

Centre for Global Higher Education working paper series

AN ESRC & HEFCE INVESTMENT

Changes and challenges to higher education financing in Japan

Futao Huang

Working paper no. 10 December 2016





Published by the Centre for Global Higher Education, UCL Institute of Education, London WC1H 0AL

www.researchcghe.org

© Centre for Global Higher Education 2016

ISSN 2398-564X

The Centre for Global Higher Education (CGHE) is the largest research centre in the world specifically focused on higher education and its future development. Its research integrates local, national and global perspectives and aims to inform and improve higher education policy and practice.

CGHE is funded by the Economic and Social Research Council (ESRC) and the Higher Education Funding Council of England (HEFCE), and is a partnership based at UCL Institute of Education with Lancaster University, the University of Sheffield and international universities Australian National University (Australia), Dublin Institute of Technology (Ireland), Hiroshima University (Japan), Leiden University (Netherlands), Lingnan University (Hong Kong), Shanghai Jiao Tong University (China), the University of Cape Town (South Africa) and the University of Michigan (US).

The support of the Economic and Social Research Council (ESRC) and the Higher Education Funding Council of England (HEFCE) is gratefully acknowledged.

This working paper is part of Research Programme 1. 'Globalisation, UK higher education and the public contributions of HEIs'.

Changes and challenges to higher education financing in Japan

Futao Huang

Contents

Abstract	1
Keywords	1
1. Introduction	2
2. Higher education in Japan	3
3. Japanese higher education financing	
3.1 General frameworks	7
3.2 Contextual factors	8
4. Changes in Japanese financing systems	. 11
5. Influences and outcomes of Japanese financing	21
6. Concluding remarks	22
References	. 23

Changes and challenges to higher education

financing in Japan

Futao Huang

Futao Huang is Professor at Research Institute for Higher Education at Hiroshima University. He is also an International Co-Investigator, Centre for Global Higher Education. Email: futao@hiroshima-u.ac.jp

Abstract

The purpose of this study is to analyse the basic model of Japanese higher education financing systems, the main changes and challenges which have occurred in these systems, and their influences on higher education development. The study is based on previous studies, national statistics and case studies of three different sectors, and focuses particularly on the period since the early 2000s. The study argues that major reasons for the changes taking place in the Japanese financing systems include not only national contextual factors, but also international and global drivers. The study shows that the past and current financing systems have greatly contributed to the massification of Japanese higher education, guality assurance of individual universities and colleges, internationalisation of Japanese higher education, and close partnership and collaboration between industry, university and government. In particular, compared to many Western countries, the role of the central government on both quantitative expansion and qualitative improvement of Japanese higher education institutions, on the restructuring of national higher education and financing systems, on the formation of frameworks of quality assurance, and on governance arrangements at an institutional level cannot be overestimated.

Keywords

Financing systems; Japanese higher education; Corporatisation of national universities; Challenges; Market forces; Comparative education

1. Introduction

Since the end of WWII, unlike North America and most European countries, Japan has formed diversified higher education systems. These consist of three different higher education sectors: national,¹ local public,² and private. Prior to the early 2000s, among national, local public and private sectors, significant differences existed; differences not only in their roles, functions and student composition, but also in their financing mechanisms. However, since the early 2000s, especially with the incorporation of national universities in April 2004 – followed by a similar incorporation of public universities – radical changes have occurred in the relationship between the central government and national and public universities. On the one hand, there has been a gradual and steady drop in the amount of government expenditure in both national and public sectors. On the other hand, the government has increased the amount of competitive funding, including both research project grants and special budgets for a variety of national projects or programmes related to educational activities (Huang, 2010). As I will discuss in the following section, since 2004, while the financing systems have been restructured at a national level, individual national and public university corporations have been asked to increase their own revenues by diversifying channels to generate resources with more freedom and autonomy.

This study begins with a brief introduction to the structure and main characteristics of Japanese higher education. It then outlines key features of Japan's financing system. In the third section, the study describes major changes that have occurred in Japanese higher education financing, especially in recent years, and key factors affecting these changes. In the fourth section, it discusses the major influence and outcomes of the financing system on higher education development and institutional strategies by providing specific information on how Japan is able to meet the needs of providing higher education access to disadvantaged groups (e.g., those from low socio-economic status backgrounds and international students) and challenges facing Japanese higher education financing. The final part summarises and offers implications for research, institutions and policy.

¹ A university set up by a national university corporation. Due to the incorporation of national universities in 2004, every national university is now established as a legal entity by a corporation, according to the framework laid down in the *National University Corporation Act*. Formerly, they were operated as governmental organisations based on the *Act on the Establishment of National Schools*.

² A university set up by local public organisations including municipal or prefectural governments. Since the 2004 academic year, the organisations may establish, at their own discretion, municipal/prefectural university corporations, to which they may delegate the management of the university. A municipal/prefectural university corporation is a local incorporated administrative agency established by a local public organisation with the aim of founding and managing one or more municipal/prefectural university(ies).

2. Higher education in Japan

Contemporary Japanese higher education basically consists of three major types of institution: universities, junior colleges (*Tanki Daigaku* in Japanese), and colleges of technology³. In some cases, specialised training colleges (*Sensyuu Gakkou*)⁴ are also considered part of the higher education sector. The number of students officially enrolled in the Open University of Japan (the University of Air until October 2007) and those pursuing their higher education learning through TV or radios in other regular universities and junior colleges are included in the data of Japan's post-secondary education as well.

