

Performance Measurement and Resource Allocation in Higher Education in Japan: The Realization of New Public Management in Japan

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#### Abstract

As in many industrialized countries, Japan carried out a deregulation of higher education around the turn of the 21<sup>st</sup> century. This reform was based on New Public Management (NPM) principles, which should have been reflected in its most salient step: the incorporation of national universities in 2004. Although the way that the NPM principles were implemented in various countries was far from uniform, the Japanese version was no doubt quite peculiar. For example, from the outset, the management by objectives approach did not work well, due to deficits in the mechanism of ex-post evaluations. In addition, a roll-back of ministerial regulation emerged over time, under the guise of performance-based funding. As a result, universities rarely felt favored or promoted. Particularly in resource allocation among the institutions, they hoped for more transparency. It is assumed that this trend of re-regulation in the Japanese system will (in all likelihood) continue in the foreseeable future.

#### Keywords

Higher Education, Performance Measurement, Funding, Incentive System, Incorporation of National Universities, National University Corporation Evaluation

## 1. Introduction

Around the turn of the 21<sup>st</sup> century, a substantial change occurred in the governance of higher education in the industrialized world (Hölscher, 2016). Specifically, in European countries, the concept of New Public Management (NPM) was introduced as new guiding principles of the higher education system (Austin & Jones, 2016). This change occurred against the backdrop of the structural transformation of the sector, particularly due to the increasing massification of higher education. Meanwhile, it became increasingly difficult for the government to enlarge its financial engagement with higher education institutions (HEIs). Since this situation also occurred in Japan, it is no surprise that the country carried out a deregulation of the sector. The centerpiece of the reform was the incorporation of national HEIs in 2004 (Oba, 2005; Kaneko, 2009; Hanada, 2013). Until then, they were simply a part of the administrative structure of the education ministry. This reform, essentially inspired by the concept of executive agency of Thatcher-Britain, bestowed the national HEIs with the legal status of independent corporations, which included significant autonomy in financial and operational terms.

Although many industrialized countries implemented NPM in higher education around that time, researchers have pointed out that there has been no single universal NPM regime (Boer, Enders, & Schimank, 2007, Broucke & De Witt, 2015). In other words, its concept modified according to each country's social and cultural configurations. As a result, the NPM mode differed from country to country, including Japan. In this regard, the following research questions are raised: What changes occurred in Japan's higher education system through the reform? How much did these changes conform to the NPM principles? Therefore, this study aims to answer these questions by focusing on their financial aspects.

## 2. Structure of Japanese Higher Education

First, it is important to provide an overview of Japan's higher education system in order to clarify why we are examining national HEIs in this study. The Japanese higher education is borne by three sectors: national, local public (mainly prefectural and municipal), and private. Quantitatively, the private sector is overwhelmingly dominant. For example, its share in the number of HEIs is 77.4% and that in the number of students is 73.6%. By contrast, national HEIs (of which there are 86) account only for 9.1% of the number of HEIs and 21.1% of the number of students, while such figures for local public HEIs are 14.9% and 5.3%, respectively (Ministry of Education, Culture, Sports, Science, and Technology [MEXT], 2018a). Although dwarfed by the number of private HEIs, the national institutions are the main pillars of the higher education system. In fact, many of the national HEIs have a considerable number of schools and institutes across a wide range of disciplinary fields. Notably, many of the Japanese institutions that emerge in world university rankings are the national ones. This is the

main reason why we are focusing on Japan's national institutions.

As for their finances, the national HEIs heavily rely on governmental funds, with the most important being the block grant. In 2019, its total sum for all of the national HEIs was JPY 1,097.1 billion (ca. USD 9.8 billion), accounting for 33% of their entire revenues (MEXT, 2020b). In return, the national HEIs are subject to control by the Ministry of Education, Culture, Sports, Science, and Technology (MEXT). Before the incorporation reform, control was carried out through minute ex-ante regulations. After 2004, it was replaced with ex-post evaluations of performance based on the management by objectives concept. In other words, control of the universities was based on whether or to what extent the previous goals had been achieved. Thus, as part of the reform of 2004, the six-year business term was introduced, i.e., all of the operations were planned and conducted within a cycle of six years.

