.

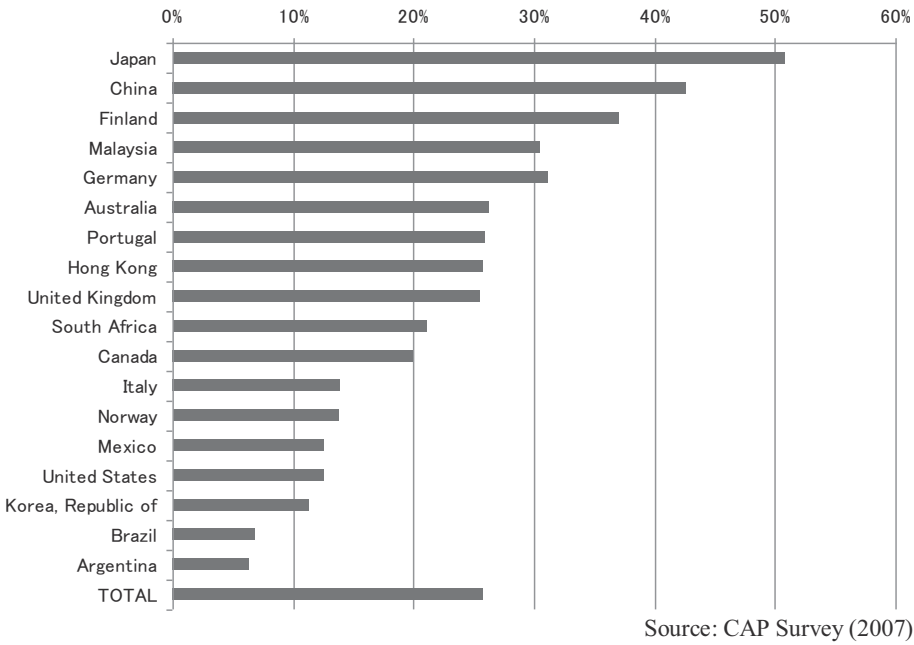
These differences between Japan and other countries imply the different structure of work among age cohorts in different countries, and may also indicate the differences of structure and process in faculty members' development of academic careers.





Source: CAP Survey (2007)
Note: Average working hours per week when classes are in session.

Figure 3. Distribution of work hours of faculty in four countries



Source: CAP Survey (2007)

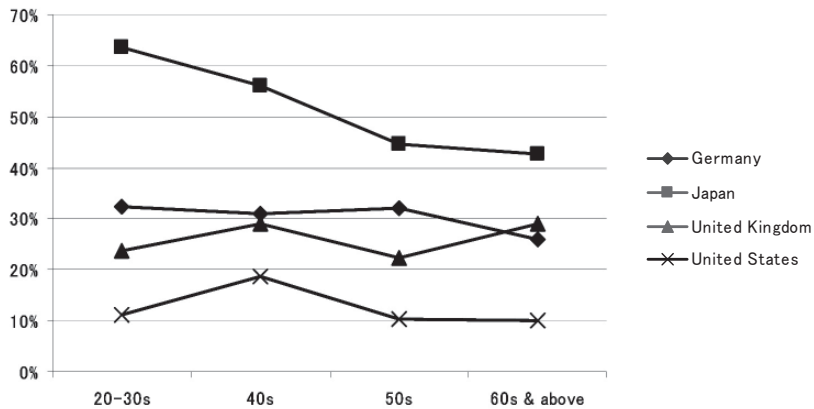
Figure 4. Percentage of faculty in 18 countries who think their teaching and research are hardly compatible, 2007

Compatibility of teaching and research

The CAP survey asks whether faculty members think their teaching and research are compatible. Figure 4 shows the proportion of respondents who perceived that their teaching and research responsibilities are 'hardly' compatible.

The proportion is the highest in Japan, and we can find huge gaps between Japan and other countries. Many factors contribute to this result, and each country has its own complex contexts of its own. So, it is not simple to interpret these results. However, at least from these data we are able to perceive some serious problems in terms of the academic work of Japanese faculty members.

Figure 5 shows perceptions of the compatibility in teaching and research by age cohorts in four countries. Teaching and research conflict is more serious for Japanese younger faculty members than for older generations and also than for young faculty members in other countries. One of the reasons that Japanese academic staff in their 20-30s tend to think teaching and research are not compatible seems to relate to their time distribution; that is, as indicated in Figure 3, they spend almost the same amount of time on teaching and research as their older colleagues even though, in other countries, younger faculty members spend more time in research than their older colleagues.



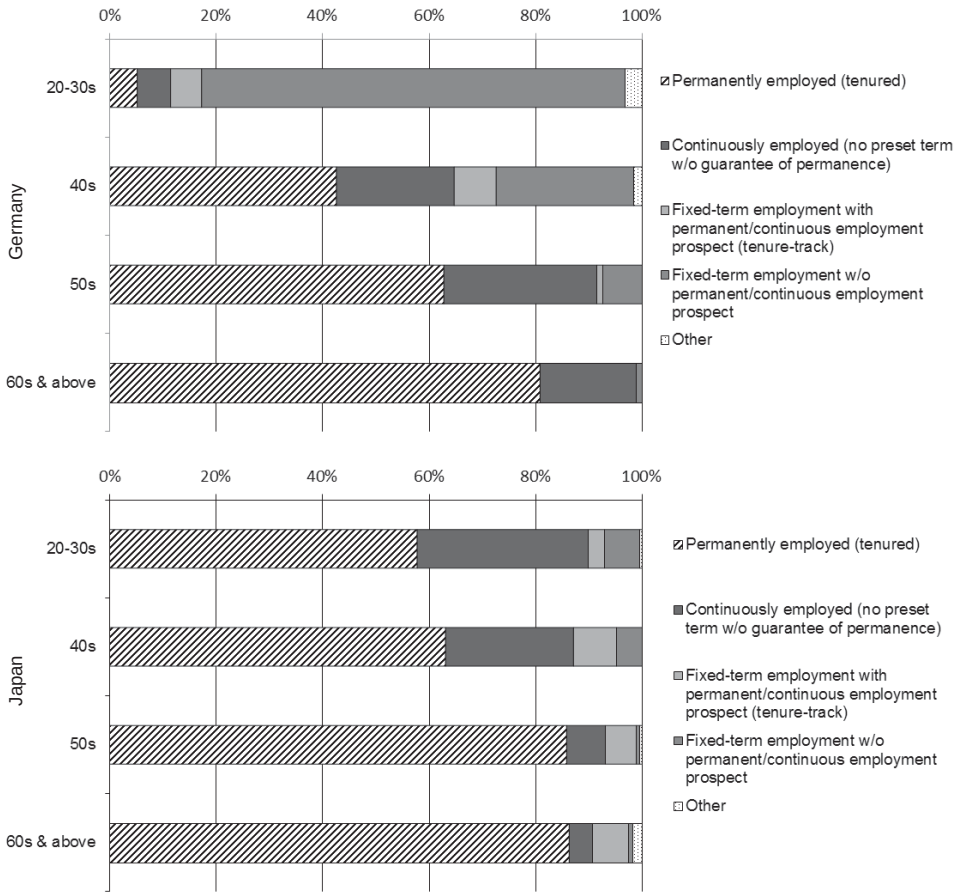
Source: CAP Survey (2007)

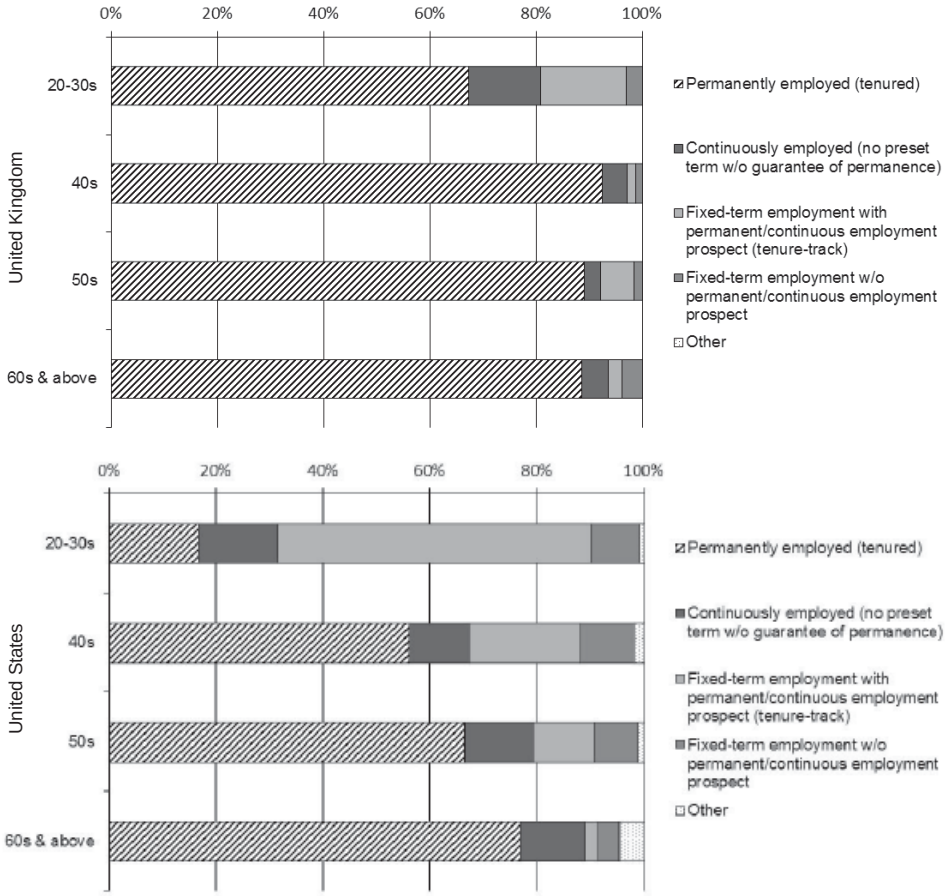
Figure 5. Percentage of faculty who think their teaching and research are hardly compatible in 4 countries by age cohort, 2007

Employment

The distribution of faculty work time may have some relationship to faculty members' employment conditions. In Japan, faculty members' employment contracts with higher education institutions have been gradually changing. Based on the CAP survey, in 1992 almost all faculties (96.9%) were permanently employed (tenured). But by 2007, some portions of them were employed on fixed-term contracts (11.9%). As shown in Figure 6, younger faculty members tend to be employed with fixed-term contracts. Even though, compared with other countries, the employment system in Japan is more stable regardless of

their ages. In Japan, most faculty members are employed permanently or continuously (no preset term without guarantee of permanence) even in their 20-30s. When we put these two categories (permanent or continuous employment) together, inter-cohort differences in the proportions reporting various types of contract are small. The situation of many young members of faculty being employed with the same status as their middle-aged and senior colleagues may be one of the factors in their equal commitment to the same proportionate obligations towards teaching and administration. What is clear is that Japanese academic professionals' working conditions differ from those of the other three countries. They share the same work structures regardless of their ages. Many faculty members are guaranteed permanent or at least continuous employment, even at the outset of their careers. It can be said that the Japanese academic world is a flat and stable system, and does not lend itself to much disparity by age when we talk about faculty development.





Source: CAP Survey (2007)

Figure 6. Duration of employment contract in four countries by age cohort, 2007

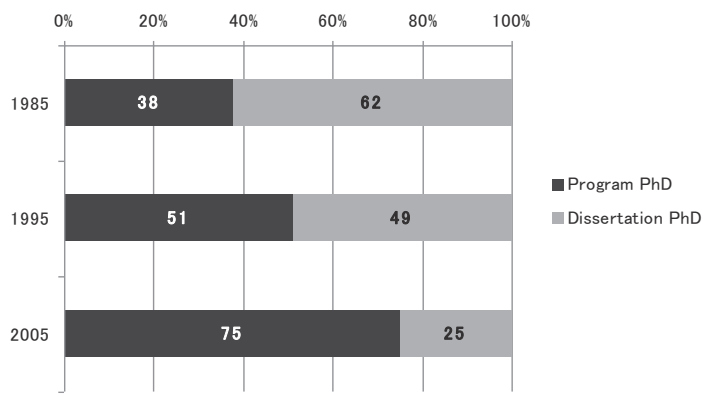
Graduate education

Graduate education provides the training for the academic professions. In the Japanese context, how to construct graduate training as systematic and substantial programs has long been an issue since we adopted the American system of graduate education after WW2. This issue includes two different, though closely connected, factors; awarding PhD degrees to more students when they graduate from doctoral programs, and making coursework requirements more systematic and substantial.

Awarding PhD degrees

In Japan, we have two types of PhD: a "program" PhD which is conferred upon completion of a required course of study and a "dissertation" PhD which is awarded regardless of the enrollment in PhD programs upon presentation of a book-length dissertation to a graduate school. Typically, many "dissertation" PhDs are awarded to individuals who have finished PhD programs without writing their dissertations (and without getting the PhD), and completed them in their 40s or 50s after they obtained academic positions and worked for years in academic world. Traditionally, PhD degrees have been thought to be authoritative particularly in the field of humanities and social sciences, and given to great scholars who already have major accomplishments in their own fields. This tradition makes it difficult for many students to get PhD degrees at the time when they finish doctoral programs. However, this trend has gradually changed after the 1990s, and currently many students finish their doctoral programs while also completing their PhD dissertations. In 1985, 62 percent of PhDs was awarded as dissertation PhDs, and only 38 percent were program PhDs. However, by 2005 75 percent of all PhDs were "program" PhDs with the number of dissertation PhDs rapidly decreasing (Ogata & Murasawa, 2009, Figure 7).

This situation indicates the significant change in the process of research training through graduate education. Completing PhD dissertation now becomes the most substantial research activity in PhD programs. Along with this change, the whole process of research training including coursework and writing master's theses should be reconsidered.



Source: Ogata & Murasawa (2009)

Figure 7. Distribution of type of PhD, 1985-2005

Table 1. Percent reporting the following characteristics of their doctoral training by country, 2007

	AR	AU	BR	CA	CH	FI	DE	HK	IT	JP	KR	MY	MX	NO	PT	ZA	UK	US	TOTAL
You were required to take a prescribed set of courses	70	18	87	75	73	64	14	54	51	36	82	35	66	64	18	7	19	82	52
You were required to write a thesis or dissertation	99	99	98	97	80	93	100	97	96	83	95	95	99	94	97	94	97	97	94
You received intensive faculty guidance for your research	61	29	68	52	71	36	30	50	82	60	63	41	87	27	92	24	25	70	54
You chose your own research topic	58	74	79	80	52	67	59	84	61	60	81	69	90	65	69	74	65	84	69
You received a scholarship or fellowship	66	71	64	78	31	57	21	57	81	49	64	74	35	73	50	28	68	73	57
You received an employment contract during your studies (for teaching or research)	53	40	27	63	39	48	62	38	18	50	51	33	39	61	28	17	33	56	40
You received training in instructional skills or learned about teaching methods	21	16	17	21	22	13	8	19	25	15	26	16	35	9	10	7	15	31	18
You were involved in research projects with faculty or senior researchers	86	45	52	60	59	57	38	42	67	21	59	44	70	43	53	20	36	52	49
You served on an institutional or departmental (unit) committee	38	19	28	32	8	20	16	13	11	3	5	30	30	28	10	11	11	30	17

Source: CAP Survey (2007)
Note 1: Percentage of positive responses
Note 2: AR: Argentina, AU: Australia, BR: Brazil, CA: Canada, CH: China, Fl: Finland, DE: Germany, HK: Hong Kong, IT: Italy, JP: Japan, KR: Korea, MY: Malaysia, MX: Mexico, NO: Norway, PT: Portugal, ZA: South Africa, UK: United Kingdom, US: United States

Coursework and process of research training

Coursework requirements have long been another critical issue for our graduate education. Table 1 shows some essential characters of each CAP country's research training.

The table provides interesting data for comparative analysis of graduate education. And, it is thought to be closely related to the academic culture of each country. Particularly, here I would like to compare the data of Japan with that of the United States. For the question "whether they were required to take a prescribed set of courses," more than 80 percent of American faculty members replied positively compared to about one third of Japanese faculty members.

When asked "whether they received a scholarship or fellowship," and "whether they received an employment contract for teaching or research," about half of Japanese faculty agreed – a rate relatively low compared with other countries. Asked "whether they were involved in research projects with faculty or senior researchers," again we can find a large gap between Japan and the US. In Japan only one-fifth of respondents have participated in research projects during graduate studies, though in the US this ratio is more than half.

For most of the other questions, we can find interesting differences between countries. In total, I can point out three specific findings about graduate education in Japan. First, Japanese universities only require a small amount of course work for the PhD –, although this low ratio in Japan seems to be similar to that in Germany and UK, both of which had some influence on Japanese higher education system particularly before WW2. Secondly, we have extremely low rates of fellowships and employment contracts. Finally, opportunities to get involved in collaborative research projects with faculty members or senior researchers are extremely limited. Of course, we should remember that practices even in Japan differ substantially by discipline.

To think about the process of research training, it is significant to review the framework which was established by Burton R. Clark (1995). Clark insisted that to make research training effective, it is important that each training system include multiple forms of settings, and two kinds of knowledge are necessary. He referred to them as 'tangible knowledge' and 'tacit knowledge.' They are concretely captured with the analogy of 'words and libretto' on the one hand, and 'music' on the other. Applying this kind of knowledge concept, he presented two kinds of groupings for research training: a teaching group and a research group. And he insisted that a sustainable and interrelated connection between these two groups is critically important. Particularly, he emphasized the importance of departments as teaching groups within the context of

contemporary knowledge expansion. Broad understanding of each discipline will be effective – as in the American graduate school system –, and I think that the concept of interconnection of the two kind of knowledge is essential for research training even in other places.

Scholarship

Boyer's framework of 'Scholarship'

To think more deeply about the nature of academic work, we need some concepts which can describe the essence of academic work and also enhance our understanding of what academics are. One of the concepts we can rely on is Ernest Boyer's notion of 'Scholarship.' His name is already well known in Japan, but I do not think his ideas are widely shared in our academic world. 'Scholarship reconsidered' should be reconsidered again. Boyer's four categories of scholarship (Scholarship of Discovery, Scholarship of Integration, Scholarship of Application and Scholarship of Teaching) are briefly summarized in Table 2.

Table 2. Characteristics of Ernest Boyer's four scholarships

Discovery	Commitment of knowledge for its own sake/ freedom of inquiry/ following disciplined fashion/ contribute to the stack of human knowledge and intellectual climate
Integration	Give meaning to isolated facts putting them in perspective/ making connections across disciplines/ placing specialties in larger context/ educating nonspecialists
Application	Equipment for service/ tied directly to one's field of knowledge/ relate to (flow directly out of) professional activities/ new intellectual understandings can arise
Teaching	Based on hard work and serious study/ dynamic endeavor building bridges between teachers understanding and student's learning/ not only transmitting knowledge but also transforming and extending it

Source: Boyer (1990)

I think the concept of Boyer's scholarship is significant because based on this concept we can effectively avoid the simplified dichotomy of teaching and research. Each of the four scholarships is suggestive as its own. Also, the whole concept suggests that scholarship is not a set of static activities, but it is based on some connection of ideas, attitudes and activities of academicians. On the one hand, we can say that each of the four scholarships exists as independent activities. On the other hand, they exist as a series of concepts that are inter-related and not mutually exclusive.

Scholarship of Teaching and Learning (SoTL)

The Scholarship of Teaching and Learning (SoTL) is one component of Boyer's notion of scholarship. SoTL is based on a conception of teaching as scholarly work. The Carnegie Foundation for the Advancement of Teaching took the initiative to enhance SoTL by establishing the program: Carnegie Academy for the Scholarship of Teaching and Learning (CASTL). This program aims to advance teaching activities not only as private activities of individual teachers but as the public "communal" scholarly work which can be equivalent to research activities. CASTL tries to establish a community to enhance the activities of teaching and learning. Scholarly work of teaching includes the process of documentation, exchange and peer review. Through them, teaching can turn from a private activities into a public one with an emphasis on accumulation of knowledge and practices. The Carnegie Foundation describes it thus;

> The CASTL Program seeks to support the development of a scholarship of teaching and learning that: fosters significant, long-lasting learning for all students; enhances the practice and profession of teaching, and; brings to faculty members' work as teachers the recognition and reward afforded to other forms of scholarly work.
>
> Achieving these goals involves significant shifts in thought and practice. For faculty in most settings, teaching is a private act, limited to the teacher and students; it is rarely evaluated by professional peers…. CASTL seeks to render teaching public, subject to critical evaluation, and usable by others in both the scholarly and the general community.

Conclusion

In this paper, I discussed the contemporary circumstances of the Japanese academic professions, focusing particularly on their work, academic development and scholarship. We found that the current working conditions of Japanese academics are unfavorable. Their working time is longer than academics in other countries, but at the same time Japanese academic's time for research is diminishing. Under these conditions, many of them, particularly younger faculty members, feel it difficult to manage their academic work. To some extent, these conditions reflect our own academic culture, and definitely have some advantages. For example, it is a strength of Japanese academic market that young faculty members can enjoy stable working conditions under the permanent or continuous employment system. However, how younger academic staff can address the challenges in managing their academic work is

not clear.

Another thing we should consider is the process of researchers' academic development. I addressed this issue through the comparative analysis of graduate education. Again, we have our own characteristics in terms of the process and structure of research training which reflect our traditions and academic culture. It is still, however, significant to rethink our tradition from the comparative perspective. I indicated that CAP data illustrate some significant differences in research training and graduate education between countries.

It is important that we point out from a comparative perspective how academic culture and traditions are different, and based on them we should think about what kinds of change are required for the future of the Japanese academic professions. At the same time, to enhance academic capacities under difficult conditions, I think it is also important to share ideas which can help to develop our thinking about what the academic profession is or should be.

It is a very difficult time for the Japanese academic professions to sustain academic capacities of colleges and universities under the circumstances of globalization and massification of higher education. However, it is important to think how we can chart a bright future for our academic world. I think it is both important to consider the Japanese academic professions from a comparative perspective on the one hand and also to keep in mind the traditional foundations of the distinctively Japanese academic professions.

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The Academic Profession in Malaysia 2010: A proposed study

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Background of the study

Universities have frequently been regarded as key institutions involved in processes of social change and development. In relation to this role, Malaysian universities have realigned themselves towards goals like creating a 'knowledge society', an 'achievement society', a 'democratic society', a 'global society' or,

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more likely, a combination of all of the above. The roles played by universities in the development period are varied, multiple and contradictory; sometimes reproductive of the status quo and sometimes transformative (Brennan & Lebeau, 2002). The main focus of a 'traditional university' in the Malaysian context is viewed in terms of its three primary functions: education, research and service to the community.