As shown in Table 1, as of 2015, except for 3,201 special training schools, there are 1,254 higher education institutions in total. By type there are 779 universities, 346 junior colleges and 57 colleges of technology. The private sector accounts for 77.5 per cent of the total. With regard to individual types of institution, colleges of technology are predominently national (89.4 per cent). By contrast, universities and junior colleges are predominantly private (76.7 per cent and 94.8 per cent respectively).

Table 1

Numbers of institutions by type and sector, 2015

Sector	Sector Total		Junior Colleges	College of Technology	Special Training School (Vocational Courses)	
Total	1,254	779	346	57	3,201	
%)	(00%)	(00%)	(00%)	(00%)	(00%)	
National	144	86	0	51	9	
%)	(11.5%)	(11.4%)	(0.0%)	(89.4%)	(0.3%)	
Local	129	89	18	3	193	
%)	(10.3%)	(11.9%)	(5.2%)	(5.3%)	(6.0%)	
Private	981	604	328	3	2,999	
%)	(77.5%)	(76.7%)	(94.8%)	(5.3%)	(93.7%)	

Source: Ministry of Education, Culture, Sports, Science and Technology (MEXT) (2016), *Basic Investigation on School Education: Higher Education Institutions* [Gakkou kihon cyousa houkokusyo, koutou kyouiku kikan hen, 2008), Tokyo: Japan. (in Japanese) with author's modifications.

 ³ A higher education institution that offers a unified five-year education (five years, six months for mercantile marine studies) aimed at nurturing technical experts. It requires graduation from lower secondary schools or equivalent academic ability for admission. A minimum of 167 credits are required for graduation (147 credits for mercantile marine studies). Graduates are awarded the title of Associate.
⁴ A higher education institution that provides practical and technical learning and skills in a wide variety of disciplines such as medical care, technology, culture and general education, business, personal care and nutrition, education and welfare, fashion and home science, agriculture and much more. Graduates are conferred with Certification.

As indicated in Table 2, as of 2015, there are 2,860,210 students in total, including 249,474 students at graduate level, 2,716,134 students at undergraduate level in university, junior colleges and colleges of technology, and 187,528 students in correspondence schools. The proportion of private sector enrolments constitutes 75.7 per cent of the total. Furthermore, with an enrolment of 2,514,228 students, undergraduate level makes up the largest proportion of students. A closer look at percentages of students at different levels by type of institution reveals that the national sector represents the largest enrolment percentage of students studying at graduate level and in colleges of technology, at 61.2 per cent and 89.6 per cent respectively. Conversely, private institutions represent the largest share of student enrolment in undergraduate universities and junior colleges, at 77.5 per cent and 94.8 per cent respectively.

Table 2

								Special Training
Sector	Total	Graduate School	Total	University (Under- graduate Level)	Junior Colleges	College of Technology	Correspondence Education	
Total	2,860,210	249,474	2,716,134	2,556,062	132,681	57,611	187,528	588,183
(%)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)
National	610,802	150,091	477,153	445,668	0	51,615		301
(%)	(21.4)	(61.2)	(17.6)	(17.4)	(0.0)	(89.6)		(0.1)
Local	148,766	15,974	124,054	129,618	6,956	3,778		25,422
(%)	(5.2)	(6.4)	(4.6)	(5.1)	(5.2)	(6.6)		(4.3)
Private	2,100,642	83,409	2,114,927	1,980,776	125,725	2218		562,460
(%)	(73.4)	(32.4)	(77.9)	(77.5)	(94.8)	(3.8)		(95.6)

Student enrolment by educational levels and sector, 2015

Source: MEXT (2008), Basic Investigation on School Education: Higher Education Institutions [Gakkou kihon cyousa houkokusyo, koutou kyouiku kikan hen, 2016), Tokyo: Japan. (in Japanese) with author's modifications.

Key characteristics of Japanese higher education may be practically identified as follows. First, modern Japanese universities were developed on the basis of the German research-oriented model in the latter part of the 19th century. This is especially the case in national universities in relation to their internal governance arrangements and teaching and research activities. From the latter part of the 19th century to the early 20th century, like many other countries such as the United States, China, France, and so forth, many Japanese students and researchers or scholars came to Germany to pursue advanced learning. After returning to Japan, some of them introduced German educational ideas and practices to Japanese universities and other higher education institutions. According to Ushiogi (2007), the impact of the Humboldtian ideal and the German research university on Japanese higher education can be divided into two broad stages. Prior to 1910, more efforts were made to introduce and implement a unity of teaching through current research, seminar-based instruction in the classroom, establishing university libraries, laboratories, and research institutes, and seeking corporate autonomy for universities. For example, from 1900 to 1907, Professor Yoshito Takane – who studied at the University of Berlin from 1896 to 1900 – attempted the use of seminar-based instruction in the Faculty of Law at the Imperial University of Kyoto.

Since 1910, with more research into German research universities and more academic exchange between Japan and Germany, the Humboldtian model of higher education has been introduced to Japan in a more systematic way. Clear examples include the increasingly published articles in newspapers and journals about German research universities and especially the interpretation of the Humboldtian model. Since the conclusion of WWII, although Japanese higher education has been largely affected by US ideals in almost all aspects, part of the German perspective continues to influence Japanese higher education and its academics. To illustrate, in terms of governance arrangements, modern universities in Japan combine governmental control with a considerable measure of internal academic freedom, as exists in Germany (Cummings & Amano, 1977; Amano, 1989).