Prior to the beginning of the cycle, the HEIs determined what objectives they would achieve in each of their business fields of education, research, knowledge valorization, administration, and finances (medium-term objectives, MTOs), and what specific steps they would take to realize these goals (medium-term plans, MTPs). Both the MTOs and MTPs were submitted to the ministry for approval. At the end of the business term, a performance assessment was conducted, after which the outcomes were reflected in the block grant. In this case, good outcomes were honored with financial gains.

This assessment is called the "National University Corporation Evaluation" (NUCE). Given the decisive significance of the ex-post evaluation in management by objectives, this evaluation scheme is the cornerstone of the six-year business term. In fact, the NUCE is a large-scale scheme equipped with considerable manpower and costs, since it addresses all of the MTOs and MTPs that the HEIs set for their various fields of activity. However, the MEXT does not solely rely on the NUCE for assessing the performance of HEIs. There are several other schemes, including categorization and uniform quantification.

Regarding private and local public institutions, the state conducts no such performance evaluation. Indeed, the government provides private HEIs with public funds, but the sum is relatively small and mainly demand-based (e.g., the number of students and teachers).<sup>1</sup> Additionally, the performance assessment of local public HEIs is the responsibility of the prefectures and cities.

As mentioned earlier, in post-2004 Japan, the basic NPM principles, namely, performance measurement and resource allocation based on its outcomes, are seemingly well in place at first glance. However, for a more proper understanding of the significance of the Japanese variant, we must focus on its details.

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<sup>1</sup> The subsidy for private institutions was JPY 584.3 billion (approximately USD 5.3 billion), accounting for 8.9% of their revenues (MEXT, 2020a).

### 3. NUCE

The NUCE is not carried out by the MEXT itself, but by a committee set up for this purpose. For the core fields of education and research, the National Institution for Academic Degrees and Quality Enhancement of Higher Education (NIAD-QE) is commissioned to take over the evaluation because highly specialized knowledge and experience are required to review these fields (NIAD-QE, n.d.). As for the evaluations themselves, they are conducted through a peer review consisting of numerous university managers, professors, and researchers, with those from practical professions (e.g., business, journalism, and non-profit bodies) as external stakeholders.

Despite being an ex-post evaluation, the NUCE is actually conducted twice during the six-year business term, i.e., during the fifth year and the year after the term's end (i.e., the "seventh year"). The fifth-year review makes it possible for the HEI to draw on the evaluation results in time to prepare for the coming term. This is not possible in the seventh year because the next business term has already begun. As for the procedure, the NUCE follows the general rules of university evaluations. First, the HEI conducts its own evaluation of its activities and performance, and produces a report. Second, the reviewers, whom the NIAD-QE already selected, examine the report based on the criteria set by the agency. Subsequently, a site visit takes place (performed online in most cases) in which the reviewers interview the managers and teachers of the HEI. Finally, the reviewers draft the evaluation based on the results of both the document examination and the site visit.

It is worth noting that, in contrast to the usual university evaluations (particularly those for accreditation), the NUCE's foremost aim is resource allocation, i.e., deciding how to distribute the block grants among the national HEIs. For accreditation, the mission is to simply single out the ineligible institutions in absolute terms such as meeting the minimum requirements for higher education. Conversely, the NUCE compares the performance of HEIs and utilizes a single grading scale based on quality. In short, the NUCE is a relative evaluation. At the same time, however, the NUCE is based on individual achievement. That is, the quality of a HEI's performance should be determined by to what extent the institution attained the MTOs established at the outset of the business term. However, this raises the following question: How is it possible to place various HEIs on a single grading scale when they are pursuing different objectives?

In this regard, there are several devices built into the NUCE to cope with this difficulty. One of them is the stock-taking review of teaching and research, which is conducted as a sub-evaluation. Specifically, this sub-evaluation focuses on individual schools and institutions, and depicts an across-all-university perspective of the quality of the HEI's operations. However, this does not solve the problem. First, it is questionable if the quality of teaching and research can be decided by one school.

Second, there is a logistical obstacle. Conducting a simultaneous review of all of the schools and institutions among the 86 national HEIs (totaling approximately 1,500) demands a considerable effort. If this should be carried out, then a meaningfully accurate examination will certainly fall victim to this approach. Third and most critically, the question will be raised on how the sub-evaluation can be grafted onto the NUCE, since the results gained from the inter-university comparative evaluation are, by definition, incompatible with those of the individual MTOs.