Recent years have seen marked changes in what we understand as university education and the academic profession. The new emphasis is expressed in phrases like 'the knowledge economy', 'knowledge workers', 'knowledge management', and 'the knowledge society'. Driving such changes in the university are the following factors:

(i) *Changing demographics* − Longer lives, longer work days, larger urban areas, more diverse populations and more frequent moves;
(ii) *The restructuring of employment* − It has been predicted that the average career trajectory in the future will consist of six or seven different careers pursued sequentially. Lifelong learning is becoming a necessity rather than the enrichment opportunity it may have been in the past. Increasingly, students who already possess a degree are looking for vocational courses to develop new job or career skills;
(iii) *Technological change* − The rate at which new technologies are penetrating businesses and especially homes is increasing. One possible impact of changing technologies is a move away from site-based delivery of education to a more flexible, learner-selected mode of learning;
(iv) *Cultural change* − human needs have been transformed to the point where, in the marketplace, consumers focus on representations as much as they do on physical entities; and
(v) *Other* – Design, aesthetics, concepts, brand associations, and service sensibilities.

The above forces have led to the generation of new academic roles and the diversification of existing ones. With the market emphasis and government steering characteristic of the knowledge society, much is made of the importance of training in multiple-skills, flexible career paths, lifelong learning and learning in the workplace (Government of Malaysia, 2006). There appears to be a shift away from an emphasis on knowledge elitism and knowledge for its own sake, as typified by the traditional university, towards the integration of the subject discipline with professional and vocational education. The attention to academic roles is becoming critical. In this vein, exciting discussions are

taking place: about the curriculum; about how to teach and learn; about the experiences that are essential for an educated person; about the appropriate balance between education for a career and education for its own sake; and about appropriate length of study for degrees or certificates (how soon students can graduate after initial enrolment). Malaysian academics are currently being urged to initiate a paradigm shift in their teaching responsibilities, from teacher-centred to learner-centred. At the same time, there is the imperative to balance the tensions of market driven, narrow and technical outcomes in terms of the mastery of, and proficiency in, the practice of a discipline or field, against a broad education in citizenship in the context of transforming societies in which the professions.

On top of innovative teaching and research, universities in Malaysia are confronting a new set of roles, with the emphasis on promoting the usefulness of knowledge and the scholarship of application. The primary source of this change is the growth of knowledge in science and technology emerging from research activities, led by corporate research and development. Universities in Malaysia are also experiencing similar expansion in roles and functions. Another source of change is the spread of for-profit education, typical of the private higher education institutions (PHEI) in Malaysia, which propels a third set of roles for these universities: course goals that are tactical, focusing on knowledge and skills that have immediate payoff *i.e*. the competencies their customers need right now and for their next career move, – popularly termed as lifelong employability competencies. According to Newton (2002), many institutions of higher learning become educational corporations depending on expertise in finance, accreditation, marketing and customer relations to survive in an increasingly competitive environment marked by diminishing government funding.

Recent developments in Malaysia affecting the academic profession

Since the conduct of the international Changing Academic Profession survey in 2007, a multitude of policy and governance changes have taken place in Malaysia. These changes affect all aspects of life in Malaysia, including higher education and the academic profession. In 2007, the Malaysian Qualifications Agency (MQA) Act was instituted. The MQA Act 2007 introduced the Malaysian Qualifications Framework (MQF) that sets the standards on the quality of higher education in nine areas: (i) vision, mission, educational goals and learning outcomes; (ii) curriculum design and delivery;

(iii) assessment of students; (iv) student selection and support services; (v) academic staff; (vi) educational resources; (vii) programme monitoring and review; (viii) leadership, governance and administration; and (ix) continual quality improvement (MQA, 2009). MQF also stipulates the determination of learning outcomes of all academic programmes to cover eight domains: (i) knowledge; (ii) practical skills; (iii) social skills and responsibilities; (iv) ethics, professionalism and humanities; (v) communication, leadership and team skills; (vi) scientific methods, critical thinking and problem solving skills; (vii) lifelong learning and information management skills, and (viii) entrepreneurship and managerial skills.

To transform higher education in order to meet a world standard, the National Higher Education Strategic Plan: Towards 2020 and Beyond (MOHE, 2007b), and the National Higher Education Action Plan 2007-2010 (MOHE, 2007a) were launched in 2007. Seven thrusts were outlined in the Strategic Plan: (i) widening access and enhancing equity; (ii) improving the quality of teaching and learning; (iii) enhancing research and innovation; (iv) strengthening institutions of higher education; (v) intensifying internationalization; (vi) enculturation of lifelong learning; and (vii) reinforcing the Ministry of Higher Education's service delivery system. Subsequently the Ministry of Higher Education established the Project Management Office (PMO) to facilitate the rolling out of the plans, to monitor progress as well as to perform formative evaluation of implementation. In all public institutions of higher learning, Institutional Project Management Offices (IPMO) were set up to facilitate the implementation of plans and to support the national PMO.

In the March 2008 general elections, the ruling party lost its two-third majority in the parliament for the first time in history. The result of the elections indirectly caused a change in the country's leadership. Under the new prime minister, numerous new programs and policies aimed at making Malaysia more competitive were introduced. The concept of One Malaysia was introduced "to preserve and enhance this unity in diversity which has always been our strength and remains our best hope for the future" (Najib Tun Razak, 2010). The Government Transformation Plan (GTP) was then introduced with a focus on six National Key Result Areas (NKRA) of which education is included. The Key Performance Indicator (KPI) system was introduced to provide a mechanism to regularly assess the performance of all ministries and government agencies, including public institutions of higher learning (PIHL). In public institutions of higher learning, the performance assessment management is coordinated by IPMO. Each ministry and agency has been

required to establish specific KPIs to be attained within specific time frames. In public institutions of higher learning's, each and every academic staff member was required to set his/her KPI that will jointly contribute towards the attainment of KPI in the institution.

The KPI system that stressed assessment and accountability shifted the character of universities from elite institutions of higher learning to institutions that meet public, academic and market demands. The Ministry of Higher Education has outlined the performance indicators for the academicians to include teaching, research, publication, public service and consultancy. For example, Malaysian academics have to ensure they carry out three research projects a year and at least two published articles a year, apart from teaching and other administrative work (Saran Kaur Gill, 2007).

Assessment and accountability mechanisms are extending to institutions as well. The Academic Performance Audit (APA) which was an important milestone of the 2007-2010 higher education action plan was carried out nationwide in all public and private institutions of higher learning in 2010. APA resulted in the award of Institutional Accreditation Status to Universiti Sains Malaysia, Universiti Malaya, Universiti Kebangsaan Malaysia, Universiti Putra Malaysia, Monash University Sunway Campus, Nottingham University Malaysia Campus, Curtin University Sarawak Campus, and Swinburne University Sarawak Campus. MQA is planning to perform program audits for all undergraduate and postgraduate programs in all public and private institutions of higher learning in 2011.

The Malaysian government has identified a resource allocation system based on the results of institutional assessments such as the Research Assessment Exercise in the UK. Beginning in 2011, the funding mechanism of public institutions of higher learning will take into account their performance, as measured by the Rating System for Higher Education Institutions in Malaysia (SETARA) carried out by the Malaysian Qualifications Agency (MQA) (Economic Planning Unit, 2010).

Statement of the problem

Traditionally, academics in public institutions of higher learning are expected to be producers and disseminators of knowledge, whose duties primarily involve teaching, supervising research of undergraduate and postgraduate students, conducting research and publishing scholarly works. Academics in private higher education institutions, in contrast, are mainly

expected to be disseminators of knowledge, focusing primarily on teaching, but with the additional duties of marketing courses and recruiting students. Academics in public institutions of higher learning's are expected to teach students in undergraduate as well as postgraduate programs. They may design the courses they teach, assign reading material and assess their students. On the other hand, many academics in private higher education institutions, which mostly offer franchised programs, have no part in designing courses or even assessing the students they teach (Lee, 2002).

While academics in public universities are expected to conduct research and produce publications that meet national and international standards, and present their findings in national or international seminars and/or publish them in the form of monographs, books or articles, their counterparts in the private sector are not expected to undertake publication. However, of late, some private universities and university colleges[1] are moving in the direction of public universities with respect to research and publication, offering grants for their academic staff to conduct research and publish journals of their own. Currently, services to the university and community are also important for academics in public institutions of higher learning, as they are part of the criteria for promotion. For instance, they may be appointed to perform administrative duties, such as the role of chair of an academic program, unit coordinator, director or dean. They must also be involved in committees, for example, to organise a conference or act as a task force either at the university or school/faculty level. They are expected to contribute their expertise to academic and non-academic local community and national development programs. Academics in private higher education institutions are expected to be involved in administrative duties, but community service is less common (Lee, 1999).

Due to the introduction of an entrepreneurial, income generation role in public higher learning institutions, all academicians are expected to undertake consultancy work that benefits the university and themselves, in addition to teaching, research and service. Corporatisation has a strong impact on the way academics conduct their work today. As a result of corporatisation, 'universities in Malaysia began to operate like business corporations and profit-making centers' (Lee, 2002, p.165). In this respect the academics

[1] University colleges are higher education institutions which are smaller in all aspects. Generally private higher education institutions register initially as university colleges and are upgraded to universities upon the attainment of the required Ministry criteria.

become not only knowledge providers but also entrepreneurs who face the challenge of obtaining funding and revenue from external sources and generating income for the universities. They are pressured to forge links with local industry and the international intellectual community. The corporate culture also places a lot of emphasis on performance, adopting corporate management practices, such as performance indicators, benchmarking and management-by-objectives (Lee, 2002) and annual work targets, which consequently promote intense competition among academics for rewards, recognition and promotion. One major challenge arising from this is how to compete fairly and ethically. The need to gain funds from external sources poses another challenge, that of creating a balance between entrepreneurial activities and the many other roles that academics have to perform. Pressing problems, such as rising graduate unemployment, the declining quality of graduates, inappropriate curricula (Morshidi, 2006), and rising student numbers add more pressure on academics to 'juggle' effectively their various roles. The ability to multi-task is now a necessity for them.

In relation to this, Ahmad Nurulazam Md Zain, Munir Shuib and Mellissa Ng (2010) found that academics in Malaysia, generally, were not engaging in the international arena, in terms of research and publication. Only a small number of them conducted collaborative research with academics from outside of Malaysia, presented papers at international conferences and published in international refereed journals.

Performance of Malaysian universities has also seen the scrutiny of the public and political figures. The results of university ranking exercises, such as Times Higher Education Supplement (THES), and more recently, QS ranking have applied tremendous pressure on university top management, which is then rippled down to the faculties. The Ministry of Higher Education, through the MQA, has also formulated the rating criteria for the universities using the SETARA Rating System. Apart from these, in recent years, the criteria for promotion have also become more demanding, with the inclusion of criteria such as Thompson ISI publications, whereas excellence in teaching may not be as well recognized. These changes have started to show their impact in terms of a brain drain of faculties to other sectors, overseas, or from one institution to another, which are deemed to be less demanding in terms of work load or promotion expectations.

Given the increasing scope and complexity of their job description, it is essential to study their level of well being vis a vis the increasing demand placed on them. In light of the lack of understanding of the nature and extent of the

changes experienced by Malaysian academics in recent years (2008-2010), this study mainly aims to make comparisons between the findings of the Malaysian Changing Academic Profession (CAP) 2006-2007 Survey and those of Academic Profession Malaysia 2010 (APM) study.

Research objectives and research questions

The Malaysia Academic Profession 2010 (MAP) Project will examine the nature and extent of the changes experienced by the academic profession in recent years (2008-2010). It will explore both the reasons for, and the consequences of, these changes. It will consider the implications of the changes for the attractiveness of the academic profession as a career, and for the ability of the academic community to contribute to the further development of a knowledge society and the attainment of national goals.

In line with the aims stated above, the study seeks to answer to the following questions:

(i) What is the nature of the changes experienced by the academic profession between 2008-2010?
(ii) To what extent are changes in various aspects of the academic profession (career and professional situation, general work situation and activities, teaching, research, management, and extension/community services) experienced by academics between 2008-2010?
(iii) To what extent does the experience of changes differ by gender, ethnicity, academic rank, discipline, and types of higher education institutions (public *vs*. private; Apex university *vs*. Research *vs*. Comprehensive *vs*. Technical universities)?
(iv) What are the possible associations among the six key aspects of the changing academic profession (career and professional situation, general work situation and activities, teaching, research, management, and extension/community services)?
(v) What are the external and internal drivers of these changes?
(vi) How does the academic profession respond to changes in their external and internal environment?
(vii) What are the consequences for the attractiveness of an academic career?
(viii) What are the consequences for the capacity of academics to contribute to the further development of a knowledge society and the attainment of national goals?

(ix) What are the consequences of the changes in academic jobs on the well being of academics, measured by their work-commitment, job satisfaction, or general health?

Scope of research

The population for this research includes all 62 public and private universities or university colleges in Malaysia.

Significance of the study

In this period of rapid change stimulated by globalisation and national policies promoting the knowledge economy, it is essential to understand the orientations and actions of knowledge workers, especially those of the academic profession, who occupy such a central position in the knowledge production process. What are the academic profession's views towards the increasing relevance, internationalization, and managerial adaptations of their workplace, and how are these views changing? The APM project is especially well positioned to answer these questions. The proposed study will build on the First International Survey of the Academic Profession carried out in 1991 in 14 nations and 2006-2007 CAP survey in Malaysia. Hence, many of the findings can be directly compared to findings from this earlier period.

Method

The research is divided into two phases. The first phase (which involves Research Questions i to iv) adopts an ex-post facto research design, employing quantitative methods.

The instrument: The main instrument will be modified from the original Changing Academic Profession Questionnaire. This questionnaire consists of six sections: Section A: Career and Professional Situation; Section B: General Work Situation and Activities; Section C: Teaching; Section; D: Research; Section E: Management; Section F: Extension/Community Services; Section G: Personal Background.

Samples: The study will be carried out on 3,000 academic staff in 30 public and private IHLs Malaysia, which will be selected using a cluster sampling method. Gender, ethnicity, academic rank, discipline, and types of IHLs will be used as stratification variables for the selection of the sample. The sample size will be determined based on Krejcie and Morgan's (1970) guide on minimum

sample size.

Data Analysis: The Statistical Packages for Social Sciences (SPSS) program will be used for quantitative data analysis. Descriptive statistics involving frequencies, percentages, means and standard deviations will be used. Relationships among dependent variables and independent variables will be analysed by using correlation and linear regression. As an effort to ensure all the quantitative data are drawn from a normally distributed population, numerical measures, such as skewness and kurtosis will be used to identify any deviations from normal distributions (Hair, Anderson, Tatham, & Black, 1998; Miles & Shevlin, 2001). After the assumptions for using parametric techniques in analysing quantitative data are met, statistical analyses which include independent-sample *t*-test, one-way ANOVA, correlation and multiple regression analysis will be used to test the stated null hypotheses at a specified significance level, alpha = .05.

In the second phase, four academics (1 professor, 1 associate professor, 1 senior lecturer and 1 lecturer) from each of the selected institutions (1 Research University, 3 Comprehensive Universities, 1 Technical University, 1 Overseas branch campus university, 1 Government-Linked-Company university, and 3 private universities) will be invited to participate in a focus group discussion on issues related to Research Questions (v) to (ix) listed above. The discussions will be audio-recorded and transcribed verbatim for qualitative data analysis. Content analysis will be used to generate themes and findings for the five research questions.

Concluding remarks

This paper presents the proposal for a follow-up study on the changing academic profession in Malaysia. Since a research grant has been secured, the project commenced in June 2010. To date, a literature review and instrumentation for Phase 1 have been completed. The instrument will be piloted in January 2011 and the actual data collection will be conducted upon the completion of the item analysis using the data of the pilot study in the early part of 2011. The research team hopes that the Changing Academic Profession Asia Conference 2011 in Hiroshima will provide opportunities for strategic collaboration on comparative Academic Profession studies between Malaysia and other nations in Asia.

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The Korean Academic Profession Revisited: Academic activity, performance, and governance

Jung Cheol Shin*

1. Changing academic environments and the academic profession

Korean higher education has rapidly developed during last six decades. The growth is impressive in its quality as well as quantity. The historic accomplishments have been led by a strong demand for education, government response to the policy, and economic development (Shin, 2011a). As many people in Confucian countries do, Korean parents give priority to education in their financial expenditures. It has long been a tradition of Korean culture that parents sacrifice their wealth to educate their children. This cultural DNA pushes and supports their child to get a college education. The first stage in the education boom was elementary education in the 1960s and 1970s, followed by middle school in the 1970s and high school in the 1970s and 1980s. The rapid increase of elementary and secondary education pushed the education ladder toward higher education in the late 1970s through 1990s. Currently, Korea shows the highest tertiary enrollment rate of 98 percent worldwide according to OECD data. Moreover, higher education development has reached graduate education in the 2000s.

Shin (2011a) discussed Korean higher education development from three perspectives – the Confucian tradition, the Western university idea, and economic development. These three factors intertwined with one another to shape current Korean higher education. Among these threes, the economic factor is critical in explaining Korean higher education development. Although it is quite complicated to discuss causal relationships between economic

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development and education development, one clear fact is that education development is not sustainable without economic development. In their study, Shin, Lee, and Park (2011) found that education development is the antecedent factor for elementary and secondary education development while economic development is the antecedent one for higher education. In other words, elementary and secondary education lead economic development and economic development leads higher education development in Korea. This finding is related to the fact that government can lead education development through high school, but not into higher education.

In the context of the fast growing higher education market, the academic profession has been changing a lot during the last six decades. First of all, the number of its faculty members has been growing side by side with higher education development. As Table 1 shows, the total number of faculty increased more than tenfold from 6,064 in 1965 to 71,396 in 2010. Moreover, the qualifications or academic credentials of faculty, *i.e.*, the share of PhDs among them, has rapidly grown from 12 percent in 1965 when annual education statistics began to be released to 80 percent in 2010.

Table1. Growth in tertiary enrollment, faculty numbers and academic qualifications, South Korea, 1965-2010

Year	Tertiary students	Professors	% PhD	% Foreign PhD
1965	130,968	6,064	12	38
1970	170,151	8,667	16	35
1975	235,147	11,031	25	31
1980	597,687	20,456	23	36
1985	1,260,350	33,076	27	38
1990	1,466,862	41,416	42	37
1995	2,325,580	58,509	53	39
2000	3,359,688	56,851	74	39
2005	3,490,870	64,814	79	38
2010	3,540,367	71,396	80	39

Source: *Yearly Education Statistics* from 1965 to 2010 (Korean Center for Education Statistics)

The third indicator is the share of foreign PhDs. Interestingly, the share of foreign degrees has been remained around 40 percent since the 1960s. There are advantages and disadvantages to having a relatively high share of foreign degrees (Lee, 1989). The high proportion of foreign degree holders implies that graduate education in Korea is not yet sufficiently developed; on the other

hand, it implies considerable openness to external degree holders and increased benefits for internationalization. The weaknesses and benefits reverse to the pattern in other countries (*e.g*., Japan) where the proportion of foreign PhDs is quite low. Most of the foreign degree holders earned their doctoral degree from a competitive research university and they have contributed to the rapid growth of the academic productivity of Korean universities (Shin, 2011b). Among Korean academics, 29 percent earned their doctoral degree from a US university. Although the large share of foreign degree holders may or may not be a good sign for Korean academic society, the fact implies that the academic qualifications of Korean academics are not lower than that of advanced countries.

Faculty life has been experiencing qualitative changes since the mid-1990s when the Korean government aggressively adopted neo-liberalism-based education reforms. In particular, the 5.31 Education Reform is a cornerstone of Korean higher education as well as of elementary and secondary education. Since then, new public management approaches have been widely introduced in higher education in the interests of promoting accountability and competitiveness (Shin, 2011c). These changes brought remarkable changes to the academic profession. The Carnegie International Faculty survey of 1991-1992 was conducted ahead of these changes and the 2008 CAP survey was conducted 13 years after the changes. Therefore, comparing the academic profession between the first and the second survey will provide invaluable information on that how neo-liberalism-based education reforms have affected contemporary academics. Although there are similarities with many other countries, the Korean case has enormous value because Korean higher education experienced such dramatic – and largely positive – changes between the Carnegie and the CAP survey.

In addition, globalization has broadly affected higher education as well since the mid-1990s. Globalization and the emergence of the knowledge-based economy have widely and profoundly affected higher education in many ways. Higher education institutions struggle to attract more international scholars and international students to compete with their international counterparts. University rankings, especially global rankings (*e.g*., Shanghai Jiao Tong University ranking, Times QS ranking, Leiden University ranking, Webometrics, and Taiwan Higher Education and Accreditation Council ranking *etc*.), have emerged as a tool to measure global competitiveness among universities in the mid-2000s. Universities, especially research universities, began to consider their research productivity as a lever to enhance their rankings. Under the

pressure of globalization and the knowledge-based economy, Korean universities began to emphasize research productivity. This trend has been accelerated by a government policy such as the Brain Korea 21 which was designed to build world-class research universities in Korea as a hub of knowledge production.

Within this context, our main query of interest here is whether faculty job satisfaction, their activities, and their role in governance and management have changed between the two surveys. It might be expected that faculty job satisfaction would decrease in the 2008 survey owing to the heightened harshness of their job environment after the mid-1990s: Korean faculty work harder and are required to perform better than before. From the governance point of view, they may have lost their influence in institutional governance, and they may be isolated from institutional decision making. These hypotheses are tested based upon the empirical data in this study.

2. Data and analytical strategy

Data

The 2008 CAP data is based on a different population and sample from the 1992 Carnegie data, and the data was collected through a different survey administration (Table 2). The total population for the 1992 survey was 26,365 academics and that for the 2008 survey was 52,763 academics. The gap represents the growth of Korean higher education during the intervening 15 years. The 1992 data was collected through a paper survey and the 2008 data was collected through an on-line survey. Intervening technological developments – which are part of the changing environment of higher education – enabled us to collect data through electronic methods. Digital libraries, distance learning, on-line courses, and email communication with students were rare in 1992, but are widely available in contemporary higher education.

Table 2. Comparison of 1992 Carnegie and 2008 CAP surveys

Population/sample	1992	2008
Population	26,365	52,763
Sample	3,295	6,827
Response	1,211	900
Survey Method	paper survey	on-line survey

Analytical strategy

This paper has three foci of interest. First of all, the changing environment

of higher education may affect faculty's job satisfaction. In discussing faculty job satisfaction, attention will be paid to the work environment of Korean academics because work environment is highly associated with job satisfaction. Second, the changing academic environment may affect faculty preference in their academic activities and also their workloads. Ranking competition may lead Korean universities to place greater weight on research than teaching because research is more highly valued by ranking indicators. Within this context, faculty preferences and their time allocation may have been changed. Third, the changing environment may affect institutional governance and management. An increased emphasis on performance-based accountability may weaken shared governance and may broadly promote increased managerialism in Korean higher education. The following findings and discussions are based on these three main topics of interest.

3. Job satisfaction and the work environment

Faculty job satisfaction is affected by many factors, *e.g*., salary, working hours, management and leadership styles *etc*. A groundbreaking study has been conducted by Herzberg, Mausner & Snyderman (1959) and his follow-up researchers (*e.g*., Smerek & Peterson, 2006; Volkwein & Zhou, 2003). They divided motivation between motivators and hygiene factors. The hygiene factors are job environment factors and contribute to job dissatisfaction, while the motivational factors are intrinsic factors such as job itself, empowerment, recognition *etc*. Unfortunately, the CAP data include many hygiene factors but few motivational factors, making a test of Herzberg's theory impractical. The best that we can do with current data is to discuss job satisfaction and the faculty work environment. Interestingly, overall faculty job satisfaction has not changed a lot: 76 percent reported high job satisfaction in 1992 compared to 77 percent in 2008). Indeed, on two indicators or survey items, it appears that their job satisfaction has actually increased (*e.g*., "it is a poor time for young person to be an academic," "I would not become an academic if I have a choice again"). The vast majority of Korean academics replied that this is not a poor time for young person to be an academic (80 percent), and they would be an academic again if they had a choice (92 percent).