By the early 2000s, the central government on the one hand maintained strong regulation and control of the scale, budget, and organisational structures of each college and university. For example, until March 2004 when all national universities became national university corporations, faculty members in these national universities were deemed civil servants. The government could regulate almost all of the institutions' missions and activities. On the other hand, as the basic educational, research, administrative and political unit of these universities was the academic chair position (which was headed by a full professor, a lecturer, and one or two assistants), at the institutional level, professors enjoyed a large measure of academic freedom and autonomous power. Furthermore, according to the results of the International Survey of the Academic Profession, which was conducted by the Carnegie Foundation in 1992, Japanese faculty completed more scholarly publications than faculty in any of the other countries surveyed. Moreover, approximately 75 per cent of Japanese faculty members think that it is important for a faculty member to have a strong record of successful research activity, a proportion much higher than in most of the other represented countries (Arimoto, 1996). Such emphasis on academic research reflects the German influence in higher education.

Second, although there has been a continuing decline in the number of 18-year-olds in the population since the early 1990s, there has been steady growth in the rate of higher education enrolment. By 2015, the gross enrolments of higher education institutions,

including universities, junior colleges, colleges of technology and specialised training colleges, amounted to nearly 80 per cent of the age cohort (Ministry of Education, Culture, Sports, Science and Technology (MEXT), 2016). This indicates that Japanese higher education has evolved from the stage of mass higher education to universal access to higher education, according to Martin Trow's (1973) definition.

Third, with the massification of higher education and near universal access to higher education, Japan has gradually formed diversified higher education systems. As mentioned earlier, three different sectors are represented within the systems: the national, local public or municipal/prefectural, and private sectors. The national and public sectors are mainly established, founded, and administered by national government and local authorities respectively, while the private sector is established and operated by school corporations and is largely dependent on tuition and fees⁵. As such, these three educational sectors are expected to play different roles and fulfil diverse functions. In particular, there is a clear division of labour between the national and private sectors. Except for a very few private universities with a long history, the vast majority of private sector institutions are involved in instructional activities in humanities and social sciences at an undergraduate level. They provide vocational and practical educational programmes. Moreover, as a huge amount of their revenue comes from tuition and fees, the operation and management of the private sector is more market-oriented than either the national or local public sector. The local public sector institutions, which are established and funded by local authorities, focus on the production of graduates for regional economic development and engage in service activities for the local community. In contrast, in addition to teaching activities, the national universities are more engaged in basic, applied, and large-scale scientific research. For example, according to the Academic Ranking of World Universities and the Times Higher Education Supplementary, Japan's universities listed among the top 100 are all national universities (e.g., the University of Tokyo and Kyoto University).

Finally, as aforementioned, Japan's private sector comprises the vast majority of both total institutions and student enrolments, particularly at the undergraduate level (MEXT, 2016). This trend departs from that seen in the United States and many countries in Europe. This preponderance of private institutions has exerted a significant impact on Japan's financing systems.

⁵ According to the Japan Student Services Organisation, academic fees for the first year of undergraduate education are comprised of admission fee, tuition fee, facility and equipment usage fee. Retrieved at http://www.g-studyinjapan.jasso.go.jp/en/modules/pico/index.php?content_id=17 (12 September 2016).

3. Japanese higher education financing

3.1 General frameworks

Due to the existence of a huge number of private higher education institutions that are basically dependent on tuition and fees, the proportion of public expenditure to GDP on higher education in Japan is lower than many other OECD countries. As a result, students and their parents must contribute far more to their educational expenses. Notably, the proportion of public expenditure to GDP on all tertiary education slightly increased from 1.4 per cent in 2000 to 1.5 per cent in 2012. This is equivalent to the average proportion of public expenditure on tertiary higher education in all the OECD countries (OECD, 2015, p. 233). In terms of the proportion of private contribution, Japan rose to one per cent of GDP, higher than the average proportion (0.4 per cent) of individual OECD countries in 2015 (OECD, 2015, p. 235). Furthermore, as of 2015 the percentage of public funding sources in Japan only comprises 34.3 per cent of the total, whereas the percentage of all private funding sources is as high as 65.7 per cent of the total, among which the percentage of household expenditure reaches 53.4 per cent (OECD, 2015). Significantly high tuition and fees are charged in national, local public, and private sectors in Japan, compared to many OECD member countries. For example, in the 2014-2015 academic year, the average amount of tuition and fees charged in both national and public sectors was US\$5,152 at the undergraduate level, while it was as high as US\$8,262 in private institutions. Among all the OECD countries in which the relevant data is available, Japan was one of the countries with the most expensive tuition and fees (OECD, 2015, p. 237).

By sector, the central government allocated over 90 per cent of national universities' funding, especially prior to March 2004 when all national universities became national university corporations. Similarly, as their mission is expected to be more responsive and relevant to the demands of local economic development, community and industry, more than half of local public universities' revenue comes from local authorities. In contrast, although the central government has provided some financial support to private universities since 1973, the proportion of public subsidies makes up less than 20 per cent of their total revenue.

Furthermore, clear differences in funding mechanisms can be identified, not only between the three sectors, but also within each sector. The budgeted funding varies even within the same sector, depending on universities' history, traditions, academic and social prestige, size of student enrolment, missions, national policies, and so forth. For instance, in the national and private sectors, the old imperial universities and a very few elite private universities (which were established before WWII) are allocated more public funding than other universities.