Overall, the remedy of the sub-evaluation makes the NUCE’s architecture complex and inconsistent. Consequently, its results tend to be little differentiated. In the NUCE, judgment is made on a scale of several grades.<sup>2</sup> However, generally, reviews concentrate (instead of being scattered among the grades) on the middle ground with few ratings such as “Highly Excellent” or “Significantly Insufficient.” This concentration is especially striking in the domains of education, research, and social services and internationalization. As Table 1 shows, in the first as well as the second business term, the majority of the national HEIs are ranked in education and research as either “Excellent” or “Good.”

**Table 1** Distribution of Evaluation Grades in the NUCE

The First Business Term (FY2004-09)	Highly Excellent		Excellent		Good		Insufficient		Significantly Insufficient	
Education	0	0.0%	11	12.8%	75	87.2%	0	0.0%	0	0.0%
Research	3	3.5%	27	31.4%	56	65.1%	0	0.0%	0	0.0%
Social Services and Internationalization	2	2.3%	36	41.9%	48	55.8%	0	0.0%	0	0.0%
Administration	25	29.1%	47	54.7%	13	15.1%	1	1.2%	0	0.0%
The Second Business Term (FY2010-15)	Highly Excellent		Excellent		Good		Insufficient		Significantly Insufficient	
Education	0	0.0%	11	12.8%	74	86.0%	1	1.2%	0	0.0%
Research	5	5.8%	13	15.1%	67	77.9%	1	1.2%	0	0.0%
Social Services and Internationalization	1	1.2%	21	24.4%	64	74.4%	0	0.0%	0	0.0%
Administration	12	14.0%	54	62.8%	17	19.8%	1	1.2%	2	2.3%

Source: MEXT (2011, 2017)

This all substantially undermines the NUCE’s relevance as a tool for ex-post-performance evaluation and, consequently, as a determinant of resource distribution. In fact, among the total sum of the block grants for the national HEIs

<sup>2</sup> The number of grades is five in the first and second NUCE, increasing to six in the third.

(around JPY 1.1 trillion (ca. USD 10 billion)) in recent years, approximately JPY 3 billion (ca. USD 27 million) or 0.3 % was earmarked for the NUCE's results, while the MEXT set aside JPY 122.5 billion (ca. USD 1.1 billion) for other performance-based funding schemes (MEXT, 2020c). Meanwhile, the MEXT has not been transparent about how it redistributed the JPY 3 billion because there are no published rules regarding this process.

#### 4. Categorization and Uniform Quantification

Considering the financial irrelevance of the NUCE feedback, it is safe to conclude that the incorporation of 2004 was effectively furnished by no concomitant performance-based funding. Yet, voices asking for this only grew louder both within and outside the government. On the one hand, it was argued that streamlining public funding for higher education was indispensable, in view of the deteriorating research power of Japanese HEIs in the international setting. On the other hand, there was the mounting budgetary deficit in the state finances.

This pressure brought about a course change. First, in the entire framework of higher education financing, the weight of the baseline funding was curbed in favor of competitive project-typed financing. For example, the share of the block grants in the revenue of all of the national HEIs decreased from 46% in FY 2005 to 33% in FY 2019, while the third-party funds increased from 8% to 14% in the same period (MEXT, 2020b). Second, and more importantly, the structure of the block grants was revisited, with more tangible components incorporated into performance-based funding.

One of the initiatives for this purpose was the categorization of the national HEIs (MEXT, 2020d). Until then, the ministry had long adhered to the stance that all of the national HEIs were equal, despite the differences in size, composition of the disciplinary fields, and financial capabilities among the 86 institutions. In 2015, the MEXT introduced three categories of HEIs, after which each institution was asked to apply for one based on its profile and to choose goals. The categories were as follows:

- Category 1: HEIs that focus on meeting the needs of the regional communities, while sharpening their profiles in education and research, particularly in the fields of their strength.
- Category 2: HEIs that strive to promote excellence in education and research at the national and international level, particularly in fields of their strength.
- Category 3: HEIs that strive to promote world-class activities in education, research, and knowledge- and technology-valorization, in competition with top universities abroad.