Nevertheless, more academics reply that their job is a source of considerable strain (58 percent in 1992 *vs*. 68 percent in 2008). In general, Korean academics are very satisfied with their current job even compared with the 1992 survey, but they feel that their academic job is also increasingly

stressful. The finding is quite complicated to interpret. Presumably, the academic job is a relatively good choice for them compared with other jobs for highly educated people though it is accompanied by stress. Returning to Herzberg's dual factor theory, the academic job appears to provides more internal motivation than environmental satisfiers (hygiene factors). Academics enjoy academic freedom in their teaching and research, even as they enjoy freedom in their service activities. Many academics are actively involved in social services such as community service, holding a public official's position, a top-administrator position at a government agency and even elected political positions. While academics serve in these positions, most of them maintain their faculty position even when they are employed full-time in the service jobs. In addition, their social status is relatively higher than other jobs, such as business, public officials *etc*. The value of academics rarely competes against other jobs. This may need further analysis in the future because job satisfaction explains why Korean universities attract talented people into academia.

Table 3. Percent faculty reporting high job satisfaction and high satisfaction with aspects of the work environment, 1992 *vs*. 2008

Job Satisfaction & Environment		1992	2008
Job Satisfaction	Job satisfaction	76	77
	This is a poor time for young person	35	20
	I would not become an academic if I had it to do over again?	17	8
	My job is a source of considerable personal strain	58	68
Job Environment	Classroom	21	48
	Technology for teaching	7	44
	Laboratories	8	26
	Research equipment and instruments	8	24
	Computer facilities	13	50
	Library facilities & Services	8	43
	Your office spaces	25	48
	Secretarial supports	10	19

Notes: % of faculty who agree or strongly agree with the survey item.

Alternatively, high job satisfaction (or, strictly speaking, lower job *dis*satisfaction) may come from improved work environments. As shown in Table 3, the job environment has been impressively improved during the last 15 years. The changes are related to increased financial investments. Some of the investments came from student tuition increases as well as government

supports. The Korean government has invested a lot into elementary and secondary education, but quite less in higher education (Shin, 2011a). Instead, the Korean government has used evaluation-based budget allocation policy to improve education environment. The evaluation-based budget policy has been working as a strong policy tool to lead investment in the education environment in Korean higher education. Another major policy initiative to improve the work environment is the introduction of a quality assurance framework. The Korean government adopted an accreditation framework to enhance the quality of education in 1994. However, most of evaluation indicators are input indicators and consist mostly of environmental factors (*e.g.*, building, library, computer *etc*.). These initiatives contribute a lot to improving the work environment with minimum investment by the government.

Another factor that contributed to improving the education environment is student tuition. During the past 15 years, student tuition also has increased enormously. Students, actually parents were able to pay increased tuition owing to the country's economic growth. Through the tuition increase, Korean universities upgraded their facilities and information technology, remodeled buildings, and increased faculty salaries. Once the job environment has been improved, dissatisfaction may be decreased although the improved job environment does not directly contribute to faculty motivation according to Herzberg's theory. Although theoretically hygiene factors can be split from motivational factor, both may be interrelated in practice. Therefore, academic freedom and job security, and job environment are mutually reinforcing and contribute to faculty job satisfaction.

4. Teaching and research activities: moving toward research

Globalization and the emergence of the knowledge economy have pushed universities to focus more on their research than teaching functions. Since the University of Berlin was established in 1810, the modern university has been conducting three main functions − teaching, research, and social service. The weight among these three functions has been assigned differently by different types of institutions. The research-focused university places more emphasis on research while the teaching-focused university weights teaching more. The service function has been conducted at both research and teaching focused universities though it depends on how one defines "social service." However, the relative weight between teaching and research has been moving toward research since the 1990s. Since then, academic productivity has been

considered as the main indicator of institutional competitiveness. Even teaching-focused universities emphasizes research productivity in their faculty hiring and promotion decisions. In addition, financial incentives are given to research productive faculty.

These changes shift faculty preferences towards research because faculty tend to align their preferences with available incentives. Beyond faculty preferences, academics may shift their workloads from teaching to research. These changes contribute to academic productivity at the institution as well as at the individual faculty levels. Previous research (*e.g.*, Porter & Umbach, 2001; Sax, Hagedorn, Arredondo & Dicrisi III, 2002; Shin & Cummings, 2010) has found that faculty preferences has positive effects on their academic productivity as measured by research publication. In addition, their increased time on research is closely associated with their academic productivity (Shin & Cummings, 2010). These findings support the proposition that academics produce more papers when they spend more time on research than teaching or service activities.

Table 4. Faculty preference for teaching *vs*. research (percent), time allocation (percent), and academic productivity (mean), 1992 *vs*. 2008

	Teaching/Research	1992	2008
Preference	Teaching	4.7	3.0
	Both but teaching	45.6	29.0
	Both but research	45.5	61.0
	Research	4.2	7.0
Workloads	Teaching	22.9	21.1
	Research	16.9	18.1
	Service	4.5	4.7
	Administration	4.8	6.0
	Others	3.4	3.3
	Total	52.5	53.2
Academic Productivity	Scholarly books authored	0.46	1.0
	Scholarly books edited	0.3	0.7
	Articles	4.77	10.6
	Research reports	1.52	2.6
	Paper presented at a scholarly conference	2.45	7.6
	Professional article written for newspaper or magazine	1.08	1.1
	Patent secured on a process or invention	0.05	0.7

Notes: workloads is hours *per* week during the semester, while academic productivity is the mean number of outputs over the past three years.

In the 1992 survey, academics reported a balance between teaching (50.3 percent) and research (49.7 percent), but they leaned toward research (68 *vs*. 32 percent) in the 2008 survey. The changes may or may not be a good sign for the university and the larger society. The strong emphasis on research takes faculty time away from class preparation and may result in decreased teaching quality. Although academics may argue that faculty reduce their social and family activities to increase their time to work on research (*e.g*., Harry & Goldner, 1972), the CAP data shows that increased time allocated to research reduced their time on teaching. During the period between the Carnegie and the CAP surveys, faculty time on teaching has been reduced 1.8 hours *per* week and time on research has been increased 1.2 hours *per* week, while faculty workloads have been increased only 0.7 hours *per* week from 52.5 hours to 53.2 hours. The finding implies that academics tend to decrease their time on teaching and increase their time on research in response to the incentives in their job environment.

If academics decrease their teaching preparation to increase their time on research, does it result in decreased teaching quality? The literature does not provide definitive conclusions on this topic. According to the higher education literature, time on research has an impact on academic productivity. However, time on teaching may or may not affect teaching quality (Marsh & Hattie, 2002). Teaching quality may be related to the training in teaching skills or personal preference, but not much to course preparation hours. From that vantage point, increased time on research may or may not affect faculty classroom teaching. However, simultaneous increases in teaching and administration loads lead to a decrease in research hours for Korean academics. As Table 4 shows, Korean academics are spending 1.2 additional hours *per* week on administrative work.

With the increased research emphasis and time allocation to research, the productivity of Korean academics has increased considerably in most areas. Noticeable change has been reported in patents which show a 13-fold increase since the 1992 survey. This may be related to the fact that the Korean government has encouraged academics to apply for patents to support industrial development through technological innovation. The next question is whether increased faculty productivity has positive effects on their teaching quality. Academics tend to perceive that research has positive effects on their classroom teaching. However, empirical evidence does not support that perception. According to quantitative studies, research has near zero association with teaching quality (*e.g*., Feldman, 1987; Friedrich & Michalak Jr., 1983; Hattie &

Marsh, 1996; Marsh & Hattie, 2002); on the other hand, many qualitative studies found that faculty research has positive impact on their classroom teaching (*e.g.*, Durning & Jenkins, 2005; Robertson, 2007). Although the association may differ by faculty career stage, types of research productivity (*e.g.*, articles, book), and level of education (undergraduate and graduate education) (Shin, 2011d), faculty research may not contribute to undergraduate teaching. If research does not contribute to classroom teaching, to what does it contribute? Knowledge can be used for technological development and management skills. The contributions of knowledge production to society have been addressed in various ways. One is the Triple-helix approach which was developed in the late 1990s and applied to analyze the social utility of knowledge production (Etzkowiz & Leydesdorff, 1997). The Triple-helix theory assumes that knowledge produced through collaboration between university-industry-government agencies has more utility to society than the knowledge produced only in university settings. The Triple-helix approach can be broadly applied in analyzing the health of research production in a country. According to a Triple-helix framework, the pattern of research production by Korean academics was less healthy *i.e.* current research is less useful to society in the 1990s and 2000s than in the 1970s (Park & Leydesdorff, 2010).

5. Governance and management

The environmental changes between 1992 and 2008 may affect governance and institutional management. The Korean government has widely deregulated its administration in the 1990s and 2000s. These changes are related to the neo-liberal policy of the Korean government. With the deregulation, a large share of administrative power has devolved to individual universities. This may be an opportunity for institutional leaders to more effectively manage their institution or it may be an unwelcome challenge to them. This section focuses on the changes in governance and management between the two surveys.

Institutional governance may have changed considerably between the two surveys. The new public management has been broadly applied since the mid-1990s when the Korean government adopted the 5.31 Education Reform. The reforms sought to minimize government involvement in higher education institutions and use a quality assurance and accountability framework as the main policy tool to reform higher education institutions. The Korean government began to allocate budgets to higher education institution based on an evaluation of their performance. Among the survey items, academics perceive

that they have lost influence in three areas of institutional governance selecting key administrators, determining overall teaching loads, and setting admission standards. These changes may be related to increased managerialism in the Korean university. The university president tends to have stronger power under the *evaluative states,* under neo-liberal policies, in many countries (Neave, 1998). Performance-based accountability empowers top managers to work efficiently rather than empowering collegiate-based decision making.

Table 5. Percent reporting faculty have primary influence in seven governance areas and percent agreeing or strongly agreeing with statements on institutional management, 1992 *vs.* 2008

	Governance & Management	1992	2008
Institutional Governance	Selecting key administrator	***70***	***83***
	Choosing new faculty	26	22
	Faculty promotion and tenure	43	42
	Establishing budget priority	72	77
	Determining overall teaching load	***18***	***55***
	Setting admission standard	***39***	***59***
	Approving new academic program	46	44
Institutional Management	Top administrators show competent leadership	48	27
	Keep information on what is going on at this institution	48	42
	Lack of faculty involvement is a real problem	***53***	***38***
	Administration support academic freedom	59	50

Among various areas, academics may lose their power those that are "in-between" academic and administrative affairs. University managers may assume increasing influence on in-between affairs in the performance-based accountability regime. As shown in Table 5, the three items on which academics report losing their influence are in between items: "selecting key administrator," "determining overall teaching load," and "setting admission standard." The primary consideration in selecting administrative staff is whether he/she works efficiently rather than whether he/she is recommended by or acceptable to academics. From this perspective, a top-manger might have a better view on these matters than a group of faculty colleagues. It is also not easy to reflect collective opinion in determining the teaching load of an individual professor; rather it is the university authorities who assign appropriate credit hours for their faculty to teach. Admission standards are also difficult to determine based on a compromise between academics because academics tend to be negative toward reform initiatives in admission affairs. In addition,

admission affairs have serious financial implications. Thus, decision making on these in-between items has moved from the faculty collegium to top decision makers in performance-based accountability contexts.

On the other hand, pure administrative affairs and pure academic affairs have not changed much in terms of the locus of decision making power. Academic affairs are still addressed collegially while administrative affairs are addressed by administrators. For example, choosing new faculty, approving new academic program, and faculty promotion and tenure are decided on collegially. On the other hand, budget priorities are determined by administrative decision.

These trends in institutional governance show that decision making power is moving toward top administrators from the faculty collegium. This is occurring not only in Korean higher education. In other Western countries, including those in Europe where faculty collegiality has a strong tradition, faculty power is eroding in the face of emerging academic managerialism. Academics are becoming a functional part of the university rather than an active stakeholder in many countries. Even academics perceive that lack of active participation in university affairs is not a serious problem. Although shared governance is a main feature of modern university governance, it is being eroded (Shin, 2011c). As discussed, however, faculty have maintained control overly purely academic affairs, including appointments and promotion. In the new "managerial" university, top administrators have greater influence in decision making and they are expected to show competent leadership. Surprisingly, however, a lower portion of faculty report that top administrators show competent leadership in 2008 than in 1992. This finding implies that top administrators have stronger influence on their campus, but show less effective leadership than in 1992. What happened during this period? This is difficult to interpret. Shin (2011c) attributed the weak leadership of top-administrators to the voting systems for university president. Many Korean universities, especially national universities, elect their president by direct faculty voting which is quite rare in many advanced countries. The election system has been adopted since the democratization of Korean politics in the late 1980s and early 1990s. Under the direct voting system, the university president may not object to faculty opinion on critical matters. Thus, presidents tend to organize many committees to escape blame from his/her supporters in the election. This is a serious problem in many Korean universities, especially in the national and public universities. As usual, however, the committees produce a compromise among different entities that represent different units (*e.g.*, college or

department). The compromise among committee members may not be satisfactory to most academics. On the other hand, the decision by committee is often not arrived at in a timely fashion. In this context, top administrators tend to miss timely decisions and fail to satisfy their faculty constituencies. Although this interpretation needs more in-depth follow-up research and further elaboration, this appears to be what is occurring at many Korean universities.

Current governance patterns represents a case of *decentralized* centralization in Shin and Harman's term (2009), but such centralized management is not efficient owing to the presidential selection system. The Korean government has initiated many policy initiatives to address this shortcomings since the early 1990s. One policy proposal was to exclude faculty from the voting systems for president and academic deans. However, there were strong objections from academics because they perceive the election as a sign of campus democracy. On the other hand, there is strong social pressure to change the election system. Finally, the Korean government adopted a policy to have deans appointed by the president instead of having them elected by the faculty. The new policy will be implemented beginning in 2012.

Another policy proposal was to incorporate the national university as an independent entity along the lines of the U.S. model. The Korean government has sought to transform university systems from a part of government to an independent entity which is an *incorporated* and *independent* body from government. Although the government aggressively addressed the policy in the mid-2000s, only one new university under the Ministry of Education has been established as an incorporated body. Recently, the Korean National Assembly passed a law to transform Seoul National University into an independent incorporate body in 2012. According to the law, the president of Seoul National University is not elected by faculty voting. Instead, the board of trustees is authorized to appoint university president. These changes may enable presidents to have greater power and to show more competent leadership.

Nevertheless, these policy efforts and policy changes bring with them many challenges. These governance changes empower top administrators and reduce faculty power on campus life. Faculty participation is a critical component of shared governance. Although academics maintain their influences on academic affairs, they are wondering if and when they may lose their influence on academic affairs. Top-administrators may make appropriate and timely decisions without caring much about their former "voters", but they may make less wise decisions without faculty participation. As *checks and balances* are critical to government, they may also be to the university. Under the new

governance system (incorporation of a national university), policymakers should pay attention to the balance between efficiency and academic freedom. Academic freedom should not be compromised in any situation because, as this author would argue, *academic freedom is 99 percent of the university and the remaining 1 percent is also academic freedom.*

With these governance changes, academic managerialism has been broadly expanded to many dimensions of academic life. The Korean government has applied performance-based accountability since the mid-1990s. Korean government allocated 90 percent of its budget based on institutional evaluations in 2008. The performance-based resource allocation approach may ultimately influence resource allocation at the institution level; however, resource allocation at the institution level is currently still based on *head count* of students and faculty. Recently, an aggressive policy was proposed by the Korean government in 2010 – an annual salary contract system. The system is quite a challenge to Korean academics though it is common to the US, the UK, Australia, Hong Kong, Singapore and some other countries. Although Korean academics used to sign a salary contract with their university, the contract is based on their careers (*e.g.*, years of teaching, years of working *etc*.). However, the new contract systems place greater weight on their current academic performance than their previous working careers. These changes have potentially huge impacts on academics. Korean academics are wondering whether these changes may bring severe competition among academics and result in loss of academic values on campus.

6. Concluding remarks

There have been many environmental changes for higher education during last 15 years between the 1992 Carnegie and the 2008 CAP surveys. Academics explain these changes with various expressions such as globalization and the knowledge-based economy, performance-based accountability, new public management, academic capitalism *etc*. These environmental changes have had enormous impacts on higher education and its academics. The changes require academics to respond in a certain way. For example, academics are required to work harder to satisfy social demands, to publish more papers, to educate larger size classes, to use diverse instructional methods in their classroom, and to do better service to their society. These changes may be a sign of increasing competitiveness of university education and may represent increasing educational quality.

One of queries has been how these changes affect academics. The 1992 Carnegie and 2008 CAP surveys enable us to compare faculty life before and after the academic environmental changes of the mid-1990s. This study provided a snapshot of the differences between the two surveys. As expected, this study showed Korean academics preference has moved from a balance between teaching and research toward research; they spend more time on research than teaching; they publish more than twice as many books and articles as they did; and they are losing their influence on campus-wide decision making. These environmental changes may lead to reduced academic job satisfaction.

Surprisingly, however, Korean academics feel satisfied with their current job. Among the 19 countries that participated in the 2008 CAP survey, job satisfaction of Korean academics is the second highest after Mexican academics. What makes Korean academics satisfied with their current job? This may or may not be related to their physical working environments (*e.g*., new building, computer equipment, lab, personnel supports, salary *etc*.). Alternatively, Korean academics may be satisfied with their job security and the social status of academics in Confucian culture. Presumably, these all together affect their job satisfaction. That job satisfaction should be further studied in the future.

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The Internationalization of Universities in South Korea: Networking strategies and research performance

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1. Introduction

Most universities in South Korea are being pressured by stakeholders to become international and global universities. Indeed, Korean universities now widely use words and phrases related to internationalization, such as international, global, world class, leading the world and top of the world, in their university strategy and vision statements. Moreover, there are many programs and projects for internationalization of higher education institutions not only at the institutional level but also at the national level such as "Brain Korea 21", "Study Korea", and "Humanities Korea".

Now more than ever, internationalization means improving academic quality and the position of universities in the world rankings because "internationalization" is one factor used to evaluate universities. When it was originally introduced by the "Study Korea project" in 2004, the internationalization strategy focused more on mobility of students and faculty. The government and universities sought to recruit foreign students and faculty to enhance the international competitiveness of universities and generate tuition revenues. However, the scope of internationalization has been enlarged from personal mobility to academic exchange. Personal mobility is the mobility of faculty and students through exchange programs, recruitment, and training programs. Academic exchange promotes international collaboration and

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cooperation in research through joint research projects, systems for collaboration, international seminars and conferences and partnerships between universities. Insofar as a cooperative climate and collaborative work enhance research productivity (Shin & Cummings, 2010; Smeby & Try, 2005), international collaboration is one critical factors in research performance. Increasing international higher education consortia and various networking strategies have been established as processes of globalization (Beerkens & Derwende, 2007).

Despite the increased interest in the internationalization of higher education institutions, relatively few studies have focused on the effects of internationalization strategies. Previous studies have attempted to define the concept of internationalization (Hayden & Thompson, 1995; Knight, 2003; Van der Wend, 1997; Yang, 2002) and to analyze strategies of internationalization at the national and institutional level (De Wit, 1995; Douglass, 2005; Knight, 2004; Rudzki, 1995).

This research led us to explore the effects of internationalization strategies on international collaboration and research performance. In particular, internationalization strategies focus on networking strategies at an institutional level and departmental level. Since Knight (2004) discerned that the "real process" of internationalization is actually taking place in institutions, it is important to examine networking strategies *within* as well as between universities.

In this study, the goal is to analyze how individual and institutional characteristics affect international collaboration patterns and research performance and to evaluate the impacts of networking strategies on research collaboration and research performance at the institutional and departmental levels.

2. Literature

The literature review is organized into three sections. First, we overview definitions of internationalization and distinguish between internationalization and the related concept of globalization. Second, we discuss approaches to internationalization focusing on strategies for internationalization in higher education institutions. Third, the determinants and measures of research performance are reviewed.

2.1 Definition of internationalization

There exist different definitions of internationalization of higher education

is taking place in different nations, and involving different stakeholders and levels (Kehm, 2003; Knight, 2005). Knight (1994) described internationalization as the "process of integrating an international or intercultural dimension into the teaching, research and service functions of the institutions"; and Arum and Van de Water (1992) defined the internationalization of higher education as many activities, programs and services including international learning, interchange of curriculum and alliances of technology. Definitions of internationalization are broadly divided into two types: some definitions are related to institutional responses to a specific phenomenon and other are more specifically related to border crossing activity. First, internationalization is the systematic effort by which an institution responds to demands and challenges for social change such as globalization (UNESCO, 2004; Van der Wende, 1997). Second, internationalization is activities to cooperate and develop international views by crossing borders and boundaries of nations and societies.

To understand different views and definitions of internationalization, it is important to distinguish between internationalization and globalization. Researchers and administrators frequently use internationalization and globalization interchangeably. However, several researchers think globalization and internationalization are distinctive, albeit related, concepts. Internationalization is defined as activities to cross borders as an institutional level response, but globalization is a tendency towards the blurring of borders and is a macro phenomenon. Therefore, globalization is a *status quo* that is never affected by influences from institutions and an external process that has all-inclusive, social, and economical characteristics (Van de Wende, 1997). Moreover, globalization is blurring the boundaries between nations, even eliminating the borders, and emphasizes the processes of economic integration (Friedman & Ramonet, 1999; Teichler, 2004).

In this study, internationalization is defined as the internal efforts and activities of higher education institutions such as exchange and cooperation responses to the phenomenon of globalization.

2.2 Strategies for internationalization

Researchers have proposed a variety of strategies for internationalization. Knight (2004) suggested four institutional-level programs and organizational strategies: academic programs, governance, research and scholarly collaboration, and operations. Harman (2005) suggested that internationalization is a combination of activities which include the movement of students, the movement of academic staff and researchers, the exchange of higher education

curricula, and links between nations. In addition, Rudzki (1995) identified the factors critical to successful internationalization as: favorable staff attitudes, having the active support of senior management, having staff with a specific international agenda, having staff who are fluent in foreign languages, availability of additional funds internally, having good partner institutions, having staff development focused on internationalization, access to information on good practice, having staff experienced in teaching overseas, and remission from teaching.

Networking is one of the key strategies for internationalization in tertiary education institutions (Douglass, 2005; Knight, 2004; de Wit, Jaramillo, Gacel-Ávila & Knight, 2005; Rudzki, 1995) when the core concept of internationalization is cooperation. Cooperation between universities is set up to gain access to various resources such as research facilities, library collections, educational resources, human resources, or reputation and prestige in terms of the resource-based view (Beerkens & Derwende, 2007). Networking strategies are divided into individual level, department level, institution level, sector level and national level (Sanderson, 2008; Katz & Martin, 1997).