From the perspective of student service, Japan has developed various programmes for different types of students. On 1 April 2004, the Japan Student Services Organisation (JASSO) was founded by rearranging and integrating: (1) the scholarship loan programmes provided by the Japan Education Association; (2) the support programmes for international students provided by the Association of International Education, Japan; (3) the Centre for Domestic and Foreign Students; (4) the International Students Institute; (5) the Kansai International Students Institute; and (6) the scholarship programmes for international students and the student support programmes provided by the government. Currently, it mainly provides four programmes to prepare an environment suitable for both Japanese and international students to study in either Japanese or foreign universities. These include scholarship loan programmes for Japanese students, support programmes for international students to study abroad, and other programmes for international student exchange.

JASSO provides scholarship loan programmes in the form of Category 1 loans (interestfree) and Category 2 (interest-bearing) for Japanese students who study in all types of higher education institution. Numbers of recipients of Category 1 and Category 2 have been increased from 409,681 persons and 583,065 persons in 2005, to 467,297 persons and 1,344,640 persons in 2015 respectively. The amount of Category 1 loans and Category 2 loans has also grown from 254.0 billion JPY and 487.9 billion JPY, to 317.3 billion JPY and 796.6 billion JPY respectively over the same period (JASSO, 2016, p. 5).

For international students, it provides four broad scholarships, including Monbukagakusho (meaning scholarships provided by the MEXT) Honours Scholarships for private international students, scholarships for students under the Japan-Korea Joint Program for Science and Technology Students, scholarships for Japanese government scholarship students, and scholarships for international students to study in Japanese universities for a short time, ranging from eight days to one year, under university student exchange programmes. Similarly, JASSO also provides financial support to Japanese students in foreign universities for a short time, of between eight days and one year, under the university student exchange programme. The purpose of this is to encourage more motivated and capable Japanese students to study abroad and especially to double the number of Japanese students studying in other countries and regions to 120,000 persons by 2020.

3.2 Contextual factors

As with many countries and regions, tremendous changes have occurred in Japanese higher education since the 1990s due to increasing impacts from new factors such as globalisation and market forces, together with a continual decline in numbers of the 18-

year-old population (MEXT, 2011; Huang, 2015). These changes have been affected by both global/international and domestic factors (Amano, 2014). At a global or international level, factors include an increased influence from economic globalisation and knowledge-based society, global trends in marketisation and privatisation, and a growing international competitiveness in the quality of teaching and research activities. From a domestic perspective, Japan has seen a steady decline in the 18-year-old population, the deregulation of higher education, the long-standing backdrop of an economic slump, the quest for more internationalised universities and top-ranked universities in the world, and a further implementation of structural reforms on higher education systems.

It is worth noting that the incorporation of the Japanese national and local public universities has been affected by more diverse and complex factors, and in particular by a number of serious political conflicts. The pressure to make reforms in Japan prior to 2000 had been coming from three sides: the Ministry of Education, industry, and the universities themselves (Doyon, 2001). In a major sense, the incorporation of the national and local public universities was realised only after a long process of compromise between different political parties and groups, including the Prime Minister's Office, other ministries at a central level, MEXT, industry, and universities themselves.

In response to these challenges, the Japanese government has facilitated several national-level reforms in higher education by developing and implementing numerous policies and strategic plans. Efforts such as the undergraduate curriculum reforms in 1991, the corporatisation of national universities in 2004, and recent policies to enhance international competitiveness of Japanese higher education have had profound and apparent influences on Japanese higher education and its financing systems. First, curriculum reform, which was initiated in 1991, began with deregulation of the 'Standards for Establishment of Universities' and the consequent delegation of more power and autonomy to each individual national university for the design and implementation of curricula according to their own missions, goals, and objectives. While encouraging individual universities to revise the structure of their undergraduate education in accordance with their own objectives, the government also urged institutions to conduct self-monitoring and self-evaluation to make their teaching and research activities more accountable and to assure their educational quality. Based on the 1991 reforms and follow-up reforms such as GP (good practice) programmes, Japanese higher education institutions are required to be more relevant to diversified needs from industry and the labour market, and to make more effort to form their distinctive characteristics of mission, governance, financial arrangements, and teaching and research activities.

Second, the incorporation of national universities in 2004, followed by a similar incorporation of public universities, has resulted in considerable changes in the financial structure of Japan's higher education sector, particularly in the national universities. On one hand there has been a steady drop in the amount of government expenditure in both national and public sectors, while individual national and public university corporations have been given more freedom to charge tuition and fees according their chosen level. On the other hand, government has increased the amount of competitive funding, including both research project grants and special budgets for a variety of projects or programmes related to educational activities (Jibu et al., 2008).

Third, the impact from policies and strategies of improving the international competiveness of Japanese higher education on Japan's higher education financing structure or mechanism is also evident and considerable. In 2001, the Japanese government set the goal of fostering the 'Top 30' universities towards attainment of top global standards. Later, the programme was changed into a scheme cultivating 'Centres of Excellence in the 21st Century' (COE21). The central government chose to focus on, and expand, the budget for units in nine key disciplines. As a way of attracting more incoming international students, in 2009 the government launched a 'Global 30' programme, aiming at accepting 300,000 foreign students by 2020. In order to achieve this goal, 13 universities, including seven national and six private, were selected to play a central role in implementing the programme. With additional funding from the central government, these universities are required to accept many more international students as well as develop new English-taught degree programmes. In 2014, the Japanese government issued another national project: the 'Top Global University Project'. This project aims to enhance the international compatibility and competitiveness of higher education in Japan. It provides intensive financial support for selected universities that are expected to press forward with comprehensive internationalisation and university reform. There are two types of university category in the project. Type A (Top Type, approximately 10 universities) is for world-class universities that have the potential to be ranked in the top 100 in world university rankings. Type B (Global Traction Type, approximately 20 universities) is for innovative universities that lead the internationalisation of Japanese society, based on continuous improvement of their current efforts. The central government will reportedly allocate 7.7 billion JPY for those selected universities in 10 consecutive years (MEXT, 2016).

Finally, the national policy of facilitating differentiation and diversity of Japanese higher education institutions is also considered a critical factor affecting recent changes in Japanese higher education financing. For example, the government reports 'The Future of Higher Education in Japan' (2005), 'The Basic Plan for Education Promotion' (2008), and 'On Constructing Undergraduate Education' (2008) address numerous issues concerning the future of Japanese higher education. These reports suggest that there should be a transition in the role of the central government from the old fashion of

stipulating and regulating higher education policies to a new way that consists of presenting a vision of the future of higher education and 'guiding' autonomous institutions. Moreover, these reports also emphasise the importance of diversifying missions of individual universities: particularly in the 2005 report, it is expected that seven functional differentiations among higher education institutions in Japan should be facilitated in the future. More importantly, it is highly possible that the current way of allocating public expenditure to different sectors and types of higher education institution will be changed to promote these seven functions:

- 1. A centre for research and education at an international level;
- 2. The production of highly specialised professionals;
- 3. The production of graduates with wide vocational knowledge and skills;
- 4. A comprehensive liberal or general education;
- 5. Education and research focused in specific fields (art, physical education, etc.);
- 6. A centre for providing regional lifelong learning opportunities; and
- 7. Making contributions to society (regional contribution, academic-industry collaboration, and international exchange, etc.).

4. Changes in Japanese financing systems

As noted earlier, the incorporation of national universities in 2004, followed by a similar incorporation of public universities, has resulted in considerable changes in the financial structure of Japanese higher education. As indicated in *The National University Corporation Law of 2003* (MEXT, 2003), major changes in the financing and governance of national and public sectors take place as follows:

- Deregulation of the institutional budget and personnel affairs leading to a competitive environment derived from university autonomy.
- Introduction of management techniques based on private-sector concepts topdown management by a board of directors centred on the president.
- People from outside the university appointed as executives and participating in approval of management plans.
- Selection of personnel who do not conform to the civil servant type introduction of a diverse and flexible personnel system with promotion on the basis of capability and performance.
- Evaluation and disclosure of information-allocation of resources based on results of third-party evaluation, thus ensuring transparency to encourage increased public participation.

According to the outline of the *National University Corporation Law,* the system of national university corporations is characterised by the following major points (*National University Corporation Law,* 2003).

- Individual corporate responsibility: a break away from support of the national universities in the style of an 'armed convoy.' Deregulation of budget and personnel affairs leading to a competitive environment by ensuring university autonomy. Production of attractive education and research by the national universities.
- 2. Introduction of management techniques based on private-sector concepts topdown management by a board of directors centred on the president.
- 3. External participation in management of universities participation of people from outside the university as executives and to approve management plans.
- Improved process for selecting the president establishment of a Presidential Selection Committee in which external non-university experts participate to identify well-qualified candidates for president from both inside and outside the university.
- 5. Selection of non-civil servant types as the status of personnel introduction of a diverse and flexible personnel system on the basis of capability and performance.
- 6. Evaluation and disclosure of information allocation of resources based on results of third-party evaluation. Ensuring transparency to encourage increased public participation.

Since 2004, among national, local public and private sectors, significant differences exist not only in roles, functions and student composition, but also in the allocation of public funding, including research grants. University incorporation has resulted in considerable changes in Japan's higher education structure, and to national universities in particular. One of the most striking changes is that there has been a steady drop in the amount of government expenditure on national university corporations since 2004. As indicated in Figure 1, the amount of national budget for the same number of national university corporations was decreased from 124,150 million JPY in 2004 to 109,450 million JPY, reducing by approximately one per cent of the total grants from government each year. Nevertheless, in spite of this persistent funding decline, over half of national universities' annual revenue continues to come directly from government expenditure.



Fig. 1. Changes in the amount of Management Expenses Grants for National University Corporations (Unit: 10 million).

Source: MEXT (2004-2015). With author's modifications.

As indicated in Figure 2, by the end of the 1990s in Japan, the government share of national university revenue was 66 per cent. Tuition fees provided 11.7 per cent of university revenue, and the income of hospitals affiliated to individual universities provided an additional 19.1 per cent. The remainder of the revenue came from other sources. Even with the decrease in the amount of grants from government, the 2015 average share of public funding for national universities in total revenue – including operating budget, normal research grants for all faculties, and subsidies for infrastructures and equipment – was still more than 40 per cent, with less than 15 per cent of revenue in the form of tuition fees charged to students.



Fig. 2. Changes in annual revenue of national university 1990-2015.

Note: Public expenditure includes operating budget, competitive research grants, and others.