2.3 Research performance

Research is one of the primary duties of faculties in universities; and research performance is getting increased attention from policy makers and heads of higher education institutions as a criterion for faculty evaluation and recruitment. Therefore, indicators of research performance need to reveal accurately the amount and quality of research for a proper evaluation (Print & Hattie, 1997). Research performance usually includes published books and journal articles, patents, presentations at conferences, and so on (Yuker, 1974). Among the available indicators, the number of articles included in Science Citation Index (SCI), Social Science Citation Index (SSCI), Art and Humanities Citation Index (A&HCI), and SCOPUS have been used for the quantitative analysis of research performance.

The dynamic processes that generate research productivity are also emphasized as well as the quantity and quality of publications. Productivity is typically viewed as stemming – at least in the natural and social sciences – from interactions based on the collaboration among researchers. Researchers affect each other socially and interact intellectually to discover new academic knowledge through working in collaboration (Edge, 1979; Katz & Martin, 1997; Stokes & Hartley, 1989). Therefore, beyond the number of articles published in international journals, the documentation of research collaboration is also

important to represent research performance.

In research performance, many studies have reported that individual factors – age, gender, academic training, family situation, *etc*. – have an effect on faculty research (Horta, 2009; Over, 1982; Sax, Hagedorn, Arredondo & Dicrisi, 2002; Stack, 2004). Not only individual factors but also organizational contexts affect faculty research productivity. Faculty research productivity is positively related to the reputation of higher education institutions (Porter & Toutkoushian, 2006) and their mission (Rerry, Clifton, Menec, Struthers & Menges, 2000; Shin & Cummings, 2010). On top of that, a cooperative climate and collaborative work have impacts on research performance. The climate of cooperation at the departmental level has a positive impact on research performance and international collaboration is a critical factor in predicting research performance even though domestic collaboration does not have significant effects (Shin & Cummings, 2010; Smeby & Try, 2005).

3. Internationalization of higher education

The status of internationalization in higher education is examined focusing on personal mobility owing to the limitations imposed by available statistics.

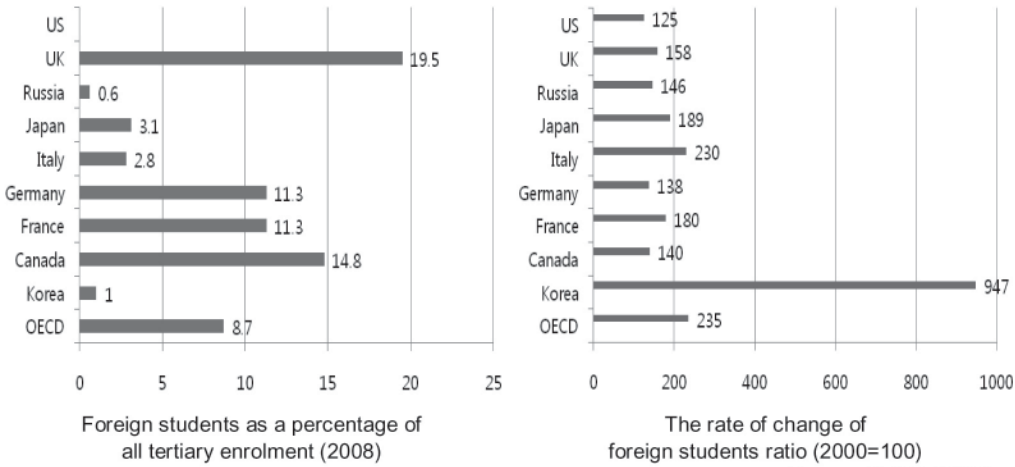
3.1 Foreign students in higher education

The status of foreign students in Korean higher education compared to the G8 countries is shown in Figure 1. The mean proportion of foreign students as a percentage of all tertiary enrollments is 8.7 percent for all OECD countries, with the UK (19.5 percent) highest, followed by Canada (14.8 percent), France (11.3 percent), Germany (11.3 percent), and others. In South Korea's case, foreign students constitute only 1.0 percent of all tertiary enrollment – significantly less than the OECD average, but the rate of change of foreign student ratio is the highest among the OECD countries (KEDI, 2009). This shows that internationalization in South Korea is advancing rapidly.

Figure 2 shows the number of foreign students in higher education in South Korea by year since 2001. After 2005-2006, the number of foreign students in South Korea increases rapidly. This growth is related to the policy of the government and efforts of universities to attract foreign students after 2000. The Korean government set up the 'Study Korea Project' in 2004 to enhance international competitiveness of universities and correct the imbalance of international payments.

Table 1 shows the distribution of foreign students in Korean higher

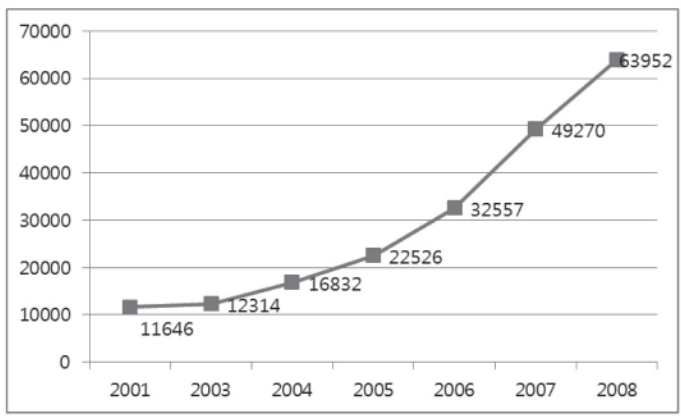
education by country of origin. About three-fifths of foreign students in South Korea are from China, with East Asian students constituting the majority of foreign students.



Source: KEDI (2009)

Note: change index is estimated by the proportion of the number of foreign students based on the number of foreign students in 2000

Figure 1. Foreign students as a percentage of all tertiary enrolment and change index



Source: KEDI (2009) *Education Statistics Analysis 2009*.

Figure 2. The number of foreign students in higher education in South Korea

Table 1. Foreign students in Korean higher education by country of origin (2005)

	China	Japan	US	Taiwan	Vietnam	Mongolia	others	total
Number of students	13,091	2,789	982	827	705	510	3,712	22,526
%	58.1%	12.4%	4.0%	3.7%	3.1%	2.3%	16.4%	100%

Source: MEST (2006) *Study Korea Project*.

3.2 Citizens studying abroad in higher education

The number of citizens studying abroad in G8 countries is shown in Table 2. About three-fifths of students studying abroad are studying in the U.S., followed by Japan (20.6 percent) Germany (4.9 percent), U.K. (4.0 percent), and other. In another analysis examining the distributions of foreign students in U.S. higher education in 2003 (MEST, 2006), India constitutes the highest proportion (12.7 percent), followed by China (11.0 percent), and Korea is the third highest (8.8 percent).

Table 2. Citizens studying abroad in higher education by country of destination (2007)

	OECD (G8)								Total partner country destinations	Total all reporting destinations
	Canada	France	Germany	Italy	Japan	UK	US	Total OECD destinations		
OECD	3.0	5.8	12.2	1.8	3.2	16.5	24.4	96.4	3.6	100
Korea	0.7	2.3	4.9	0.3	20.6	4.0	59.5	98.7	1.3	100

Source: KEDI (2009); OECD (2009)

4. Method

4.1 Data

The data for this study is drawn from the Korean Changing Academic Professions (CAP) survey − an international comparative study on academic professions. The population in this study was 52,763 full-time faculty members affiliated with 4-year universities in South Korea. The data was collected through an on-line survey to which 900 faculty members responded. The sample is broadly representative of the population of Korean professors by discipline, gender, faculty rank, and institutional type. The data for type of university, including mission and location is drawn from Korean Educational

Development Institute (KEDI) and Ministry of Education, Science, & Technology (MEST).

4.2 Variables and analytical strategy

This study explores the effect of networking strategies on international research performance. The independent and dependent variables in this study are listed in Table 3. The independent variables were divided into the characteristics of faculty members and of universities, and international networking strategies. The characteristics of faculty members were gender, age, rank, and discipline. Rank of the faculty was divided into senior rank, and junior rank. Discipline was divided into hard and soft disciplines according to Braxton and Hargens (1996). The characteristics of universities were type, location, and mission. The mission of universities was divided into research-intensive universities and teaching-intensive universities. This classification was followed by Shin (2008). International networking strategies were divided into department networks and university networks – *i.e.* according to the level. The department network was defined to include relations with the same department in foreign universities, and the university network was defined to include various international exchange programs at the university level. The dependent variables are collaboration with international colleagues and research productivity, such as number of articles in journals covered by SCI· SSCI· A&HCI.

Table 3. Independent and dependent variables

Variables			Measurement
Independent variables	The characteristics of faculty members	Gender	Male=1, Female=0
		Age	2008 – birth year
		Rank	Senior rank=1, Junior rank=0
		Discipline	Hard discipline=1, Soft discipline=0
	The characteristics of universities	Type of Univ.	Private=1, Public=0
		Location of Univ.	The capital and its environs=1, others=0
		Mission of Univ.	Research univ.=1, Teaching univ.=0
	Networking Strategies	Department level	Yes=1, No=0
		University level	Yes=1, No=0
Dependent variables	Research performance	Collaboration	Collaboration with international colleagues (Yes =1, No=0)
		Publication	Number of SCI·SSCI·AHCI articles (2005-2007)

To examine the differences in research performance associated with the characteristics of universities, Chi-square analysis and t-test analysis were used, and to analyze the effect of international networking strategies, regression analysis was used in this study. To be more specific, as the dependent variable of collaboration is a binary variable, logistic regression analysis was used. The dependent variable of SCI· SSCI· A&HCI articles is a count variable. Hence this study applied zero-inflated negative binominal regression analysis to examine the effect on research performance. STATA 10.0 tools were used to conduct these statistical analyses.

4.3 Framework and hypothesis

The framework for this study considered how the characteristics of faculties and universities, and international networking strategies affect collaboration with international colleagues, and research performance. This study focused on the effect of networking strategies along the dimensions of the department and the university.

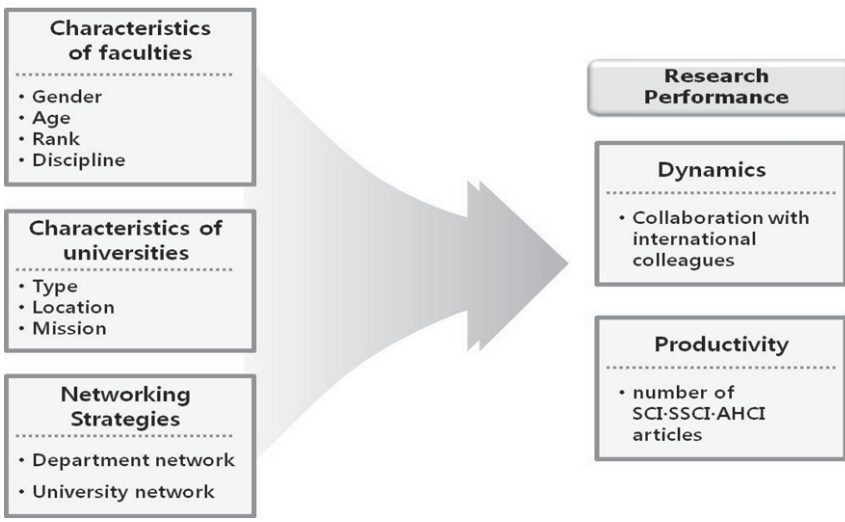


Figure 3. Framework of this study

The research hypotheses examined in this study are as follows:

(1) The senior faculty will generate higher international research productivity and greater collaboration with foreign colleagues.

(2) International research performance will vary according to the

characteristics of universities. Private or research-intensive universities will have a higher standard of international research performance. Universities in the capital and its environs will show higher international research performance.

(3) Employment of networking strategies will be associated with greater collaboration with foreign colleagues and higher international research productivity.

(4) The effect of department networks on international research performance is more significant than the effect of university networks.

5. Findings and discussions

5.1 Descriptive statistics

Table 4 provides basic descriptive statistics for the sample on the study variables.

For the characteristics of faculties investigated, the sample included 734 males (81.6 percent), and 166 females (18.4 percent). The mean of age is approximately 48 years old. Sixty-three percent of the sample are in senior rank, while 36.4 percent are in junior rank or other position. Forty-six percent of the sample are in hard disciplines, while 53.6 percent are in soft disciplines. The faculty sample included N=373 in private universities (41.5 percent), and 527 in public universities (58.5 percent). Forty-five percent of the sample is in the capital and its environs, while 54.8 percent are not in the capital and its environs. The faculty sample included 328 in research-intensive universities (36.5 percent), and 572 in teaching-intensive universities (63.5 percent).

Regarding having explicit networking strategies, the number involved in department networks is 391 (43.4 percent), while the number involved in various international exchange programs at the university level is 694 (77.1 percent). This indicates that department networks are less vigorous than university networks.

Twenty-nine percent of respondents reported collaborating with international colleagues for the last year (N=262) while almost three-fifths of the sample reported no collaboration with foreign colleagues.

The mean numbers of SCI·SSCI·A&HCI articles published in the past three years (2005-2007) is 3.72, while the proportion of respondents who have not published in international journals is 54.8 percent (N=494). It is surmised that because of language differences, and because the research in soft disciplines is based in a social context, it is more difficult to publish in international journals.

Table 4. Descriptive statistics

Binary Variables				No (%)
Independent	The characteristics of faculties	Gender	Male	734 (81.6)
			Female	166 (18.4)
		Rank	Senior	572 (63.6)
			Junior	328 (36.4)
		Discipline	Hard	418 (46.4)
			Soft	482 (53.6)
	The characteristics of universities	Type of universities	Private	373 (41.5)
			Public	527 (58.5)
		Location of universities	The capital	406 (45.2)
			Others	494 (54.8)
		Mission of universities	Research	328 (36.5)
			Teaching	572 (63.5)
	Networking strategies	Department level	Yes	391 (43.4)
			No	506 (56.2)
		University level	Yes	694 (77.1)
			No	201 (22.3)
Dependent	Research performance	Collaboration	Yes	262 (29.1)
			No	638 (70.9)

Continuous Variables			Mean	Std. Dev	Min	Max
Independent	The characteristics of faculties	Age	48.09	7.13	32	74
Dependent	Research performance	Publication	3.72	7.86	0	90

5.2 Characteristics of universities and research performance

Chi-square analysis was employed to examine the differences in collaboration with international colleagues according to characteristics of the universities. The results of Chi-square analysis showed a statistically significant difference in collaboration with international colleagues associated with the location and mission of the universities. It was found that collaboration with international colleagues was higher in research-intensive universities and in universities located in the capital and its environs.

This study employed t-test to test for the statistical significance of differences in research productivity – a continuous variable – according to characteristics of the universities. Only the mission of universities was statistically significant ($p<0.001$). The mean number of SCI·SSCI·A&HCI articles was 6 in research-intensive universities, and 2 in teaching-intensive universities.

Table 5. Analysis of universities' characteristics and research performance

		Type		Area		Mission		Discipline	
		Public	Private	Capital	Others	Research	Education	Hard	Soft
Collaboration (n)	Yes	119 (32%)	143 (27%)	139 (34%)	123 (25%)	119 (36%)	143 (25%)	123 (29%)	139 (29%)
	No	254 (68%)	384 (73%)	267 (66%)	371 (75%)	209 (64%)	429 (75%)	295 (71%)	343 (71%)
Total (n)		373	527	406	494	328	572	418	482
Chi-square		2.41		9.42**		12.85***		0.04	
Research performance (average)		4	3	4	3	6	2	4	3

**p<0.01, ***p<0.001

5.3 Networking strategies and collaboration with international colleagues

Logistic regression analysis was employed to examine the effect of networking strategies on collaboration with international colleagues. Table 6 summarizes the results of the logistic regression analysis. The model fit for this study was statistically significant ($p<0.001$).

Age and rank among the characteristics of faculty members were statistically significantly ($p<0.01$) associated with collaboration with international colleagues. Younger faculty members and senior rank faculty members were positively associated with the likelihood of collaboration with international colleagues. Location and type among the characteristics examined of universities were statistically significantly ($p<0.05$) associated with collaboration with international colleagues. Universities in the capital and its environs and research-intensive universities were positively associated with the likelihood of collaboration with international colleagues. Public universities were more active in such collaboration than private universities.

Regarding the examined effect of networking strategies, department networking was positively related to the likelihood of collaboration with international colleagues (OR=1.45, $p<0.05$). However university networking was not statistically associated with likelihood of collaboration with international colleagues. In general, the effect of networking strategies is small, but it is statistically significant that the more that a department network is established, the more likely is collaboration with foreign colleagues. Thus the findings suggest that networking strategies at a department level are more important than at a university level to promote collaborative relations between academics. As

the perspectives of internationalization are enlarged from personal mobility to academic exchange, networking strategies at the department level are more critical.

Table 6. Networking strategies and collaboration with international colleagues

Variables		Odds Ratio	Std. Err	P>|z|
The characteristics of faculties	Gender	0.99	0.19	0.954
	Age	0.96	0.01	0.004**
	Rank	1.64	0.33	0.015*
	Discipline	1.05	0.16	0.727
The characteristics of universities	Type of universities	0.72	0.12	0.040*
	Location of universities	1.43	0.25	0.039*
	Mission of universities	1.30	0.22	0.125
Networking Strategies	Department level	1.45	0.23	0.021*
	University level	0.85	0.16	0.392
Log likelihood		-520.22		
LR chi2(9)		34.36		
N		892		

* p<0.05, **p<0.01, ***p<0.001

5.4 Networking strategies and research productivity

Zero-inflated negative binominal regression analysis was used to analyze the effect of networking strategies on research performance according to the count variable. Table 7 presents the results of the regression analysis. Model fit for this study was statistically significant ($p<0.001$).

In terms of age, younger age was positively associated with international research productivity. And senior rank increased the likelihood of more international research productivity.

Only mission among the university characteristics examined was a statistically significant ($p<0.01$) predictor of research productivity. Research-intensive universities increased the likelihood of faculty research productivity. It is hypothesized this is because research-intensive universities emphasize the research productivity in the university vision, the faculty evaluation system, and so on.

Department networks had positive effects on research performance ($p<0.05$). However, university networks were negatively associated with research productivity ($p<0.05$). The reason suggested is that most universities try to expand various international exchange programs in terms of personal mobility.

These results suggest that universities should also try to push ahead with various international exchange programs in terms of academic exchanges to enhance international research productivity.

Table 7. Networking strategies and research productivity

Variables		Coef	Std. Err	P>|z|
The characteristics of faculties	Gender	-.00	.17	.999
	Age	-.05	.01	.001**
	Rank	.45	.18	.013*
	Discipline	.14	.13	.276
The characteristics of universities	Type of universities	-.17	.14	.215
	Location of universities	-.16	.15	.267
	Mission of universities	.47	.15	.002**
Networking Strategies	Department level	.30	.14	.029*
	University level	-.37	.16	.022*
Log likelihood		-1786.341		
LR chi2(9)		32.74		
N		892		

* p<0.05, **p<0.01, ***p<0.001

6. Concluding remarks

International student mobility continues to grow rapidly, and government and university authorities seek to attract foreign students and faculty members. Most universities try to enhance their research performance and raise their worldwide ranking in the competitive environment of globalization. As the context of internationalization has changed from quantitative enlargement (*i.e.* massification) to qualitative distinction, various networking strategies to support internationalization become more crucial. Therefore this study investigated the status of internationalization in tertiary education and examined the relationship of international networking strategies to faculty research performance.

The results of this study are as follows:

According to the descriptive statistics, internationalization in South Korea is advancing rapidly. While the proportion of foreign students in all of Korea's tertiary enrollment appears small – 1.0 percent compared to the mean of 8.7 percent among OECD countries – the number of foreign students in South Korea

grew rapidly from 11,646 in 2001 to 63,952 in 2008. It is suggested that the Korean government's consistent efforts to attract foreign students to enhance the international competitiveness of universities is largely responsible for the recent dramatic increase. However, most of the foreign students in South Korea come from East Asia, and the distribution of countries of origin of students has a limited range.

Second, this study analyzed the effect of networking strategies on collaboration with international colleagues. Networking strategies examined in this study were divided into department networks and university networks according to their level. The results showed that universities in the capital and its environs; and public universities were positively associated with the likelihood of collaboration with international colleagues. In terms of the characteristics of faculty members, younger faculty members and senior ranked faculty members were positively associated with the likelihood of collaboration with international colleagues. Department networks were positively related to the likelihood of collaboration with international colleagues, but university networks were not. It appears that social and spatial proximity encourages collaboration since it tends to generate more formal and informal communication (Katz & Martin, 1997).

Third, this study examined the effect of networking strategies on research productivity such as numbers of SCI· SSCI· A&HCI articles. From these results, it was found that only the mission of universities among the characteristics examined of universities and age and rank among the characteristics of faculty members were statistically significant. In terms of networking strategies, department networks had positive effects on research productivity, but university networks were negatively associated with research productivity.

The findings of this study indicate that networking strategies at the department level are more important than at the university level to promote relations between academics and to enhance their research performance. Meanwhile university authorities have tried to expand personal mobility and attract foreign students and faculty members in order to increase the enrollment of students and raise their worldwide ranking. However, serious competition to attract foreign students causes side effects. For example, problems have arisen with foreign students who have not fulfilled requirements of their scholastic course (Ahn, 2009). This study suggests the government and university authorities should pay attention to the exchange of academics (in contradistinction to personal mobility) to improve research performance and to

strengthen the competitiveness of universities as well as to the mobility of foreign students.

Moreover, university authorities should establish international networking strategies based at the departmental level to encourage international cultural exchange, to contribute to the improvement of teaching and research, and to facilitate human resource development. As Knight (2004) remarked, the "real process" of internationalization is actually taking place in institutions; it is emphasized that the various networking strategies within institutions are key factors in enhancing international research performance and promoting international collaboration.

In conclusion, internationalization does not mean just personal mobility. When internationalization is a focus of the internal efforts and activities of higher education institutions and exchange and cooperation are responses to the phenomenon of globalization, the importance of networking, communication and collaboration is emphasized.

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The Changing Taiwanese Academic Profession: From regulation to supervision

Hsiou-Hsia Tai* and Chia-Yu Chen**

Introduction

This paper argues that the governance of higher education in Taiwan has shifted from a government *regulation* type to a government *supervision* model, with resulting pressures on the Taiwanese academic profession from widening participation, a call for internationalization, salary incentives, and increasing demands for individual accountability. The government's role becomes more critical than ever in this supervision model.

Taiwanese universities hardly functioned as agents of social and economic change until the abolishment of Martial Law in 1987. Indeed, academia preferred stability to change. Before the mid-1990s, the entire education system in Taiwan was under centralized control of the government. Yet, the higher education has gone through dramatic changes in the past two decades because of political and economic liberalization. Notable policy changes include (1) diminishing state subsidies for the sector and the modification of its funding mechanism, (2) growing demands for accountability from colleges and universities, (3) strengthening linkages between universities and industry, (4) promoting stronger ties with the international academic community, (5) pursuing prestige in worldwide rankings, and (6) the shifting in state controls from regulation to supervision.[1]

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[1] The impetus for the transition from a regulation to a supervision model in this paper is a set of social and political changes which took place in the mid-1990s, in response to public demands for greater access to higher education. Moreover, the Amendment of the University Act announced in 1994 granted institutions and faculty more autonomy. Therefore, we argue

To improve the quality of university education, the Taiwanese government has launched a series of major higher education initiatives since 2000. These projects came with large government investments, a rarity in the history of the higher education. Accordingly, the Ministry of Education (MOE), attached a long list of conditions to the receipt of grants, composed of plans to improve university governance, institutional infrastructure, and accountability in teaching and research.