Source: Center for National University Finance and Management (2001), and MEXT (2015a). With author's modifications.

The decline in the amount of government expenditure to individual national university corporations has led to a rise in the amount of income generated by each corporation. This is especially evident in the growth in income from university hospitals. Figure 2 shows that what began as a moderate rise in the amount of income from university hospitals between 1990 and 2004 (6.4 per cent) has increased rapidly from 25.5 per cent in 2004 to 39.7 per cent in 2015 (a growth of 14.2 per cent).

Furthermore, as displayed in Figure 3, there has been a rise in the amount of income from donations to national university corporations since 2004. Although there was not a steady increase in the amount of donations, the amount of overall income from donations grew from 63,100 million JPY in 2004 to 78,968 million JPY in 2012.



Fig. 3. Changes in donations in national university corporations (Unit: million). *Source*: MEXT (2015b).

The case study of the University of Tokyo also suggests that there has been a drop in the share of government grants and a growth in the share of self-generated incomes, especially university hospital fees. As indicated in Figure 4, it is noticeable that the proportion of government grants received by the university over the past decade decreased from 49.7 per cent to 43 per cent, while the proportion of hospital fees increased from 14.2 per cent to 20.7 per cent.



Fig. 4. Changes in the breakdown of revenues of the University of Tokyo 2004-2014

Note: 2004 grants include government grants, subsidies for university infrastructure and equipment. 2014 grants include government grants, government grants for specific purposes, indirect cost grants, and subsidies. *Source*: University of Tokyo (2005, 2015).

Compared with the national sector, the situation of local public universities appears to be more complicated and diversified because not all local public universities have become public university corporations. Despite growth in the number of students enrolled in local public universities, there has been a coinciding decline in the proportion of public expenditure to local public university or public university corporations since the early 2000s. Figure 5 shows that with a drop in the proportion of grants from local authorities from 64 per cent to 54 per cent of total revenues for the past four years alone, there has been a rise in the proportion of income from competitive funding and other sources over the same period.



Fig. 5. Changes in the breakdown of revenues of local public university 2009-2013. *Source*: MEXT (2009), and Kondo (2016).

The case of Prefectural University of Hiroshima also provides a similar trend of changes in the breakdown of revenues of local public universities. As shown in Figure 6, from 2007 to 2014, with a tiny decline in the proportion of grants from local authorities (from 64.3 per cent to 60 per cent), there has been a corresponding increase in the proportion of income from other channels, rising from 1.1 per cent to 2.4 per cent of the total revenue.



Fig. 6. Changes in the breakdown of revenues of Prefectural University of Hiroshima 2007-2014.

Source: Prefectural University of Hiroshima (2008, 2015).

As noted earlier, although the Japanese government started its financial support for private higher education institutions as early as the 1970s, as indicated in Figure 7, since 1980 there has been a steady drop in the proportion of public expenditure to private institutions. Simultaneously, there has been a continual increase in the share of both private institutions in relation to the total number of Japanese higher education institutions, and privately enrolled students in relation to total higher education student enrolment. Figure 7 indicates that the proportion of grants from government accounted for nearly 30 per cent of total private higher education revenue and reached its peak in 1980, but has begun to decline continuously, constituting only 10.7 per cent of the total in 2010.





There is little doubt that changes in the share of grants from government have affected the breakdown of the revenue of private institutions. However, even when the share of government grants to private universities made up nearly 30 per cent of total revenues, the proportion of tuition and fee revenue still comprised more than half of the income for most private institutions. This is especially true in recent years. As shown in Table 3, the proportion of government grants or public funding was only 12.3 per cent of revenue in private institutions in 2005, with tuition and fees at 60 per cent of the total. This revenue composition stands in sharp contrast to the situation of both national university corporations and local public universities or corporations (SRTIMIAC, 2009).

Table 3.

i mancing of private universities, 2005.				
Public funding	12.3%			
Tuition & fees	60.0%			
Income from university hospitals & other business	24.9%			
Others	2.9%			
Total	100.0%			

Financing of private universities, 2005

Source: Statistical Research and Training Institute of Ministry of Internal Affairs and Communications (2009).

The case of Waseda University, one of the two top private universities in Japan, provides an interesting example of changes in the breakdown of revenues in private universities. Figure 8 reveals that while there appear to be no radical changes in subsidies or grants from government or business activities, the proportion of student fees has increased from 64 per cent of the total in 2004 to 66 per cent of the total in 2014. This implies that even in the leading private university, there has been a tendency to charge more tuition from students to maintain its operation.



Fig. 8. Changes in the breakdown of revenue of Waseda University 2004-2014. *Source*: Waseda University (2004, 2015).

Due to the decline in the share of grants from both central government and local authorities, all three sectors of higher education have come to be heavily dependent on their ability to obtain funds from a variety of sources and less dependent on government support. Among a wide variety of efforts made by Japanese higher education institutions in this regard, it is worth noting that more and more universities and colleges have undertaken joint research with private industry or companies to seek more external research grants from these sectors. Figure 9 shows that there has been an obvious and steady growth in the number of joint research projects collaboratively undertaken by universities and colleges and private industry, increasing from 29,451 in 2009 to 41,603 in 2014. Meanwhile, the amount of funding from these joint research projects has also grown from 29,451 million to 41,603 million over the same period.



Fig. 9. Changes in the number of joint research projects with private industry and amount of funding from these projects 2009-2014. *Source:* MEXT (2015b).

Furthermore, efforts have also been made by Japanese higher education institutions to generate more sources from patents and other intellectual property. Figure 10 suggests that although there has been a decrease in the amount of incomes generated from other intellectual property between 2009 and 2014, declining from 725 million JPY to 632 million JPY, the amount of incomes from patents has increased by more than triple, rising from 891 million JPY to 1,992 million JPY over the same period.



Fig. 10. Incomes from patent and other intellectual property in all higher education institutions (Unit: million). *Source*: MEXT (2015b).

www.researchcghe.org

5. Influences and outcomes of Japanese financing

Typical outcomes resulting from the Japanese model of higher education financing on higher education systems and institutional strategies can be summarised as follows: first, the financing model has contributed to the realisation of near universal access to higher education, as the current rate of higher education enrolments has reached nearly 80 per cent of the 18-year-old population. With a transition from mass higher education to near universal access, by employing financial means, the central government has tried to diversify both the structure and functions of Japanese higher education.

Second, the Japanese financing model has not only facilitated the massification of higher education, it has also partly helped the formation of several top-ranked universities in the world, such as the universities of Tokyo and Kyoto. Especially in recent years, by adopting the policy of selection and concentration, and allocating additional funding to several selected universities, Japan has established a vision for building up several world-class universities in the near future.

Third, differently from many Western countries such as the UK, Australia, Canada and the US, Japan's financing model has contributed to the acceptance of more and more international students by providing a variety of financial support, including government scholarships, to international students. On the other hand, the model has also taken into consideration ways to encourage Japanese students to study abroad through various programmes.

Fourth, the funding model has maintained the minimum level of quality of private universities through the allocation of public subsidies to them.

Fifth, the changing pattern of higher education financing has stimulated a closer partnership and collaboration of both universities and colleges (especially national university corporations), with private industry in terms of joint research and commissioned research, as well as obtaining external funding.

Finally, the corporatisation of both national universities and local public universities has changed the essential characters of both sectors. Market forces are not only affecting educational and research activities in the private sector, but have also come to be introduced into the national and public sectors. 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. This has inevitably led to an increasing competition for public funding, financial support from industry, tuition and fees from students, and revenues from other channels. In addition, it has facilitated and will further stimulate the hierarchical structure of Japanese higher education. In particular, it has widened the gap between national university

corporations, public university corporations, and private universities in relation to their academic and social status and financial situation.

6. Concluding remarks

This study provides a general portrait of the financing systems of Japanese higher education and outlines changes occurring in the systems, especially since the early 2000s. The study argues that major reasons for the changes taking place in the Japanese financing system at a higher education level include not only national contextual factors, but also international and global drivers. In a major sense, these changes may be regarded as responses made by both government and individual institutions to deal with challenges in a new era of higher education.

The importance of public expenditure – especially grants from the central government – to the operation, quantitative expansion, and quality assurance of the sectors and types of higher education institution cannot be overestimated. The obvious and strong role played by the central government in terms of frameworks of quality assurance, and governance arrangements at an institutional level can be considered to be one of the most striking characteristics of Japanese financing systems compared to many Western countries. Furthermore, despite the fact that market forces increasingly influence Japanese higher education, the government still provides some financial support to all sectors and types of higher education institution. In effect, the government has changed its relationship with individual universities and colleges and has begun to exert its influence in a new form.

It is difficult to predict what new changes will occur in the Japanese financing system in the future; however, there is little doubt that more diversified, transparent, and accountable frameworks of higher education financing in Japan are being pursued and constructed.

References

- Amano, I., 1989. Kindai nihon koutoukyouiku kenkyu [Research in Modern Japanese Higher Education]. Saitama University Press, Tokyo (in Japanese).
- Amano, I., 2014. Globalization and higher education reforms in Japan: The obstacles to greater international competitiveness. In-depth: International Competitiveness of Universities in a Global Age. Accessed June 18, 2016: http://www.nippon.com/en/in-depth/a02801/
- Arimoto, A. (Eds.), 1996. Daigaku kyoukyusyoku no kokusai hikaku [Academic Profession in the Comparative Perspectives] Tokyo, Tamagawa Printing House (in Japanese).
- Center for National University Finance and Management, 2001. Research Report on Funding System in Major Universities in Europe and the US. Tokyo, Japan (in Japanese).
- Cummings W.G., Amano, I., 1977. The changing roles of the Japanese professor. In Altbach, P.G. (Ed.). Comparative Perspectives on the Academic Profession. Praeger Publishers, New York, pp.43-67.
- Doyon, P., 2001. A review of higher education reform in modern Japan. *Higher Education* 41 (4), 443-470. Accessed June 18, 2016:
 - http://www.jstor.org.pitt.idm.oclc.org/stable/3448133
- Huang, F., 2010. The marketization of higher education: A perspective from Japan. In Brown, R. (Ed.), Higher Education and the Market. Routledge, Taylor & Francis Group, New York and London, pp. 146-157.
- Japan Student Services Organization (JASSO), 2016. JASSO Outline 2015-2016. Accessed June 18, 2016: http://www.jasso.go.jp
- Kondo, M., 2016. Actual Situation and Issues of Local Public Universities. Accessed June 18, 2016: http://www.janu.jp/news/files/20160509-wnew-giren2.pdf#search='%E5%85%AC%E7%AB%8B%E5%A4%A7%E5%AD%A6%E5%AE%9F%E6%9F%E6%85%8B%E8%AA%BF%E6%9F%BB%E3%80%8D' (in Japanese).
- MEXT (Ministry of Education, Culture, Sports, Science, and Technology), 2004-2015. The Breakdown of Management Expenses Grants of National University Corporations. Accessed June 18, 2016: http://www.janu.jp/news/files/20150818wnew-