Contextual factors affecting the academic profession

Widening participation

Proceeding from a long tradition of "credentialism" and demands for economic development, higher education in Taiwan underwent three stages of expansion. From the supply perspective, Figure 1 shows a linear increase in the number of institutions since 1987. The first, and larger, expansion phase began in 1987 and ended in 2001, with 49 new institutions established. During the second phase, 2002 to 2010, the growth in the number of institutions has slowed down slightly. Currently, there are 164 higher education institutions, including military and police academies (MOE, 2010a). In fact, the increased provision of higher education achieved the goals such as "widely establishing higher education institutions" and "widening the pathway to higher education" called for in the "410 Demonstration for Education Deregulation" by the public in 1994.

From the demand perspective student enrollment in higher education has tripled during the same period from about 400 thousand to more than 1.3 million as shown in Figure 2. Some characteristics of the growing participation rate are noteworthy. First, the growth of student participation from 1987 to 2010 is mainly accounted for by undergraduate students. The growth of undergraduate students was especially strong during the period from 1978 to 1997 and from 1997 to 2005 with average annual growth rates of 6.42 percent and 14.81 percent, respectively. However, the average growth rate of undergraduate enrollment declined to 3.98 percent during the period 2003 to 2010. Total student enrollment (including graduate students) reached 1 million in the academic year 1999-2000 for the first time and exceeded 1.3 million in the academic year

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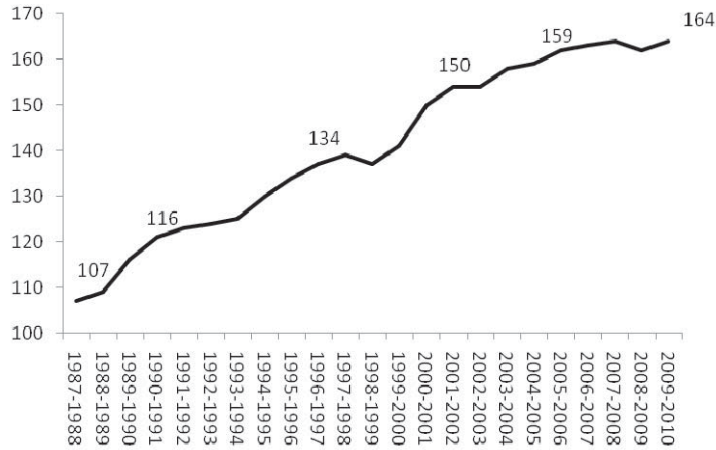
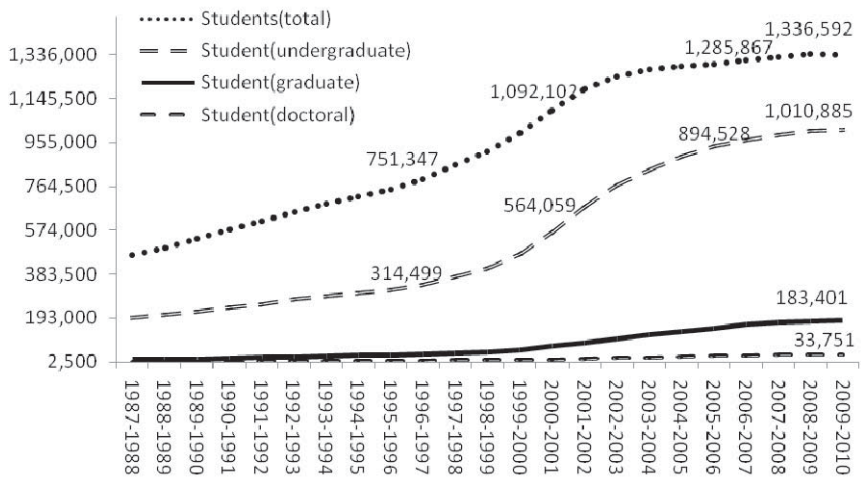
that government control of academia gradually shifted since the mid-1990s from a more rigid regulation model to a more flexible model based on accountability for performance, what we have referred to as the supervision model.

2006-2007. Second, the enrollment growth rate turned negative for the first time in academic year 2009 to 2010. The number of full students decreased by 863, after taking undergraduate, master and doctorate levels into account. Third, both graduate and doctoral student enrollment grew substantially since academic year 1999 to 2000 – 28 percent and 13 percent, respectively – actually exceeding the growth rate for undergraduate enrollment from 1999 to 2010.



Source: MOE (2010a)

Figure 1. Growth of higher education institutions in Taiwan (1987-2010)



Source: MOE (2010a)

Figure 2. Trends in student enrollment (1987-2010)

The quantity of institutions and student enrollment reached their peak in recent years because of several policies in the 1990s responding to social demands for higher education opportunity. However, the crisis of low birth rates, which has been ongoing since 1984, started to strike the higher education system in recent years. The declining population of potential students notably influences the higher education market and the academic professions.

Internationalisation

For decades, Taiwan has been one of the top nations sending students abroad; primarily to the United States. For example, in 2009, there were 33,339 students studying abroad, of which 15,594 (47 percent) were in the U.S. However, at the same time, the number of international students studying in Taiwan, has been relatively low, only 19,376 for 2009 (MOE, 2010b).

The Ministry of Education in Taiwan now faces the challenges of globalization and feels pressured to promote the internationalization of higher education at the institution level to extensively boost integration with the global academic mainstream. The pressure to internationalize higher education is partly due to Taiwan's entry into the World Trade Organization (WTO) in 2001 and the subsequent General Agreements on Trade and Services (GATS), in which the Taiwanese government agreed to open the higher education market to foreign trade partners. These agreements alarmed the MOE. It was necessary to aggressively compel colleges and universities to become more internationalized, as local higher education institutions could face serious challenges from foreign universities once the latter begin to recruit Taiwanese students through various cross-border activities permitted by GATS. It is believed that foreign competition will exacerbate existing problem of the higher education in Taiwan, such as the shrinking pool of local students. In response to the potential problem, the MOE has attempted to explore various options such as recruiting university students from other countries.

As global competition among universities becomes evident and the Taiwan government continues to perceive university competitiveness as a crucial contributing factor to the country's economic prosperity, the MOE has realized the importance of elevating the overall performance of Taiwanese universities in the international academic community. The level of internationalization, therefore, is regarded as one of the decisive features in a university's ability to compete, and this in turn translates directly into the country's future productivity.

Quest for academic excellence

The pressure to establish world class universities in Taiwan is attributable to two factors: (1) the rapid expansion of the higher education sector since the mid-1980s, which has raised a series of concerns about the scarcity of resources available to individual universities and students; and (2) the fact that rising investment in top universities in other countries, such as Singapore and Korea, has been perceived by the Taiwanese government as a potential threat to the country's competitiveness in the long run.

The state is alarmed by the recent decline in universities' average *per* student spending as a consequence of substantial expansion in higher education. It is particularly concerned given that neighboring countries such as Japan, Korea and China have launched significant projects which invest heavily in higher education.

The MOE therefore perceived the need to introduce large competitive grants in order to encourage excellence and diversified development among higher education institutions. It should be noted that the state's quest for world-class universities became even more definite after 2003 when the Macro Planning Committee presented its final report on the prospects of Taiwanese higher education. The Macro Planning Committee was an *ad hoc* committee organised in 2001 by the Executive Yuan, the top executive branch of the country's central government, to conduct an overall review of Taiwan's higher education development. It had seven members which included prominent figures in the country, current and former university presidents, an entrepreneur, an academician from the Academic Sinica, and a university professor. All committee members had either studied and/or worked overseas and most did so in the U.S. In their report, they suggested that Taiwan higher education focus on diversifying its universities' missions and goals, promote university autonomy, develop technological integration and innovation, elevate the quality of elite and overall education, establish world class universities, and underscore professional and general education.

Rigid salary scheme

In principle, economic theory suggests that all individuals should be paid based on their performance (Cohn, 1996). For teachers, basing salary differentials on subject-matter area may serve to reduce some shortages in key disciplines (Kershaw & McKean, 1962), and balance the supply and demand of the teachers. Compared to the merit based remuneration scheme in other countries, the faculty remuneration system in Taiwan is rigid and does not

differentiate among teachers in various disciplines.

The Ministry of Education in Taiwan is the authority for salary allocation for all teachers, including faculty members in public universities and colleges. Three pieces of legislations are regarded as the legal basis for teachers' salaries. These three pieces of legislations stipulate that a teacher's salary is determined by his or her educational level and official working experience in schools and institutions. The salary of teachers working in public institutions and schools is distributed based on three components: the salary rank, salary ladder, and job title (see Table 1). The salary rank denotes the hierarchy of teacher's salary and ranges from #1 to #26. The salary ladder labelled with a three-digit-number refers to the amount of money a teacher shall earn, although nowadays the numerical amount on the ladder no longer represents the real amount a teacher earns. Currently, each level on the salary ladder can be transformed to a specific amount of monetary compensation through mathematical computation. Typically, an assistant professor will earn the salary at level 310 or 330 on the ladder when he or she is initially employed as full-time faculty in the institution. His or her salary level will rise by 1 level each year automatically up to the maximum level of 650, after being employed for 15 years. Likewise, a professor's salary begins at level 475, and is assumed to reach the top of the salary ladder at level 770 after being promoted to the status of full professor for twelve years.

It is recognized that the monthly salary for faculty members in the public education system in Taiwan is composed of two types of salaries: basic pay and academic research pay. These two salaries are allocated according to their standing points on the salary ladder.

What is remarkable about the salary structure for faculty members is that the overall range in salary is slight. For instance, the difference in highest salary received by a professor and an associate professor only equals to 11 percent of an associate professor's salary. Likewise, the salary difference between an associate professor and an assistant professor is just 10 percent of an assistant professor's monthly compensation. This tendency can also be found in professors who have same job titles. The salary change coming from teaching years of service is 14.9 percent for professors, 23.2 percent for associate professors, and 27.4 percent for assistant professors. It is apparent that such a salary structure doesn't serve as a strong incentive for faculty members to pursue higher academic achievement. Furthermore, a faculty could possibly take advantage of the salary system by putting the least effort on research and teaching since the salary structure is seniority-based rather than

performance-based.

Due to the lack of flexibility and competitive incentive embedded in the salary scheme, (and other possible individual reasons), there has emerged a recent trend of faculty crossing nations. For example, three distinguished scholars left their tenured positions and took new positions in other institutions in Asia in 2006. As neighboring nations such as Japan, Korea, China, and Singapore recruit research talent with attractive salaries and benefits, the issues of potential brain drain needs to be taken into consideration more seriously.

Table 1. Teacher's salary ladder in public educational institution in Taiwan

Salary Rank	Salary Ladder	Job Title				
	770	Professor				
	740					
	710		Associate Professor			
#1	680					
#2	650			Assistant Professor		
#3	625					
#4	600					
#5	575					
#6	550					*with PhD degree
#7	525					
#8	500					*with master degree
#9	475					
#10	450				Instructor	Teacher at primary, middle, and high schools *with bachelor degree
#11	430					
#12	410					
#13	390					
#14	370					
#15	350					
#16	330					
#17	310					
#18	290					
#19	275					
#20	260					
#21	245					
#22	230					
#23	220					
#24	210					
#25	200					
#26	190					

Resource: Law and Regulations Database of the Taiwan.
Retrieved and summarized on Oct. 20, 2010 from
http://edu.law.moe.gov.tw/LawContentDetails.aspx?id=FL008489&KeyWordHL=&StyleType=1

Responding policy initiatives

Excellence-oriented competitive funding for research and teaching

Based on the recommendation of the Higher Education Macro Planning Committee, "The Project for Developing First-class Universities" was introduced as part of the Ten New Major Construction Projects plan[2]. The Construction Projects plan was budgeted at NT$948 billion (approximately US$29 billion) over five years, aiming to improve major infrastructures in higher education, culture, transportation, technology, and water resources. Seeing colleges and universities as a major agency to cultivate first-class talent and strengthen innovative research and development, the government generously allocated NT$50 billion (US$1.6 billion) to the project over five years on top of its regular allocation to the higher education sector.

Owing to the unprecedented large sum ascribed to it, the Project became one of the most eye-catching available to universities. Often nicknamed the "Five-Years-50-Billion Project," the project aims to establish first-class universities and top research centers. To be specific, the government hopes to have at least 15 program areas or cross-university research centers ranking first in Asia within five years and at least one university ranking among the world's top 100 within ten years. The major strategies to develop first-class universities included fortifying university management, elevating the effectiveness of teaching and research resources, integrating human resources, merging into an "appropriate" scale in terms of size, *etc*. Accordingly, the MOE invested efforts to improving university governance, institutional infrastructure, and accountability in teaching and research (Song & Tai, 2007). In the end, 12 universities were selected out of the 49 applicants in 2006, and 11 of the 12 universities were re-selected for the second-stage of the project in 2008 to share the largest sum of block grants in the history of Taiwanese higher education.

To improve educational quality at the majority of the 147 higher education institutions, the MOE launched a project entitled "The Project for Pursuing Teaching Excellence". The objectives of this project include (1) implementing teacher evaluation mechanisms, (2) establishing a teaching assessment system, (3) promoting well-rounded curriculum planning, (4) reinforcing the willingness of students to study, guiding and improving their study habits, and raising

[2] The plan, the Ten New Major Construction Projects, was initiated by the government in 2004 in an effort to expand public infrastructure investment to enhance Taiwan's overall international competitiveness and accelerate the development of the economy.

academic standards, and (5) establishing systems to raise employability through the provision of various forms of workplace experience.

A NT$1 billion (roughly US$32 million) budget was allocated for 2005 to set up an incentive mechanism to encourage wide participation. After stringent screening, 13 universities were chosen for 2005. Due to the wide recognition of the project, the annual budget was increased to NT$5 billion since 2006. In 2006, 2007, and 2009, 58, 60, and 63 higher education institutions received subsidies, respectively.

Flexible salary scheme

Facing a potential brain drain and difficulty in recruiting top research personnel, the Taiwan government designed a possible solution − adopting a flexible salary scheme that encourages and rewards excellence. The Ministry of Education has recently unveiled a plan to replace the existing flat salary structure for public university faculty with a flexible structure, and a formal announcement of the policy was made in July 2010. Four purposes in this flexible salary scheme could be noted (1) to renovate the salary structure for faculty in public education system, (2) to enhance the incentive for faculty to achieve academic excellence, (3) to improve national academic competitiveness, and (4) to attract international research and teaching talent (MOE, 2010c).

The new scheme will function as an additional design that distributes extra monetary reward to those who are worthy, in terms of their contribution to academia. Yet, the existing salary system, basic pay and academic research pay components and computation of regular compensation will remain stable after the flexible salary scheme is implemented in the future. The application of a flexible salary scheme is institutionally based. Three occasions are recommended for selected institutions to employ the new scheme, including recruiting new teaching and research talent, retaining outstanding teaching and research faculty, and also recruiting professional managerial talent for the institution's future development. By increasing monetary incentives, the institutions are expected to compete more effectively for global talents and retain outstanding faculty members.

The Taiwan government realized the importance of establishing an effective merit pay system. Two types of institutions are expected to adjust the salary range for faculty in different ways. For institutions that are selected to be in the "Project for Developing First-class Universities" and the "Project for Pursuing Teaching Excellence", they are able to use up to 10 percent of the above two funds allocated by the Ministry of Education to increase the salary for selected

faculty who fit the institutions' targeted interests. For other universities and colleges that are not awarded funding in the above projects, the MOE will provide NT$100 million (US$3.3 million) as a special fund for them to employ to hire and retain outstanding faculty members. Moreover, all institutions are urged to flexibly allocate self-raised funds including donations, facilities income, extension education income, funding from collaboration with industry, and investments to make salary and benefit packages attractive to academic job candidates. The National Science Council (NSC) also provides funds for institutions to reward excellent researchers for their contributions in academia.

The flexible salary scheme will break down the assumption that faculty members are homogenous in terms of their academic performance and research contribution, and assume rather that incentive pay does matter and influence behaviors (Murnane & Cohen, 1986). Yet, the extent to which institutions take advantage of this policy change to recruit better talents, and the extent to which this new flexible salary scheme offsets brain drain, and actually attracts global talent remains to be seen.

Quality assurance programs

There was no regular evaluation authority in Taiwan until 2005. The Ministry of Education and universities established the Higher Education Evaluation and Accreditation Council of Taiwan (HEEACT) through joint endowment, aiming to conduct higher education evaluation studies and maintain quality standards in the education provided by universities and colleges in Taiwan. It is the main institution charged with creating a university evaluation system. The Regulation of University Evaluation released in 2007 served as the legal foundation for HEEACT to plan and conduct evaluations of four year colleges and graduate programs for the purpose of diagnosing their quality and providing a basis for the Ministry of Education to consider fund allocation decisions (HEEACT, 2010). The quality assurance of Taiwan higher education is examined and maintained through binding government funding decisions and the results of evaluation of institutions.

The quality assurance mechanism changed the climate of the academic profession for two reasons. First, the universities and colleges could not be exempted from regular public examination. Although the Amendment of the University Act in 1994 granted institutions the autonomy to operate with academic freedom in terms of administration, research and teaching, the later Amendments in 2005, 2007, and 2010 showed the government's attempt to promote university and college accountability and responsiveness to national

goals through legal and practical perspectives. The quality assurance program, namely, the mechanism of university evaluation is one of these cases.

Second, the quality assurance mechanism has taken the form of a regular external evaluation of higher education institutions. There were 70 comprehensive universities, and 1,843 departments and programs participating in the evaluation for the first run from 2006 to 2010 (Control Yuan, 2010). Since the results of evaluation will be connected to the government's decision to allocate future funds and the annual student quota for each institution, most institutions conducted their internal evaluations to ensure gaining the accreditation from HEEACT's external evaluation. Institutions and programs are expected to provide delicate self-reports with quantitative and qualitative evidence for each examined domain for HEEACT's peer review and group visit. Given the indicators that HEEACT requires when evaluating departments and programs, the breadth as well as the depth of analysis is remarkable.

A more stressful academic profession

Evaluation anxiety

The phenomenon of striving for accreditation by HEEACT is mainly for reputation and funding support. Interestingly, although the evaluation is conducted every five years, institutions tend to prepare for it early, including self-evaluation one year ahead and submitting the report to the HEEACT committee before their official visit. The three types of results, "accredited", "accredited conditionally", and "failure" of evaluation are announced to the public as well. In case a department is acknowledged as being "accredited conditionally" or failed by HEEACT, it will need to prepare for another follow-up evaluation to prove its improvement after one year, but it will still be on the list of regular five-year evaluations after HEEACT's first visit. Taking into consideration the cost of failing an external evaluation by HEEACT, therefore, the pressures of preparing for regular five-year evaluations and additional follow-up evaluations have led institutions, departments, and programs to take serious and long-term actions to assure positive results from quality assurance evaluation. The cases of spending NT$10 million (US$330,000) and conducting more than 100 intra-institutional meetings within the individual university, simply to prepare fully for the evaluation, have been identified during past few years (Control Yuan, 2010).

Three examples illustrate the anxiety of evaluation. First, at the department level, faculty members and administrators are expected to provide

rich information to finish the self-evaluation and to demonstrate students' learning outcomes to the HEEACT committee members (HEEACT, 2007). The quantitative part is shown as Table 2:

Table 2. The suggested quantitative information of department for the evaluation

Overall	The enrollment rate, the retention rate, the number of transfer students, the minimum credit requirement for graduation
Teachers	The full time and part time teacher ratio, the full and associate professor ratio, the ratio of teachers with Ph.D. degree, teaching load per teacher, the amount of grant and fund raised per teacher, the number of academic publication per teacher, the frequency of joining international research project per teacher, the foreign teacher ratio, and the frequency of international scholar visits
Students	The performance of competitions on-campus and out-of-campus, The pass rate of certificates examinations, the pass rate of taking national-level examinations, the number of international exchange students, the number of student granted M.A./Ph.D. degrees, and the number of thesis and dissertation publication
Alumni	The further graduate study rate, the employment rate

Note: retrieved from the example offered by the HEEACT to institutions, and summarized by the researchers

Table 3. Documents for demonstrating the quality of curriculum design and teaching

Category	Information
Teaching plan	Showing the course syllabi and design for lessons
Teaching and student attendance	Documenting a faculty member's teaching load, including his or her weekly teaching hours, records of student attendance, class general information, and records of office hour.
Teaching content	Demonstrating the teaching material designs and renovation of teaching handouts, course syllabi, relative textbooks and teaching supplements made by the instructors
E-learning materials	Establishing individual teaching and research websites and having e-learning resources available to students
Professional development	Listing the teaching-methods seminars that a faculty member takes part in, the various efforts to improve teaching techniques and helping students to learn

Resource: summarized from reviews of evaluation reports of institutions by the researchers

The department-based information aims to demonstrate how departments are operated. More descriptive information about department operation must

be provided as well. It is likely that institutions could spend half to more than one year to prepare these data, and further descriptive evidence of the quality of (1) goals, characteristics, and improvement, (2) curriculum design and teaching, (3) student learning and student affairs, (4) faculty research and professional performance, and (5) alumni performance in the labor market and in professional fields. Taking the second indicator, curriculum design and teaching, as another example, institutions may encourage or ask faculty members to prepare documents that might be accredited by HEEACT committees as shown in Table 3. Faculty members are not only expected to demonstrate their research performance but also required to more carefully organize syllabi and design teaching activities.

Third, at the institutional level, administrators have even created a set of tutorials for guiding all departments through the accreditation process successfully. One document named "important notice" announced by the office of academic affairs, in one of the top research universities, is cited as below:

> [We suggest] the instructors should collect records of five students' scores on midterm, final and key assignments, through low to middle and high performance groups, at your class. It will be very beneficial for passing the external evaluation held by HEEACT. Even though it is not required by HEEACT, we believe it would be a plus.
>
> [We suggest] the departments should have instructors to prepare individual teaching and research portfolio.
>
> [In an interview with the HEEACT committee,] it is proper to respond to the committee's comments with care; however, there should not too many negative views on departments, lest the committee will have an unfavorable comment on their reports.
>
> [To well prepare the presentation to committees,] it will need many practices and rehearsals before the evaluation day since it is difficult to give a briefing properly in 20 minutes. Besides, a presentation should be concluded by reviewing all the aspects impressing the evaluators.
>
> Office of Academic Affairs (2007)

It is evident that the university is worried about the evaluation, including the possibility of the faculty's inappropriate speech during an interview and how the faculty and administrators of each department will perform on the evaluation visit days. From the financial and student recruitment perspective, passing the university evaluation is the best way for an institution to maintain its resources.

Thus, I argue although the quality assurance designs used by the government might seek to raise the quality of higher education at the beginning, they more importantly lead to a government supervision model.

New mode of higher education employment

The total population of faculty in the entire higher education system has increased dramatically since the 1990s. In 1990, the number of total full time faculty was 7,585, and it grew to 20,906 by the end of 1995 with the growth of institutions and students. By 2000, the number of faculty in institutions reached nearly 40,000; and by 2005, the population of the faculty exceeded 48,000. Beginning in 2006, however, the growth slowed due to the predictable shortage of student enrollment. For the first time, one four-year college tried to lay off 40 faculty members due to insufficient student enrollment in fall 2009 without any advance notice (Liberty Times, 2009).

In fact, the MOE regulates the capacity of faculty in public universities. For public universities, the number of tenure track position has been limited due to the prospect of insufficient student enrollment for the coming 10 years following the dramatic growth in faculty in the previous 15 years. One of the alternatives that the institutions adopt widely is to recruit *contract* teaching faculty who will not be counted into the full-time faculty and staff members. By doing that, universities could keep the flexibility of obtaining the talents without violating the recruitment regulation established by the MOE. However, this practical policy threatens the benefits of new employees of universities. The source of salary for contract faculty members is mainly from university funds, rather than from the government. If the funds raised by the institution are lower than expected, the contracted faculty's work opportunity will be risky. Likewise, some universities offer post-doc positions to meet the institutions' needs. They are assumed to be as productive as the tenured faculty but more "economically efficient" for institutions.

Conclusion

To improve national competitiveness, the government has emphasized a comprehensive and accountable higher education system to foster competitive higher education institutions. As a set of education reforms became a top priority since the mid-1990s, many education-related regulations were overhauled to create a more liberal higher educational environment. However, in the recent years, national competitiveness and pressures such as high student

participation, potentially insufficient student enrollment, internationalization, a quest for academic excellence, and rigid salary scheme led the government to shift its control from rigid regulation, to a supervision model emphasizing performance outcomes and accountability. This paper briefly reviews how socio-political changes drove and impacted the academic professions in Taiwan. With the current quality assurance program, the Taiwan government gains more power to penetrate the higher education system, and this new form of governance will shape the future development of the academic profession.

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Connect ASEAN: Promoting regional integration in higher education in Southeast Asia

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Introduction: Regional integration and the evolving trend of higher education restructuring in Southeast Asia

As globalization, or increasing economic integration and/or interdependence among nations, sweeps across the world, various sectors have attempted to respond to the trend's imperatives as well as exploit its opportunities. A reform of the higher education system in response to globalisation has moved high on the agenda of higher education institutions. Professor Dr Jane Knight (2003) argues that internationalisation of higher education is both a response to globalisation as well as an agent of globalisation. Internationalisation is changing the world of higher education and globalisation is changing the process of internationalisation. Globalization has led to both competitiveness and collaboration not only in the economic sector, but also in the higher education community both within and outside Southeast Asia. This paper examines the emerging trend of regional collaboration towards harmonisation of higher education in Southeast Asia and its implications for higher education restructuring including a changing role for the academic profession.

Many initiatives with the aim of creating a common space of higher education in Southeast Asia have begun in earnest in an effort to reinforce the three pillars – the ASEAN Political-Security Community, ASEAN Economic Community, and ASEAN Socio-Cultural Community – to establish an ASEAN Community by 2015. Nevertheless, as systems, targets and requirements in

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Southeast Asian higher education are highly diverse, several mechanisms initiated by the Southeast Asian Ministers of Education Organization's Regional Centre for Higher Education and Development (SEAMEO RIHED) have been launched over the last decade to push forward a harmonisation process of higher education. The key goals are, namely, to create a regional quality assurance framework, to enhance student and staff mobility, to establish a regional credit transfer system, and to foster the development of ASEAN Research Clusters and an ASEAN Citation Index. The development of these four infrastructures responds to the ambitious idea of creating a Southeast Asian Higher Education Area (SEA-HEA). In order to optimize the achievement or attainment of those priorities and remain faithful to a vision of regional integration through the harmonisation process, SEAMEO RIHED has sought to learn from the most prominent effort to harmonise university systems in 47 European countries through the Bologna Process.[1] Four prioritised mechanisms identified by SEAMEO RIHED will be discussed in the following section.

A roadmap towards a regional quality assurance framework in Southeast Asia

In order to facilitate the free flow of human resources over the region as part of economic integration of the ASEAN Community, the credentials of graduates produced in one country must be recognized regionally. To respond to this need, a regional quality assurance framework is required. However, in Southeast Asia there are a variety of approaches to quality assurance in place.

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[1] The Bologna Process is an inter governmental process involving 47 European countries with the overarching aim of creating a European Higher Education Area by 2010. In the Bologna declaration (1999), the education ministers affirmed their intention to create Europe of Knowledge through the following action lines:

- Adoption of a system of easily readable and comparable degrees to promote employability. The Diploma Supplement is one instrument designed to facilitate this.
- Adoption of a system essentially based on two main cycles, undergraduate and graduate.
- Establishment of a system of credits (such as European Credit Transfer and Accumulation System or ECTS) to promote widespread student mobility.
- Support of mobility of students, teachers, researchers and administrative staff, with full recognition of periods spent in a European context.
- Promotion of European cooperation in quality assurance (such as the establishment of The European Association for Quality Assurance in Higher Education or ENQA).
- Promotion of the necessary European dimensions in higher education (*i.e*. in terms of curricula development and inter-institutional cooperation).

Moreover, the ten ASEAN Member[2] Countries are at different stages of development in their quality assurance practices. Some countries have established their own quality assurance mechanism and are now in the process of implementation for achieving quality monitoring and enhancement. However, some countries such as Cambodia, The Lao PDR (Laos) and Myanmar are still planning and implementing reforms (Aphijanyatham, 2010). At this point, it is important to identify the commonalities among quality assurance systems in Southeast Asia and search for the most suitable macro framework that accommodates and reinforces the existing systems of every nation.

The massification of higher education in the past few decades has resulted in greater diversification of academic curricula, and consequently many scholars, relevant stakeholders, and particularly employers have expressed their concern and raised questions about quality and quality assurance of higher education. Insofar as regional integration was set as the goal for Southeast Asia in this decade, every nation needs to ensure the quality of graduates through the quality of courses and programs offered internationally as well as through the qualified teachers and the effectiveness of their teaching and learning methods. However, many have raised a question as to who should set standards or criteria for quality assessment and assurance and how the process should be carried out.

At present various regional networks on quality assurance cooperation have been established, for example, APQN (Asia-Pacific Quality Network), AQAN (ASEAN Quality Assurance Network), and a sub-regional network of AUN-QA (ASEAN University Network-QA). These networks have worked to ensure common quality standards among higher education systems and to achieve the set up of a regional quality assurance framework. As there are different characteristics of external quality assurance (EQA) practices in the region, SEAMEO RIHED has pointed out the importance of establishment of the sub-regional EQA network for sharing and developing good practices of quality assurance at the national and regional level among national EQA agencies. This initiative was proposed by SEAMEO RIHED to several policy-making venues such as the 30th High Officials Meeting and the 2nd Meeting of Directors General/Secretary General/Commissioner responsible for Higher Education in the Southeast Asian region in 2007. With a strong commitment, SEAMEO RIHED has served its role to foster dialogue between different quality assurance

[2] ASEAN Member Countries include Brunei Darussalam, Cambodia, Indonesia, The Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam. For more information, please refer to http://www.asean.org.

systems through seminars, workshops, and study visits for quality assurance professionals, government officials as well as university administrators since 2008. This effort has made quality assurance a more visible and challenging priority in university administration and management as well as raised awareness of academic professors and lecturers about the need to improve their instructional techniques and the quality of their research.

Quality assurance practices in Southeast Asian countries have significant implications for university administration. In Indonesia, Malaysia, Philippines and Thailand, outcomes of quality assurance exercises are linked to higher autonomy and other incentives for higher education institutions. In Brunei, Singapore and Vietnam, the quality assurance outcomes result in granting government accreditation to the higher education institutions. Quality assurance exercises are therefore one of the key challenges to the academic profession and its interface with management. In addition, strong pressures of external societal expectations force higher education institutions to carefully shape their organisational environment with increasing control of their performance so as to ensure their quality. The quality assurance exercise has been progressively made explicit by being covered in institutional developing strategies. In Thailand, internal quality assurance is carried out by higher education institutions and its results in the form of self-assessment report are submitted to the Office of the Higher Education Commission (OHEC), Ministry of Education and also made public. OHEC and the Office for National Education Standards and Quality Assessment (ONESQA) serve their roles as supporters of Thai higher education institutions by providing internal quality assurance guidelines and ensuring effective action upon the completion of external quality assurance by ONESQA. Practices employed in recruiting academic professions has been changed as a consequence of the greater pressure of quality assurance. The transparency and openness of staff recruitment has been gradually raised as higher education institutions require only highly qualified and knowledgeable academics. However, higher staff qualifications it may also create recruitment difficulties in some places. Furthermore, the growing importance of quality assurance also leads to the transformation of the nature of the *traditional* academy with its stress on basic research and disciplinary teaching to the *relevant* academy wherein research and teaching must respond to the growth of industry, commerce and social development.

The development of regional quality assurance systems is not only a factor contributing to change in academic roles and university management in the region, but also a driving force for mobility of students and faculty members.

The growing trend of regional quality assurance practices provides new opportunities for more "boundaryless" forms of academic careers and knowledge transfer. One consequence is that many future graduates and scholars will have more options for employment across the region regardless of their nationalities.

The evolution of student and staff mobility across the Southeast Asian region

The current global emphasis on knowledge production and information flow play an important role in pushing towards the internationalisation of higher education. Over the past decade, higher education institutions in Southeast Asia have sought to recruit more international students with the aim of increasing national competitiveness through the infusion of highly skilled foreign human resources. One of the distinct developments is the emerging trend in bilateral and multilateral collaboration on international mobility of students and staff. In 2010, SEAMEO RIHED with the collaboration of the Department of Higher Education, Ministry of Higher Education, Malaysia; the Directorate General of Higher Education, Ministry of National Education, Indonesia; the Office of the Higher Education Commission, Thailand launched the Malaysia-Indonesia-Thailand (M-I-T) student mobility program. The project provided a platform for regional engagement through a series of student mobility meetings. These meetings have been essential in the development of a Southeast Asian model for student mobility at the tertiary education level.

The 1st M-I-T Meeting, held on 28 August 2009, in Bangkok Thailand, was attended by key policy-makers from the three countries. It identified five disciplines suitable for pilot undergraduate student exchange, namely agriculture, language & culture, hospitality & tourism, international business, and food science & technology. The University Mobility in Asia and the Pacific Credit Transfer System (UCTS) was chosen as a cross-border recognition platform, pending the development of a regional credit transfer system. Furthermore, the meeting reached decisions about budget allocation, level of support provided by host and sending governments, language used in the program, numbers of participating universities and targeted numbers of students.

The 2nd M-I-T Meeting was held on 15-16 October 2009, with the purpose of identifying and comparing course syllabi. The meeting came to the agreement that the program would commence in 2010. One hundred fifty students would participate – 50 outgoing students from each of the three participating countries. The respective Offices of Higher Education selected a

number of universities to participate in the pilot. The meeting included the participating universities, focusing on a comparison of the course syllabus to identify relevant subjects for mobility students to undertake. Additionally, most participating universities came to a preliminary agreement on the number of outgoing and incoming students and the duration of the programme.

The 3rd M-I-T Meeting (International Relations Officers Meeting) was organised during 7-9 December 2009 in Jakarta Indonesia. The Meeting involved the International Relations Officers (IROs) from each country and covered specifics on the number of participating students, orientation programmes, and preferred subjects in each area and also shared best practice.

The recent M-I-T Mobility Programme Review Meeting was held during 21-22 September 2010 in Putrajaya, Malaysia. The Meeting identified impediments to exchange and designed actions to resolve the issues. Recommendations included the appointment of a Country Coordinator to act as a central information resource for mobility in that country, the development of a Student Manual and information for the website of the Ministry responsible for Higher Education, and bi-annual review meetings with relevant stakeholders. A further significant development was the strengthening of the role of International Relations Officers within universities. The Review Meeting reached agreement on timelines for issuing student Letters of Offer, the process for health checks, and the provision of HEI Student ID Cards. The meeting was informed of the current outcomes of the project. One hundred seventeen students have commenced or undertaken a mobility programme in 2010, with many additional students scheduled for 2011 (See: Table 1 and Table 2). The Meeting aimed to review the recommendations from the Review Meeting and confirm decisions for the pending M-I-T Review Meeting to be held in 31 January 2011 to 1 February 2011, Bangkok Thailand.

Furthermore, the Meeting acknowledged that several other countries had expressed interest in becoming involved in a Southeast Asian student mobility program. There was general agreement on the benefits of expanding the program to additional countries, including Japan, China and South Korea, and bolstering the number of participating students. After the successful discussion between SEAMEO RIHED and the Ministry of Education, Culture, Sciences and Technology, Japan, the proposal for the workshop leading to the set-up of Japan-Malaysia-Indonesia-Thailand (J-M-I-T) student mobility program was drafted. The initiative was reported to the 33rd SEAMEO High Officials Meeting, held during 22-25 November 2010, Bangkok, Thailand. Additionally, SEAMEO RIHED will promote this plan at the 5th Meeting of Directors

General/Secretary General/Commissioner responsible for Higher Education in the Southeast Asian region, and submit the proposal to the 46th SEAMEO Council Meeting as well as further present it to the 6th ASEAN Education Ministers Meeting through the SEAMEO Secretariat for approval of the expansion in 2011.

The 4th M-I-T Meeting will be held to discuss the future direction of program soon after the project is successfully expanded in terms of both numbers of students and participating countries.

Table 1. No. Students Participating in the M-I-T Student Mobility Program, December 2010

Malaysia (M)				Indonesia (I)				Thailand (T)			
Inbound		Outbound		Inbound		Outbound		Inbound		Outbound	
I	T	I	T	M	T	M	T	M	I	M	I
45	22	-	4	-	14	45	32	4	32	22	14

Note: Project Progress Actual figures as of December 2010 indicate that 117 students undertook overseas study as part of the project in 2010.
M: Malaysia, I: Indonesia, T: Thailand

Table 2. No. Students Participating in the M-I-T Student Mobility Program by discipline, December 2010

Discipline	Malaysia				Indonesia				Thailand			
	Inbound		Outbound		Inbound		Outbound		Inbound		Outbound	
	I	T	I	T	M	T	M	T	I	M	I	M
Agriculture	7	3	-	4	-	-	7	12	12	4	-	3
Language & Culture	13	5	-	-	-	-	13	6	6	-	-	5
Hospitality & Tourism	7	4	-	-	-	6	7	7	7	-	6	4
International Business	10	5	-	-	-	5	10	5	5	-	5	5
Food Science & Technology	8	5	-	-	-	3	8	2	2	-	3	5
Totals	45	22	0	4	0	14	45	32	32	4	14	22

The increasing cross-national flow of students and staff within Southeast Asia through the M-I-T student mobility program is an important factor reinforcing a multicultural space of ASEAN people. However, many challenges require a stronger commitment from relevant stakeholders at all

levels. Those challenges include, for example, maintaining funding at the government level, developing practical strategies for higher education institutions on mobility structure and management, the improvement of communication flow between and among higher education institutions, and the development of a database through ICT network or social network in some particular contexts. Some conceptual aspects of the program also require examination. Participating countries must work hard to control the quality of education and provide a diversified international environment to international students by offering a diversity of culture and language courses.

The M-I-T student mobility program has implications not only for regional integration of higher education, but also for traditional values and practices within academe. The attempt to internationalise their programs requires changes in institutional strategic plans and management. Those include, for example, the creation of new opportunities for the profession, the more intense interaction between higher education and science and innovation policies as well as market demand, the increasing international mobility of people and knowledge, growing interdisciplinary connections within and between cognate fields of knowledge, different combinations of teaching, scholarship, research, knowledge exchange and community engagement.

The ambitious idea of developing a regional credit transfer system

Another priority initiative by SEAMEO RIHED is the establishment of a Southeast Asian credit transfer system. The organisation has carried out a study on how to align the existing regional credit transfer systems. Those are, namely, UMAP[3] Credit Transfer Scheme (UCTS) and ASEAN Credit Transfer System (ACTS). The following table highlights the common and different features between UCTS and ACTS.

At the regional policy level, SEAMEO RIHED has pushed forward the development of the Southeast Asian Credit Transfer System (SEA-CTS),

[3] UMAP Membership is open to countries/territories in the Asia-Pacific region. Members can include government higher education departments or ministers, individual universities, university umbrella organizations, or a combination of these. Individual persons are not eligible for membership. UMAP membership is currently open to the following countries/territories: Australia, Bangladesh, Brunei, Cambodia, Canada, Chile, Ecuador, Fiji, Guam, Hong Kong, India, Indonesia, Japan, South Korea, Laos, Macau, Malaysia, Mexico, Mongolia, Myanmar, New Zealand, Papua New Guinea, Peru, People's Republic of China, Philippines, Re-Union Islands, Russia, Samoa, Singapore, Taiwan, Thailand, Timor Leste, United States of America, and Vietnam.

responding to the needs of non-AUN member higher education institutions and narrowing the scope of higher education institutions participating in UMAP within Southeast Asia. The idea aims to supplement both existing credit transfer systems. It was agreed during the 3rd Meeting of Directors General/Secretary General/Commissioner responsible for Higher Education in the Southeast Asian region, held on 29 January 2009, Bangkok, Thailand, that Thailand and SEAMEO RIHED would play the key role in developing a template for a Southeast Asian Credit Transfer System with principles and criteria designed on the basis of the UCTS. The recent Six Recommended Key Principles for Credit Transfer in Proposing SEA-CTS were agreed to at The South-East Asian Policy Forum: Regional Credit Transfer System: Lessons Learnt from UCTS, held on 30 June 2010, Bangkok, Thailand.

Table 3. The common and different features between UCTS and ACTS[4]

Comparison between UCTS & ACTS	UCTS[5]	ACTS[6]
Objective	To promote student mobility between UMAP Member Countries/Territories and other regions with the standard credit transfer system	To promote and facilitate greater student mobility among ASEAN Universities[7], particularly standards/criteria of credit system recognition at the institutional level, country level and ASEAN level
Type	Based on student workload	Based on student workload
Key Documents	Handbook: UMAP Student Connection Online & UMAP Credit Transfer Scheme; Standard UMAP Application Form & UCTS	ACTS Student Manual and ACTS University Administrator Manual http://acts.ui.ac.id/index.php/home
Grading Conversion	UCTS agreed conversion system	No need for grading conversion but use existing university's grading system
Duration of Exchange	Not specific	one up to maximum two academic semesters or shorter period of study (summer semester)

[4] See Aphijanyatham, 2010, p.68
[5] See http://www.umap.org
[6] See http://www.aunsec.org
[7] 22 ASEAN University Network (AUN) Member Universities consist of 1 HEI from Brunei, 2 HEIs from Cambodia, 3 HEIs from Indonesia, 1 HEI from Lao PDR, 3 HEIs from Malaysia, 2 HEIs from Myanmar, 3 HEIs from the Philippines, 2 HEIs from Singapore, 3 HEIs from Thailand and 2 HEIs from Vietnam.

The Six Recommended Key Principles for Credit Transfer in Proposing SEA-CTS are:

1. SEA-CTS is to be used uniformly for credit transfer in higher education programs.
2. SEA-CTS is to be used to transfer credits for single courses or groups of courses in higher education programs or equivalent.
3. Only grades attaining the following levels or above shall be transferred: C or 2.00 score level or equivalent for a Bachelor's Degree, and B or 3.00 score level or equivalent, or the S score level for a Graduate's Degree.
4. Content of the credit to be transferred should be comparable to three quarters of the course being credited.
5. For a Bachelor's Degree, credits to be transferred shall not exceed one-third of the total credits of a study program into which they are transferred.
6. A transferred credit shall not be included in the calculation for the cumulative grade point average (optional).

Nonetheless, there are issues to be considered and resolved concerning the practical implications of the potential SEA-CTS. One of those basic considerations is the balanced design of curriculum with the learning outcomes of period of study alongside student workload.

The issues of quality assurance and the potential regional credit transfer system are both priorities in a process of development of a regional system of comparable programs. In addition, standardised and effective learning processes are required to facilitate the development process. Consequently, academic staff are expected to assume the role of facilitating learning and developing students' analytical and problem-solving skills instead of simply "supplying information." The adoption of a credit transfer policy also leads to changes in university management in terms of the role of international relations offices (IROs). This is because the effectiveness of the IROs holds the key to the flow of students across borders and the successful management of credit transfer between institutions.

The establishment of ASEAN Research Clusters and the creation of an ASEAN Citation Index

The greater emphasis on quality assurance of higher education requires a

new structure for teaching and research. In Southeast Asia, the First Conference on Pioneering ASEAN Research Clusters, held in 26-27 November 2010, provided an opportunity to develop both the research capacity and research outputs of Southeast Asian nations. The conference provided insight onto how research can be strengthened. The key themes and questions explored at the conference were:

1. Sharing updates on Southeast Asian higher education research policy and management;
2. Identifying areas for establishing research clusters;
3. Exploring the possibility of an ASEAN Citation Index; and
4. Building a platform for strengthening research collaboration.

Research involves the systematic search for new knowledge, and is of key importance as countries transition from an information society, to a knowledge economy and onto a learning economy.[8] Research is essential to economic development as it has the potential to reap longer-term benefits. Research excellence can be a source of competitive advantage and increase global competiveness. It can also lead to innovation and breakthroughs, which may have direct financial benefits if commercialised. Innovation can be nurtured and fostered through development of cross-national clusters. Clusters drive innovation through the development of knowledge linkages and interdependencies between actors in different national networks of production.

Research involves higher education institutions, industry, governments and other actors, and directly assists with the development of social capital. Because of the many stakeholders involved, a platform is required to adequately consider and initiate a research framework for the region. The 1st Research Cluster conference provided that platform. The conference also built on a key strength of the ASEAN community – the commitment to work cooperatively to meet their collective goals. This commitment was demonstrated by the signing of the Joint Statement on Promoting ASEAN Higher Education Research Clusters, which provided the region with a common view of how Research Clusters will be promoted in Southeast Asia.

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[8] According to *UNESCO World Report on Towards Knowledge Societies*, knowledge societies are about capabilities to identify, produce, process, transform, disseminate and use information to build and apply knowledge for human development. On the other hand, the idea of information society is based on technological breakthroughs.
http://unesdoc.unesco.org/images/0014/001418/141843e.pdf

Associate Professor Dr Wanchai De-Eknamkul, Secretary of the National Research University Committee, Office of the Higher Education Commission, Thailand, provided a presentation about establishing ASEAN Research clusters, making recommendations based upon a review of current ASEAN research strengths. He proposed both a model for establishing ASEAN Research Clusters and an accompanying management system. Dr Wanchai's proposed model for establishing research clusters included: establish targeted research areas; establish virtual clusters; involve universities using collaborative research projects. The four research clusters proposed for future discussion were:

1. Health and Medicine, hosted by Singapore and Thailand
2. Agriculture and Food, hosted by Vietnam, Malaysia and possibly Thailand
3. Environment and Biodiversity, hosted by the Philippines and Indonesia
4. Social Science, hosted by Singapore and the Philippines

Regarding financing issue, Dr Wanchai suggested that clusters build upon the top scientists and researchers, by informing them that clusters are being formed and that researchers will be doing collaborative research. Initially, collaboration will be virtual, limiting costs. The host country will provide funding to initiate clusters, so this can be established without a formal cluster budget, building upon the current research strengths detailed in his presentation. Dr Wanchai advised that the Higher Education Commission should fund mobility or conferences to facilitate networking among researchers.