youbou1.pdf#search='%E5%9B%BD%E7%AB%8B%E5%A4%A7%E5%AD%A6% E6%B3%95%E4%BA%BA%E9%81%8B%E5%96%B6%E8%B2%BB%E4%BA% A4%E4%BB%98%E9%87%91%E4%BA%88%E7%AE%97%E9%A1%8D%E3%8 1%AE%E6%8E%A8%E7%A7%BB' (in Japanese).

- MEXT, 2009. Survey on the Actual Situation of Local Public Universities in 2009. (in Japanese).
- MEXT, 2010. Changes in the share of public expenditure of the revenue of private higher education institutions. Accessed June 18, 2016:

http://www.mext.go.jp/a_menu/koutou/shinkou/07021403/002/001/002.htm (in Japanese).

- MEXT, 2011. *Gakkou kihon cyousa houkokusyo, koutou kyouiku kikan hen* [Basic Investigation on School Education: Higher Education Institutions]. MEXT, Tokyo. (in Japanese).
- MEXT, 2012. *Gakkou kihon cyousa houkokusyo, koutou kyouiku kikan hen* [Basic Investigation on School Education: Higher Education Institutions]. MEXT, Tokyo (in Japanese).
- MEXT, 2014a. Statistical Abstract 2014 edition. National Printing Bureau, Tokyo.
- MEXT, 2014b. Selection for the FY 2014 Top Global University Project. Accessed June 18, 2016:

http://www.mext.go.jp/b_menu/houdou/26/09/__icsFiles/afieldfile/2014/10/07/1352 218_02.pdf

MEXT, 2015a. On the Actual Situation of National University Corporations. Accessed June 18, 2016:

http://www.mext.go.jp/b_menu/shingi/chousa/koutou/062/gijiroku/__icsFiles/afieldfi le/2014/11/10/1353375_3_2.pdf#search='%E5%9B%BD%E7%AB%8B%E5%A4% A7%E5%AD%A6%E6%B3%95%E4%BA%BA%E3%81%B8%E3%81%AE%E5% 85%AC%E7%9A%84%E6%94%AF%E5%87%BA%E6%8E%A8%E7%A7%BB' (in Japanese).

MEXT, 2015b. On the Actual Situation of Partnership between Universities and Private Industry. Accessed June 18, 2016: http://www.mext.go.jp/component/a menu/science/detail/ icsFiles/afieldfile/2015/

<u>http://www.mext.go.jp/component/a_menu/science/detail/__icsFiles/afieldfile/2015</u> <u>12/25/1365509_2.pdf</u> (in Japanese).

- MEXT, 2016. Statistical Abstract 2015 edition. National Printing Bureau, Tokyo.
- OECD, 2006. Funding Systems and Their Effects on Higher Education Systems: Japan. OECD, Paris.
- OECD, 2015. Education at a Glance: OECD Indicators. OECD, Paris. Accessed June 18, 2016: http://www.oecd.org/education/education-at-a-glance-19991487.htm
- Prefectural University of Hiroshima, 2008. Financial Report. (in Japanese). Accessed June 18, 2016: http://www.pu-hiroshima.ac.jp/uploaded/attachment/1604.pdf
- Prefectural University of Hiroshima, 2015. Financial Report. (in Japanese). Accessed June 18, 2016: http://www.pu-hiroshima.ac.jp/uploaded/attachment/8486.pdf
- Statistical Research and Training Institute of Ministry of Internal Affairs and Communications, 2009. Japan Statistical Yearbook (2009), p. 719. Tokyo (in Japanese). Also posted at http://www.mext.go.jp/
- Trow, M., 1973. Problems in the Transition from Elite to Mass Higher Education. Carnegie Commission on Higher Education, Berkeley, CA. Accessed June 18, 2016: http://files.eric.ed.gov/fulltext/ED091983.pdf
- University of Tokyo, 2005. Report of University Enterprise 2004. (in Japanese). Accessed June 18, 2016: http://www.u-tokyo.ac.jp/content/400003370.pdf

University of Tokyo, 2015. Financial Report 2014. Accessed June 18, 2016: http://www.u-tokyo.ac.jp/content/400038419.pdf

- Ushiogi, M., 2007. A Japanese perspective of the Humboldt's Mythos. In Daigaku Ronsyu 38. Research in Higher Education, Hiroshima University, pp.171-187. (in Japanese). Accessed June 18, 2016: http://rihejoho.hiroshimau.ac.jp/pdf/ron/38/74009.pdf
- Waseda University, 2004. Income and Expense Statement for Fiscal Year 2004. Accessed June 18, 2016:

http://www.waseda.jp/top/assets/uploads/2014/04/2004jigyohokoku.pdf (in Japanese).

Waseda University, 2015. Waseda University 2015 Facts. Accessed June 18, 2016: http://www.waseda.jp/intl-ac/assets/FACTS.pdf

Centre for Global Higher Education UCL Institute of Education London WC1H 0AL

www.researchcghe.org @ResearchCGHE