The shared idea of the ASEAN Citation Index (ACI) was presented by Professor Dr Narongrit Sombatsompop, Head of Thai-Journal Citation Index (TCI) Centre and King Mongkut's University of Technology Thonburi (KMUTT). He demonstrated the ACI's potential to assess the efficiency and quality of researchers and research outputs, improve university rankings, assist students with their university selection choice, and integrate evaluation at national, regional and international levels. Dr Narongrit also provided the overall concept for the ACI and an implementation plan. The implementation plan involved establishing national databases, ensuring articles contain international information, establishing one online platform, ensuring the database is supported, guaranteeing financial contributions, guaranteeing regular inputs and designating ownership and maintenance. This trend of setting up a regional research platform will greatly raise awareness and motivate academic staff of ASEAN nations to adjust their role to be more active in research innovation.

Conclusion

In the regional integration of higher education, the academic profession has one of the most significant roles to play in enhancing and steering the development of each integration mechanism. At the same time, the restructuring of university management and administration has been gradually carried out as a consequence of the regional integration. Over the past few decades, the expansion and massification of higher education was influenced by the expected need for highly qualified human resources in the emerging global economy. The internationalisation of higher education has been therefore placed high on agenda of many higher education institutions. The regional collaborations on student and staff exchange are also increasing. The roles of academic professions in international communication, cooperation and recognition are considered indispensable to the greater exchange and mobility of students and faculty across national borders. Due to the openness of knowledge transfer and the regional promotion of international mobility, the growing demand for international faculty and growing competition for talent are intense. Academic labor markets are likely to become more international than in the past.

The process of massification and concurrent expansion of international mobility has brought the issue of the quality of education, and consequently quality assurance, to the fore in university's strategic plans. Many higher education institutions in Southeast Asia have therefore put more emphasis on quality assurance assessment both at the institutional and program levels. With its overarching aim towards ASEAN Community, SEAMEO RIHED as an international organisation for higher education and development has assumed a role of promoting regional collaboration on quality assurance with a view towards aligning the diversity of each country's tradition and practices of student assessment and institutional evaluation. The greater expectation of effective and sustainable implementation of quality assurance from the national public and regional higher education bodies has put pressure on higher education institutions in each country to become more involved in the regional quality assurance network and movement. The growing information exchange and capacity development on quality assurance practices which has been regionally driven by SEAMEO RIHED will help enhance the quality of teaching as well as improve university governance in Southeast Asia.

The increasing importance of science-based knowledge and technology prompts academic profession to develop their research functions. Both national governments and higher education institutions over the past decade have

highlighted the significance of highly innovative research. This emerging force accompanied with the regional collaboration on ASEAN research clusters and ASEAN Citation Index have resulted in greater differentiation of academic sectors, institutions and job roles. Traditionally, diversity basically meant a division of labor in terms of the institutions' primary functions of either teaching or research, or a combination of both, through forms of governance and funding that worked as incentives and constraints (Musselin, 2008). The changing academic criterion of excellence follows the pursuit of research excellence. Academics are increasingly expected to raise their own research funding and create academic linkages with industry as well as respond to the community development. The trend of university social responsibility and sustainability is prominently emerging in Southeast Asia.

Higher education has become a mature service industry and the academic profession has become a large and complex profession with many faces (Musselin, 2008). The success of higher education development in Southeast Asia strongly requires the firm and continuous commitment from all stakeholders at every level. Furthermore, the effective response from the academic profession in facilitating regional higher education collaboration in every aspect is also highly important. Four priority mechanisms driven by SEAMEO RIHED are milestones on the road to regional integration both economic and socio-cultural. The success of regional higher education collaboration is the key to the whole region's political and socio-economic sustainability.

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The U.S. as a Prototype for an Asian Academic Profession: What does that prototype really look like?

Martin J. Finkelstein*

Introduction

I arrived yesterday in Hiroshima with a clearly defined role to play at this inaugural event launching RIHE's ambitious four year study of the Asian academic profession. My role was to speak about the American academic profession insofar as it represents the prototype or epitome of the academic profession to which the emergent Asian research university and its academic staff aspire. I was to represent the ideal typical end state to which Asia aspires.

The challenges to this role began almost immediately. Professor Cummings took issue with the metaphor of core-periphery which assumed a singular and universal path for moving from the academic periphery to the highest stage of academic development. And, taking this as his point of departure, Professor Yan provided a searching critique of the CAP project, targeted principally on our assumption of a unitary – and clearly Western – model of academic man (that is the term we use historically, no disrespect to academic women intended) that undergirds our framework and thinking. So, I strode up to lectern asking myself in a way I had not in preparing my remarks what the real relevance of the U.S. model (or the apogee of the Western model) might be to my audience of Asian academics. What I represent is, after all, a "unitary," culturally relative Western model that may have limited relevance to the Asian context; it certainly ought not to serve uncritically as "the" model of aspiration.

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This question of relevance, however, was not the only – or even the largest – complicating factor I faced. More fundamentally, the very model of academic man in the U.S. that I was purporting to represent is really a "moving target": after a half century of crystallization, it is now (and has been for the last generation) in flux. Indeed, the American model that you carry in your minds is now more stereotype that descriptive of current realities. My primary task in this paper is to bring you up to date with the "new" American reality as a first step in considering realistically its relevance to Asia's future. While you are trying to build a national academic profession up – and you recognize the fragility of that body in these times –, the U.S. is allowing its own to disintegrate or decompose. You need to be aware that what you aspire to is already on its way to disappearing. So what I want to do now is tell you a little bit about those changes (in as provocative a fashion as I can) and, based on that discussion, suggest some lessons East and South Asia may want to take as you chart you academic futures.

The U.S. model: A basic thesis

This paper advances a simple, basic thesis: What has heretofore been a relatively homogeneous corps of professionals – in terms of their demographics (who they are), their work role (what they do), the locus of their work activities (where they work and their time and place boundedness), their career exclusivity or pre-emptiveness (the place of academic work in their "life space") and the structure of their career track (the rungs of their career ladder) – has in the space of a generation or two morphed into a patchwork of relatively distinctive and fragmented workforces, each with its own demographic profile, work and career profile. Any discussion of the academic workforce in the U.S. today must now recognize this diversification and speak in a nuanced way about segments and their relative pre-emptiveness rather than hazard generalizations about some amorphous – and now mythic – whole.

Demographic change

Consider the following changes in the profile of faculty supply in the U.S in barely two generations.

Gender & Marital Status. Four of five faculty in 1969 were men and new recruits barely differed from old hands. By the early 2000s, nearly 2/5 faculty are women overall, and among new recruits, the gender ratio is approaching

50-50. While earlier generations of academic women were predominantly single, the new generation is married, have children and, more often than not, are part of a dual career couple (Wolf-Wendel & Ward, 2005).

Race/ethnicity. In 1969, 9/10 full-time faculty were Caucasian (and mostly male). By 2004, the overall figure had shrunk to 8/10 and lower among the newest recruits.

Nationality. In 1969, barely 10 percent of the faculty were foreign-born, typically of European origin – refugees from Nazi Germany or the former Soviet Union. The vast majority are now of East Asian (Chinese) or South Asian (Indian) origin with very different orientations to work than their native born counterparts. Especially among new recruits in the natural sciences, mathematics and engineering, perhaps as many as 1/4 to 1/2 are foreign born Asians. And unlike native born faculty, this group is disproportionately male. While the behavior of these foreign nationals is shaped by labor market conditions in the United States, they are also being shaped by new economic developments and labor market conditions in their native countries – a new "wild card" factor. As nations such as China, S. Korea, and to a lesser extent, India, have initiated major investments in their developing higher education systems to build "world-class" universities, conditions of academic life and prospects for academic careers are improving quickly and substantially – providing newly competitive opportunities for pursuing academic careers and precipitating an incipient "reverse brain drain".

Generational Weltanschauung. In 1969, the American faculty was dominated by members of the World War II generation and the newest recruits were members of the baby boom generation. Today, it is the baby boom generation that is retiring, being replaced by Generation Xers and members of the Millenial generation (Howe, Strauss & Matson, 2000). This latter is a generation focused more self-consciously on family and work-life balance issues, on teamwork and service in the name of the greater good.

Changing institutional and professional profile

Consider at the same time these shifting axes of demand for faculty in the U.S.:

Academic field. In 1969, more than 2/3 faculty were in the traditional arts and sciences disciplines pursuing their graduate education and their early career

in perfect lockstep pattern. By the early 2000s, the disciplinary balance had radically shifted towards the professions,[1] especially the health professions. Among new faculty recruits, the *majority* are now in the professions – higher and lower – and drawn as frequently from professional practice as from an insular and clearly identifiable pre-service career track.

Institutional venue. In 1969, about half the faculty were employed in research universities and the remainder distributed, for the most part, over other four-year institutions. Today, the proportion of faculty residing in research universities has shrunk to barely 2/5; and most of the recruitment is being done by other than research universities for other than research roles.

Type of appointment. In 1969, virtually all faculty positions were full-time, tenure eligible career tracks. Every incumbent was expected to play roughly the same "integrated" role consisting of teaching, research and service. Beginning with a vengeance in the 1970s, the ranks of part-time appointments swelled. And, beginning in the 1980s, full-time appointees were increasingly routed into fixed-term contract appointments and off the tenure track. Indeed, for at least the last 15 years, the *majority* of all new full-time hires have been to fixed contract, temporary appointments. These appointments reflect not merely differences in the duration and permanence prospects of contracts, but a re-definition of the work role itself. Contract appointments typically entail more specialized roles – teaching only, research only, program director only – and often preclude formal involvement in academic governance (Schuster & Finkelstein, 2006).

What do these changes mean?

Assessing what these new developments and conditions mean for the future of the American academic professions depends, of course, on the context in which one interprets them: are they temporary dislocations or fallout from an extended academic depression (part of the academic business cycle)? Or, do they represent structural re-alignments, that is, the recasting of the academic

[1] American universities, unlike their European counterparts, were historically organized around the liberal arts fields (humanities, social and natural sciences). Prior to the 20th century, many professional schools (law, medicine, engineering, social work, nursing, education) were actually established outside the universities as freestanding entities, and did not become integrated into the university structure until the early 20th century. From an historical perspective, they were "added on" to the liberal arts core. Now, they are overtaking that core.

marketplace in a globalized, knowledge-based economy? Up until quite recently, that matter of interpretation was hardly settled. Bowen and Schuster (1986) had predicted a widespread supply shortage of the "best and brightest" when the swelling baby boomlet hit college age in the first decade of the 21st century. Indeed, they seemed to suggest at that time the imminent restoration of the old academic equilibrium of the seller's market of the 1960s – with an impending rush to create new "tenure-track positions" and to do away with the lion's share of part-time appointments. Frances (1998) had predicted a surge in demand for faculty in response to continuing expansion of traditional student demand – albeit warning of the unpredictable effects of the new digital instructional technologies. And, most recently, Leslie (2007) predicted that widespread retirements of "Baby Boomer" faculty amid the relative underdevelopment of the "under 40" junior faculty ranks would drive a crisis in replenishing the faculty.

An increasing consensus, however, is emerging that while tenure and traditional academic appointments are not yet "dead" (Chait, 2002), we are witnessing a structural realignment that has little that is temporary about it. Finkelstein (2003) recently invoked Trow's (1973) concept of the structural transformation of national systems of higher education from elite to mass to universal access to remind us that broader transformations in the economy – industrialization, the emergence of the globalized, knowledge-based economy – have historically driven reconfigurations of higher education and the nature of academic work and careers – at least in the American context. Developments such as feminization of the workforce, globalization of the labor market, the restructuring of work along the lines of greater "casualization" to insure competitiveness – reflect larger social forces that are transforming work in America – and the world. The restructuring of the college teaching force is, in this context, no different than the restructuring of professional work (including medicine and law) more broadly. Globalization, as Twigg (2002) has argued, has intensified competitive pressures and has forced entire industries to "restructure" themselves – now including higher education and its labor force.

If, then, these "new" developments are not going away and are (and will be) reshaping the faculty, what shape is it taking? On the face of it, these developments suggest nothing less than a wholesale reconfiguration of the body academic in ways that we do not yet fully comprehend. U.S. higher education is increasingly hiring practicing professionals[2] who have not experienced

[2] These would include practicing physicians, nurses, attorneys *etc*. who do not possess a

extensive pre-service socialization to the academic role during traditional doctoral education. Indeed, many of these professionals may best be described as "accidental" academics. It is increasingly hiring married women with families who are insisting on a reasonable work– family-life balance – as indeed are the shrinking core of Millennial males. It is increasingly hiring foreign-born and racial/ethnic minorities. It is increasingly hiring retirees from business and industry and from academic positions at other institutions. It is increasingly redefining traditional research university roles. We are seeing clear lines of stratification among the faculty ranks among a core permanent "traditional" academic staff and a larger contingent staff serving more specialized functions. It is increasingly bringing into the academy a new sociological generation in terms of orientation to self, society, and work.

The topography of new faculty hires

Most fundamentally, these developments undermine the basic underlying assumption that there is, in some meaningful sense, a corporate faculty that has a fundamental unity of mission, background, motivation, and talent level. In that sense, the "old-line" faculty no longer exists. We have rather a highly differentiated academic *workforce* (including an exploding number of non-faculty professionals – the fastest-growing segment of the academic workforce; see Frances, 1998). How can we describe the basic lines of differentiation of this new faculty workforce, those Rhoades (1998) called "managed professionals"? Before we can assess how the "old rules" are changing, we need to describe clearly the topography of the new faculty workforce. Once the cells are named, we are then in a position to assess how the various faculty sub-groups are likely to behave. That topographical mapping exercise is best applied to recent recruits to the college teaching force – insofar as these represent the future of the profession – and allow us to extrapolate with greater confidence. Graphically, the topography of new recruits since at least the early 1990s is displayed in Figure 1.

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doctorate in a liberal arts discipline, but rather a professional degree granted by a professional school within a university, *e.g.* MD (Medical doctor), J.D. (Juris Doctor), DBA (Doctor of Business Administration). They may come to their academic position after years in professional practice – and may even plan to return to practice at a later date.

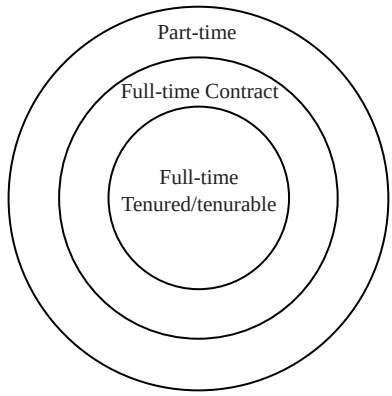

Figure 1. The topography of new faculty hires, 1993-2008

The full-time terrain

Among the newly hired full-timers over the past generation, the basic divide is between those "on" and "off" the tenure track – roughly half and half. But there are clear cleavages that cut across this basic one:

- the divide between men and women;
- the divide between those in the professions and those in the traditional arts and sciences;
- the divide between the younger entrants fresh out of graduate school (in their 30s) and the older entrants (frequently practicing professionals in their 40's or 50's or "early" retirees from business/industry or the military). Indeed, among the professionals and older new recruits are a majority of "accidental" academics in the professions;
- the divide between those in research universities and those outside.

To begin with, what can we say about the one-quarter of the newly entering college teaching force that can be classified as traditional tenure-eligible or tenured, full-time faculty – understanding that somewhere between 40 and 50 percent of them are now likely to be young married women? First, it seems to me that the most basic of the "old rules" – that academic careerists are a "special breed" whose unique confluence of values and interests, including intellectual interest and achievement, the quest for autonomy even at the risk of foregoing pecuniary benefit – still holds. All the available evidence suggests that those unique individuals are still being attracted to academic careers in about the same small, but unchanging, measure. Moreover, these individuals are, judging from

the available recent evidence, working harder than ever (58 hours weekly in 2004 *vs*. 53 hours in 1988) and are subject at once to increased expectations for scholarship and publication (Schuster & Finkelstein, 2006; Leslie, 2007), on the one hand, and heightened expectations for teaching performance, on the other. What may, however, be changing is the value orientation that mediates how these tenure-trackers fulfill these deep personal needs – and at what price. Academic women and Millennials, generally, are more oriented to family and achieving a reasonable work– life balance than has historically been the case for Baby Boomers (see Howe *et al*., 2000). Anecdotal evidence suggests that they are less willing to sacrifice everything on the altar of work. Behavioral evidence is less clear. There are some data that suggest that recently recruited women and minority faculty are leaving academic jobs at a higher rate than white men – although the actual magnitude of that rate is not clear (Trower & Chait, 2002; Gappa, Austin & Trice, 2007; Leslie, 2007). Modestly higher pre-tenure attrition rates for women are likely to be more than compensated for by recruiting new members. Moreover, the restructured academic workforce provides a new diversity of opportunities including less stressful, more specialized fixed contract positions as well as a variety of part-time positions for those seeking alternatives to the tenure track straitjacket. This is not meant to minimize the serious equity issues that are raised by the unique situation of newly entering women faculty in the U.S. – as elsewhere. They do indeed have a tougher road to hoe with fewer immediate rewards (although compensation rates are improving slightly); and academic institutions do need to consider how they will address such issues from an equity perspective. At the same time, it is important to keep in mind that tenure-track vacancies account for a shrinking proportion of academic job openings – not quite half of the full-time vacancies over the past 15 year. Indeed, Leslie (2007) recently demonstrated using National Center for Education Statistics sources just how little the number of new tenure-track positions had grown in the U.S. – for men as well as women – over the past generation for those under 40. It is critically important to emphasize that the share of these regular full-time positions has not only declined proportionately, but that actual numbers of "traditional" positions show almost no growth. Current supply in the aggregate is more than likely to fulfill quite adequately that reduced demand – assuming that the old-line faculty do not, as a group, retire all at once (certainly an unlikely scenario). More troubling – and receiving much less attention – are the changing prospects of foreign-born faculty, especially Asian men in the natural sciences and engineering. While U.S. graduate programs in these disciplines have for at least the past

quarter-century been stocked by foreign-born scholars, there is new evidence suggesting that young scholars who once completed their doctorates in the United States and routinely stayed there to pursue academic and research careers are now less likely to come (a function at least in part of post-9/11 immigration restrictions) and increasingly returning home to pursue academic careers in the rapidly developing higher education systems of their home countries (Hong, 2008). Per capita research and development expenditures are increasing much more rapidly in China and other parts of Asia than in the United States (Cummings, 2008). Indeed, while the United States still maintained a global lead in production of scholarly papers and research, the center of gravity is discernibly shifting as by far the greatest growth in scholarly production moves to Asia (*ibid*.). While the magnitude of this reversal of the "brain drain" is not yet clear, the emerging signs are unmistakable, especially among Chinese academics. Moreover, there is no evidence whatever that the proportion of native-born American students in these fields is on anything but the continued wane (Leslie, 2007). Future prospects for foreign-born faculty underline the larger issue of discipline-specific variation in the actual numbers and proportionate representation of tenure-track and tenured faculty positions. Leslie (*ibid*.) recently examined disciplinary differences in the proportion of tenure-track *vs*. fixed-term positions between 1988 and 2004. He reported a clear bifurcation between those fields that showed continued growth in tenure-track positions and those that were growing primarily through the proliferation of fixed-contract positions. Generally, the natural sciences were the only group of disciplines showing considerable growth in tenure-track appointments – although they also grew in the number of contingent appointments. The health sciences, the humanities, and education, on the other hand, grew almost entirely in terms of contingent positions while the number of tenured positions actually declined. Faculty in the "high-tenure gain" fields have higher pay, lower undergraduate teaching loads, and produce more publications than faculty in "low-tenure-gain" fields. They are also more likely to receive research funding and spend more time on research. Moreover, the fields that have gained in the proportion of tenured/tenurable positions have tended to reduce reliance on part-time faculty while those who have lost tenured faculty have come to rely increasingly on part-time faculty.

These analyses suggest three things:

1. The traditional tenured/tenurable faculty is shrinking and is likely to continue to do so. The demand for tenured/tenure able faculty is actually

declining; and available supplies, despite some minor downturn in PhD production, seem likely more than adequate to meet demand. Moreover, currently practicing professionals and retirees seeking second careers constitute new and promising sources of supply.

2. Developments are increasingly uneven across fields. Certain fields in the natural sciences and engineering are certain to require an increased need for recruitment for tenure-track positions; most other fields are decreasing their recruitment of tenurable/tenured traditional faculty. The American academic landscape is increasingly differentiated by academic field or groups of academic fields – stratification lines that began to be drawn in the 1980s have now taken a second-order leap forward (Bowen & Schuster, 1986). Very different recruitment and retention policies will be required in these situations.

3. Foreign-born scholars have over the past 20 years played an important role in American graduate education in the natural sciences and engineering and have allowed the national scientific research enterprise to be adequately staffed. There are emerging signs that over the next generation there will be increasing competition for that supply from rapidly developing higher education systems, especially in Asia (that is, China's world-class universities initiative). In the context of current federal immigration policies, the recruitment of foreign-born scholars becomes particularly problematic.

The contingent faculty

What can we say about the one-quarter of new academic positions that are fixed-term contract positions? In the first place, it is helpful to recap the major sub-categories that exist within this broad area: full-time faculty in the professions, especially the health professions, who are "accidental" academics; women faculty who deliberately seek more circumscribed positions that do not involve open-ended research commitments (in some cases, moving from a tenure-track to a fixed-contract position or even to a part-time position, typically for family reasons); and aspiring, full-time tenure track faculty, males as well as females, who have been unable to land tenure-track positions, especially in certain "oversupplied" fields in the humanities and education. Recruitment and retention issues, I would argue, vary considerably depending on which of these

three sub-groups one is discussing. The "aspiring tenure-trackers" are the most single-mindedly motivated of the three sub-groups: while some may abandon the hope of a traditional academic career at some point (and economic concerns are likely to accelerate that "tipping point"), they typically represent that "special breed" of individual for whom academic work represents a rare occupational opportunity to fulfill deep personal needs. While some women may fall into this category of aspirants, there are many more who can be classified as "life balancers" for whom such term-limited and work-circumscribed positions are indeed a positive inducement to a species of academic life that minimizes its historically greatest disadvantages/costs. For those new faculty recruits who have retired from a first career and who are seeking renewal or reinvention in a second career (often coming with attractive pension in hand), contingent academic life may offer just the right blend of meaning and (marginally acceptable) compensation. The critical supply implications here tend to be field-specific. That is, there are a handful of fields where a significant segment of the entry-level academic track is functionally specialized, fixed-contract positions. They include English, foreign languages, mathematics, basic business courses, introductory general education requirements (drawing on social science and humanities faculty), and certain professional fields, including the health sciences. While American higher education may not, in the short or intermediate term, be in danger of "running out" of such individuals, there are troubling long-term implications for the survival and prosperity of these fields for whom academic careers have historically provided a modal venue.

The sub-group of professional field faculty – the "accidental" academics – are probably the most challenging of the three sub-groups in terms of recruitment and, especially, retention. Many of these individuals will have been practicing their profession before assuming a faculty position, are doing so while concurrently holding a faculty position, or will return to professional practice after a stint in a faculty position. Issues of competitive compensation will be greatest here. Then of course, there are the part-time faculty. They rarely constitute much of a recruitment problem – although this obviously varies by field and by geographic location (relatively easy in the major urban areas, much more difficult in rural areas). Retention can be a problem, but the available data suggests that nearly one-tenth of part-timers are actually tenured and as much as half may be classified as long-term part-timers, that is, individuals who teach one or two courses a year over a significant stretch of time. It is important to be clear that the labor market for contingent faculty is likely quite different than that for tenure-track faculty. It may be local or regional, but is

rarely national or international; or, as Twombly has described it in relation to the hiring of full-time tenure-track faculty at major community colleges, "recruit nationally, but hire locally or regionally" (Twombly, 2005, p.438). This means that institutions may not be self-consciously seeking the absolute "best and brightest" in filling different sorts of faculty positions, so much as seeking to match the requirements of a particular position (which may, for example, focus on clinical teaching) to the talents of a particular individual. Many, depending on location, will test the local and regional market – even while placing advertisements in the national media. It is a critical piece of reality – testing that only a bare majority of vacancies may be filled these days by national search and national hiring processes focused on a prospective recruit's scholarly accomplishments and potential.

The implications of the American model for Asia?

In all of this, I have left untouched one of the most glaring differences between the U.S. (although not probably true of the West, generally) and Asia – the great distrust of government; the notion that "good" government is "just enough" government to provide the minimum stability for individuals and businesses to reach for their individual dreams, toting their guns in hand (the cowboy is the iconic metaphor of the American); in Asia, of course (let's keep India out of this for the moment), Government is good (or at least can be) and public policy is a good (rather than an approach to avoiding the bad).

Indeed, one similarity that strikes me – at least between Japan and S. Korea – is the functional equivalence of the private sector in higher education. In Japan and S. Korea, the private sector exists to *protect* the public sector. The public sector is something that needs protection. Thus, the Asian strategy of the "demand absorbing" private sector is nothing less than un-American. In the American mind, public institutions should be competing against the private sector, and "let the best man win." Usually that's not the public sector – although there are notable exceptions, like the Universities of Michigan, Texas and California.[3] Perhaps the biggest unheralded change in U.S. higher education generally, and in the American academic profession, is the systematic starvation of the public sector in higher education. The public sector is, of course, about 75 percent of the U.S. enterprise when you consider student

[3] These exceptions have maintained their pre-eminence by their entrepreneurial spirit and largely privatizing themselves.

enrollment and about 2/3 when you consider faculty numbers. According to the State Higher Education Executives Organization (SHEEO), *real* state appropriations to higher education *per* FTE student in FY 2008 were actually lower than in 1985; and during that period the portion of public institution revenues from state appropriations has shrunk from nearly 60 percent to under 40 percent (Zumeta, 2009). Preliminary evidence suggests that such *de facto* defunding has already been translating directly into declining institutional performance – at least in the research area. Adams reported that the U.S. has been ceding its dominant share of both scientific publications and citations to Europe and to East Asia, led by the declining research productivity of America's *public* as distinguished from its private research university sector (Adams, 2010).

So the first lesson from the "real" American model is *continue to maintain and protect the public sector*. It is a good thing and be *very* wary about all these initiatives to privatization.

What to my mind has been the historically greatest strength of the U.S. system has been the development of a clear and highly predictable infrastructure for academic careers. The American Association of University Professors formalized a regular career track, initiated upon appointment at an individual institution, and marked by a six year probationary period, followed by an up or out tenure decision, followed by promotion to the rank of full professor. That is exactly what is in the process of disintegrating. This is what the Asian countries ought to be trying to build. All of the Western countries that have not built such an infrastructure (I am thinking here of France and Germany) have suffered – badly – for that; and recent reforms in those countries have moved in that direction of building career infrastructure.

Now, and this is a major difference between the Asian countries and the U.S. – the U.S. has always used *immigration* as a band-aid for the failures of its public policy. From a human capital perspective, we have built our core system, especially in the natural sciences and engineering on the backs of Germany (during World War II), and later on Eastern Europe, the former Soviet Union, Margaret Thatcher's Great Britain and now on the backs of China, S. Korea and India. Stop building us up and start building yourselves up! I say that knowing full well that certainly China and S. Korea and even India are taking steps to reverse their 'brain drain" and bring home all those young PhDs trained in the U.S. and Western Europe. You may also want to learn something from the U.S. about immigration as a means of nation building. It can cover a lot of mistakes in public policy. One final observation concerns the use of the term

"competiveness". We all want to create world-class universities. The Top 20, perhaps the Top 100. There is a problem here; which is purely one of Newtonian physics. There are only so many top spots to fill: my gain is your loss. But what does it take to make a world-class university? Can one exist as veritable island in a sea of mediocrity? Where do its students and staff come from? We need to give that a good deal of thought. Are World Class Universities a *national* project undertaken within an international market where we just scour the world for the best people and buy them? Indeed, the counterpoint to a unitary Western model of the academic profession need not be only the development/design of a new "Asian" model, but rather the development of a supra-national or supra-regional model.

Take the case of the Chinese born geneticist who is a professor at Yale Medical School for eight months a year and a professor at Fudan University for three months a year where he heads up the world's most modern and most expensive genetics laboratory built (probably in three months) by the Chinese government – after the U.S. government (through the NIH and NSF)[4] and private foundations in the U.S. – declined to do so (Wines, 2011). This is model of the academic profession divorced from nationality, one that is built essentially on collaboration and not on competition. What, if anything, does the case of the Chinese born geneticist tell us about the global academic profession – and the place of the Asian academic profession within such an emerging "global" profession? Where (to whom) does the world-class geneticist belong? To the U.S. or to China? Which is the world class university? Yale? or Fudan? Can any one university be "world class" in everything? Even if this is Asia's century?

These are the sorts of questions that I leave with you and ask that you address as you consider how to shape the future of the Asian research university and the Asian academic profession.

[4] The National Institute of Health (NIH) and the National Science Foundation (NSF) are entities established by the U.S. government to fund and promote scientific research through administration of competitive grant programs.

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Conclusion

Changes in and Issues of Academic Profession in Asia

Futao Huang*

Introduction

The Research Institutes for Higher Education (RIHE) of Hiroshima University and Hijiyama University jointly organized the international conference, entitled 'the Changing Academic Profession in Asia: Contexts, Realities and Trends', on February 5-6, 2011 – the last of five conferences held as part of the Changing Academic Profession Project. At the conference, 60 participants from different parts of Japan heard 13 speakers from 8 countries make presentations, including four keynote speeches and nine country-specific presentations.

From the historical, comparative and quantitative perspectives, major issues concerning the emergence, changes and characteristics of the academic profession in selected Asian countries have been discussed. With respect to the keynote speeches, on the topic "University Reforms in Japan", Mr. Enomoto from the MEXT, Japan introduced the context of Japan's ongoing higher education reforms, issues and trends. Professor Arimoto addressed "International Trends in the Academic Profession from a Japanese Perspective". Based on major findings from the 1992-93 Carnegie survey, the 2007 CAP survey as well as a separate 2008 survey conducted by the Japanese team with the same questionnaire as the earlier 1992-93 Carnegie survey, he drew a portrait of the academic profession in participating countries analyzed the challenges facing the Japanese academic profession, and offered policy recommendations. In his speech on "The Rise of Asian Universities: Focus on the context",

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Professor Cummings discussed the beginnings of Asian higher education, several relevant characteristics of the region, and identified obstacles to academic knowledge production in the region. He concluded by arguing that different academic systems in the Asian region might develop distinctive patterns of excellence in the decades ahead while the region as a whole assumed an increasingly central position on the world's stage. Professor Teichler's speech sought to answer the question: "Is there an Asian Academic Profession?". By comparing senior and junior academic staff by institution across five Asian systems – China, China Hong Kong, Malaysia, Japan and Korea – he concluded that hardly any similarity can be observed across all Asian countries relative to other regions of the world. Obviously, he argued, there is no distinctively Asian pattern of academic work and careers.

In relation to the nine country presentations, Professor Yan from China emphasized the importance of Asian culture and values as well as regional features when studying the academic profession in Asia. In effect, his report argued the counterpoint to Professor Teichler. By tracing the formation of the academic profession in China, Japan and Korea, Professor Huang from Hiroshima University, Japan examined the changing context, striking characteristics of, and the major challenges facing academics in the three countries of East Asia. Associate Professor Fukudome, also from Hiroshima University, highlighted the key educational and research activities, and the career development of the academic profession in Japan in comparison with 17 other countries which took part in the CAP survey in 2007. Based on the analysis, he identified the distinctive characteristics of the academic profession in Japan and the issues facing the Japanese academics. Professor Pang from Malaysia presented a proposal for a follow-up study on the changing academic profession in his country. In his report, he reviewed recent developments in Malaysia affecting the academic profession, as well as the research objectives, questions, and methods of the proposed Malaysian survey. Associate Professor Shin from Korea dealt with two issues concerning the Korean academic profession: First, how Korean higher education developed in the most recent years?; and second, what demonstrable changes occurred to the Korean academic profession between the 1992 CAP and the 2008 CAP survey? Ph.D. candidate Lee from Korea made an analysis of the differences in international collaboration and research performance of academic staff in different types of universities in Korea and assessed the impact of internationalization strategies on research collaboration and research performance at the institutional and departmental levels. In her presentation, Professor Tai from Taiwan examined the change in the governance

of higher education in Taiwan from a government control model to a government supervision model, while identifying the challenges facing the development of the academic profession in Taiwan, including the population changes, a call for internationalization, the need for salary incentive, and demands for increasing individual accountability. Professor Yavaprabhas from Thailand introduced three strategic initiatives for regional integration of higher education in South Asia being pursued by SEAMEO RIHED. They include promoting student and staff mobility across the Southeast Asian region, the ambitious idea of developing a regional credit transfer system, and the establishment of ASEAN Research Clusters and the creation of ASEAN Citation Index. The final presentation made by Professor Finkelstein from the USA is mainly concerned with demographic changes in the U.S. academic profession, their changing institutional and disciplinary profile, recent changes in academic appointments and the academic career track in the U.S. and a few observations about academic working conditions in the U.S.

Additionally, some inspiring topics were also discussed as follows:

- What are the distinctive culture and the core values of the Asian academic profession? What similarities can be discerned among Asian culture? And is there any distinctive type of Asian academic profession in comparative perspective?
- Since the first Carnegie survey, what changes have occurred in the academic profession in individual Asian countries? What is the context for these changes? And what is the relationship between the social changes, the development of higher education and the change in the academic profession in selected countries in the region?
- What kind of the questionnaire should be developed for the international survey to be implemented in the participating countries in the future? And how the individual Asian country research teams collaborate in their research?

Although four international conferences on the changing academic profession have already taken place in Hiroshima since 2005, there remain many issues to be dealt with in future. They include:

- What models or patterns could be identified through a refined analysis of the academic profession at a national level and at a regional level in the next three years?

- To what extent substantial changes have happened to the academic profession in Asia as both the social structure and the economy constantly change? And
- What implications can our research have on political and legal decisions which might lead to positive and healthy impacts on the academic profession in individual countries?

Appendices

Appendix 1: Conference Program

The Changing Academic Profession in Asia: Contexts, Realities and Trends

Date: February 5-6, 2011
Venue: Hiroshima Garden Palace

Saturday, February 5

8:30 - Registration

*** **Opening Ceremony** ***

9:00 - 9:20 **Opening Remarks**
Toshimasa Asahara, President, Hiroshima University, Japan
Susumu Takahashi, President, Hijiyama University, Japan
Shinichi Yamamoto, Director & Professor, Research Institute for Higher Education, Hiroshima University, Japan
Akira Arimoto, Director & Professor, Research Institute for Higher Education, Hijiyama University, Japan

9:20 - 9:30 **Orientation**
Futao Huang, Professor, Research Institute for Higher Education, Hiroshima University, Japan

*** **Session 1** ***

Chairs:
Takekazu Ehara, Professor, Institute for Teaching and Learning, Ritsumeikan University, Japan
Hsiou-Hsia Tai, Professor & Dean, College of Humanities and Social Sciences, Chung Hua University, Taiwan

9:30 - 10:00 **Keynote Speech 1**
"Academic Reform in Japan"
Tsuyoshi Enomoto, Director for Higher Education Policy, Ministry of Education, Culture, Sports, Science and Technology, Japan

10:00 - 10:30 **Keynote Speech 2**
"International Trends of the Academic Profession: from a Japanese perspective"
Akira Arimoto, Director & Professor, Research Institute for Higher Education, Hijiyama University, Japan

10:30 - 10:45 Coffee Break

10:45 - 11:15 **Presentation 1: China**
"What is Special Value for the Research on Academic Profession in China?"
Fengqiao Yan, Professor, Graduate School of Education, Peking University, China

11:15 - 11:45 **Presentation 2: Japan**
"The Academic Profession in East Asia: changes and realities"
Futao Huang, Professor, Research Institute for Higher Education, Hiroshima University, Japan

11:45 - 12:30 Discussion

12:30 - 13:30 Lunch

*** **Session 2** ***
Chairs:
Reiko Yamada, Professor, Department of Education and Culture, Doshisha University, Japan
Supachai Yavaprabhas, Director, SEAMEO Regional Centre for Higher Education and Development (RIHED), Thailand

13:30 - 14:00 **Keynote Speech 3**
"The Changing Context for Asia's Academies"
William K. Cummings, Professor of International Education and International Affairs, The Elliott School of International Affairs, The George Washington University, USA

14:00 - 14:30 **Presentation 3: Japan**
"The Academic Profession in Japan: works, careers and scholarship"
Hideto Fukudome, Associate Professor, Research Institute for Higher Education, Hiroshima University, Japan

14:30 - 15:00 **Presentation 4: Malaysia**
"The Instrumentation for the Changing Academic Profession Project in Malaysia 2010"
Vincent Pang, Associate Research Fellow, National Higher Education Research Institute (IPPTN), Universiti Sains Malaysia, Malaysia

15:00 - 15:15 Coffee Break

15:15 - 15:45 **Presentation 5: South Korea**
"Model of Higher Education Development and Academic Professions in South Korea"
Jung Cheol Shin, Associate Professor, Department of Education, Seoul National University, South Korea

15:45 - 16:15 **Presentation 6: South Korea**
"Internationalization of Universities in South Korea: focusing on international networking & curriculum strategies, and research performance"
Soo Jeung Lee, PhD student, Department of Education, Seoul National University, South Korea

Yang Son Kim, PhD student, Department of Education, Seoul National University, South Korea

16:15 - 16:45 **Presentation 7: Taiwan**
"The Changing Taiwanese Academic Profession: from decentralization to re-centralization"
Hsiou-Hsia Tai, Professor & Dean, College of Humanities and Social Sciences, Chung Hua University, Taiwan
Chia-Yu Chen, Doctoral student, Center for the Study of Higher and Postsecondary Education, University of Michigan, Ann Arbor, USA

16:45 - 17:30 Discussion

18:00 - 20:00 Reception at Hiroshima Garden Palace

Sunday, February 6

8:30 - Registration

*** **Session 3** ***
Chairs:
Satoshi P. Watanabe, Professor, Research Institute for Higher Education, Hiroshima University, Japan
Vincent PANG, Associate Research Fellow, National Higher Education Research Institute (IPPTN), Universiti Sains Malaysia, Malaysia

9:00 - 9:30 **Keynote Speech 4**
"The Academic Profession in Asia: common and diverse features in comparative perspective"
Ulrich Teichler, Professor & former Director, International Centre for Higher Education Research Kassel (INCHER-Kassel), The University of Kassel, Germany

9:30 - 10:00 **Presentation 8: Thailand**
"Connect ASEAN: pushing forward harmonisation of higher education in SEA Region"
Supachai Yavaprabhas, Director, SEAMEO Regional Centre for Higher Education and Development (RIHED), Thailand

10:00 - 10:30 **Presentation 9: USA**
"The Re-Shaping of the U.S. Academic Workforce"
Martin Finkelstein, Professor of Education, College of Education and Human Services, Seton Hall University, USA

10:30 - 10:45 Coffee Break

10:45 - 11:15 **Presentation 10: Vietnam**
"Trends in Academic Professions in Vietnam"
Le Dong Phuong, Director, Center for Higher and Vocational Education, Vietnam Institute for Education Sciences, Vietnam

11:15 - 12:00 Discussion

12:00 - 12:15 **Concluding Remarks**
Tsukasa Daizen, Professor, Research Institute for Higher Education, Hiroshima University, Japan

12:15 - 12:30 **Closing Speeches**
Akira Arimoto, Director & Professor, Research Institute for Higher Education, Hijiyama University, Japan
Shinichi Yamamoto, Director & Professor, Research Institute for Higher Education, Hiroshima University, Japan

Appendix 2: List of Participants*

OVERSEAS PARTICIPANTS

Invited Experts

China

Fengqiao Yan	Professor, Graduate School of Education, Peking University

Germany

Ulrich Teichler	Professor & former Director, International Centre for Higher Education Research Kassel (INCHER-Kassel), The University of Kassel

Malaysia

Vincent Pang	Associate Research Fellow, National Higher Education Research Institute (IPPTN), Universiti Sains Malaysia

South Korea

Jung Cheol Shin	Associate Professor, Department of Education, Seoul National University

Taiwan

Hsiou-Hsia Tai	Professor & Dean, College of Humanities and Social Sciences, Chung Hua University

Thailand

Supachai Yavaprabhas	Director, SEAMEO Regional Centre for Higher Education and Development (RIHED)

USA

William K. Cummings	Professor of International Education and International Affairs, The Elliott School of International Affairs, The George Washington University
Martin Finkelstein	Professor of Education, College of Education and Human Services, Seton Hall University

Participants

South Korea

Soo Jeung Lee	PhD student, Department of Education, Seoul National University
Yang Son Kim	PhD student, Department of Education, Seoul National University

* As of February, 2011

Taiwan

Chia-Yu Chen	Doctoral student, Center for the Study of Higher and Postsecondary Education, University of Michigan, Ann Arbor, USA

UK

Keith J. Morgan	Emeritus Professor, Lancaster University / University of Newcastle, Australia

and another 7 overseas participants

JAPANESE PARTICIPANTS

Presidents

Toshimasa Asahara	President, Hiroshima University
Susumu Takahashi	President, Hijiyama University

Invited Experts

Tsuyoshi Enomoto	Director for Higher Education Policy, Ministry of Education, Culture, Sports, Science and Technology
Akira Arimoto	Director and Professor, Research Institute for Higher Education, Hijiyama University
Takekazu Ehara	Professor, Ritsumeikan University
Reiko Yamada	Professor, Department of Education and Culture, Doshisha University

Research Institute for Higher Education (RIHE)

Shinichi Yamamoto	Director and Professor
Ikuo Kitagaki	Professor
Tsukasa Daizen	Professor
Futao Huang	Professor
Satoshi P. Watanabe	Professor
Jun Oba	Associate Professor
Masataka Murasawa	Associate Professor
Kazunori Shima	Associate Professor
Hideto Fukudome	Associate Professor
Yumiko Hada	Associate Professor

and another 34 Japanese Participants

R.I.H.E. PUBLICATION IN ENGLISH

RIHE International Publication Series

No. 1: Kaneko, M. (1987). *Enrollment Expansion in Postwar Japan.*
No. 2: Guocai, Z. (1989). *Higher Education Research in China: An Annotated Bibliography.*
No. 3: Abe, Y. (1989). *Non-University Sector Higher Education in Japan.*
No. 4: Kaneko, M. (1989). *Financing Higher Education in Japan: Trends and Issues.*
No. 5: Kaneko, M. (1992). *Higher Education and Employment in Japan: Trends and Issues.*
No. 6: Morgan, J. Keith (1999). *Universities and the Community: Use of Time in Universities in Japan.*
No. 7: Arimoto, A. (ed.) (2001). *University Reforms and Academic Governance: Reports of the 2000 Three-Nation Workshop on Academic Governance.*
No. 8: Arimoto, A. (ed.) (2002). *University Reforms and Academic Governance Reconsidered: Report of the Six-Nation Higher Education Research Project.*
No. 9: Arimoto, A., Huang, F., and Yokoyama, K. (eds.) (2005). *Globalization and Higher Education.*
No.10: Huang, F. (ed.) (2006). *Transnational Higher education in Asia and the Pacific Region.*

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No. 6: *Construction and Quality Assurance of 21st Century Higher Education* (Reports of the 2003 COE International Symposium) (2003).

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No.20: *Quality, Relevance, and Governance in the Changing Academia: International Perspectives* (Reports of Changing Academic Profession Project Workshop) (2006).

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No.29: *Changing Governance in Higher Education: Incorporation, marketisation, and other reforms －A Comparative study －* (2007).

RIHE International Seminar Reports

No. 1: *Perspectives for the Future System of Higher Education* (Report of the Hiroshima International Seminar on Higher Education) (1977).

No. 2: *Higher Education for the 1980s: Challenges and Responses* (Report of the Second Hiroshima International Seminar on Higher Education) (1980).

No. 3: *Innovations in Higher Education: Exchange of Experiences and Ideas in International Perspective* (Reports of the Hiroshima/OECD Meeting of Experts on Higher Education and the Seminar on Innovations in Higher Education) (1981).

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No. 5: *The Changing Functions of Higher Education: Implications for Innovation* (Reports from the 1984 OECD/JAPAN Seminar on Higher Education), (1985).

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No. 9: *Foreign Students and Internationalizaion of Higher Education* (Proceedings of OECD/JAPAN Seminar on Higher Education and the Flow of Foreign Students) (1989).

No.10: *Academic Reforms in the World: Situation and Perspective in the Massification Stage of Higher Education* (Reports of the 1997 Six-Nation Higher Education Project Seminar) (1997).

No.11: *Higher Education Reform for Quality Higher Education Management in the 21st Century: Economic, Technological, Social and Political Forces Affecting Higher Education* (Proceedings of the 1999 Six-Nation Presidents' Summit in Hiroshima) (2000).

No.12: *The Changing Academic Profession in International Comparative and Quantitative Perspectives* (Report of the International Conference on the Changing Academic Profession Project, 2008) (2008).

No.13: *The Changing Academic Profession over 1992-2007: International, Comparative, and Quantitative Perspectives* (Report of the International Conference on the Changing Academic Profession Project, 2009) (2009).

No.14: *Producing Qualified Graduates and Assuring Education Quality in the Knowledge-Based Society: Roles and Issues of Graduate Education* (Report of the International Workshop on Graduate Education, 2009) (2010).

No.15: *The Changing Academic Profession in International and Quantitative Perspectives: A Focus on Teaching & Research Activities* (Report of the International Conference on the Changing Academic Profession Project, 2010) (2010).

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