In order to support the HEIs' endeavors for profile sharpening, a central pool was established by top-slicing the block grant for each HEI. In this case, the sum

redistributed to each HEI was decided by a special committee consisting of approximately 10 experts, not by a quality assurance body such as the NIAD-QE. In FY 2016, when this initiative was launched, the pool totaled JPY 30.8 billion (ca. USD 280 million) or 2.8 % of the total block grants of JPY 1,094.5 billion (ca. USD 10 billion) (MEXT, 2015). However, this was not actually redistributed. For example, the ministry applied, for fear of sudden disruptions, a restraint mechanism so that the redistribution could occur within a range of 90%–110% of the original block grants. Even so, through these incentives, the categorization had controlling effects on the HEIs.

Certainly, it was up to the individual HEIs to choose their respective category. Yet, the goals and indicators had to be approved by the ministry. More significantly, every indicator had to be quantifiable in order to be objectively measured. Table 2 shows how the goals and indicators were specified, based on an example from Mie University, a national HEI in central Japan.

**Table 2** Evaluation Results of the Categorization of Mie University (excerpt)

Performance Indicators		Target/Actual						Score (1)	Score (2)
		2016	2017	2018	2019	2020	2021		
Number of local working adults admitted	Target (Person)	0	25	50	75	101	127	b	a
	Actual (Person)	17	96	157	/	/	/		
	Achievement (%)	-	384.0%	314.0%	/	/	123.6%		
“Mie Revitalization Fantasista” course participation	Target (Person)	0	420	840	1,260	1,680	2,100	b	a
	Actual (Person)	65	824	1,658	/	/	/		
	Achievement (%)	-	196.2%	197.4%	/	/	79.0%		

Source: MEXT (2020e)

As stated earlier, a committee of experts was appointed by the ministry to monitor the outcomes. Specifically, they examined each indicator every year from two perspectives: its ability to represent the university’s performance; and the university’s achievement of specific goals. They then turned the outcomes into scores, as shown in Table 2.<sup>3</sup> The scores were subsequently processed through formulas, after which the

<sup>3</sup> In Table 2, Score (1) represents the indicator’s aptness, while Score (2) represents the university’s

redistribution ratios for each HEI were calculated. Despite some freedom granted to the HEIs, the procedure was (on the whole) based on a rigorous operation check by the ministerial administration. This left no sufficient room for discretion to the HEIs as agents, contrary to the management by objectives concept. This problem was compounded by the fact that the amount determined by the categorization initiative was separated from the lump-sum block grant. In other words, the money was only earmarked for the expenses that were related to the indicators in question. Moreover, demanding every goal to be quantified with numerical indicators and monitoring them on a yearly basis might have influenced the HEIs' behavior in an undesirable direction. Excessive quantification and monitoring are neither suitable for activities that are primarily of qualitative in nature nor for those that require a long-term horizon. Consequently, it can discourage HEIs to include these types of activities in their list of goals, and hamper their involvement in long-term innovative activities. In addition, a formula can, by definition, only represent what the HEI already achieved in the past. Future-oriented innovative undertakings cannot be included in its scope.

Regarding the categorization, the ministry seemed to have high expectations of it as a tool for steering HEIs. This was clearly seen from the sum set aside for the initiative. For instance, the initial volume of JPY 30.8 billion (ca. USD 280 million) in FY 2020 was no comparison with that for the aforementioned NUCE results of JPY 3 billion (ca. USD 27 million). The categorization also seemed preferable to the ministry in that the initiative enabled it to quickly link the HEIs' actual performance with funding. The monitoring results of categorization could thus be immediately reflected in the following year's budget, while the NUCE was conducted at intervals of several years.

Compared with the categorization, uniform quantification, the second initiative of performance-based funding, was even more regulatory (MEXT, 2018b). Introduced in 2019, this initiative assessed the performance of all of the national HEIs based on uniform quantifiable metrics and formulas. The basic scheme was similar to that of categorization: The block grants were top-sliced to build a central pool, which was then redistributed to the HEIs according to each institution's performance within a range of 90%–110%. The criteria for performance measurement, stipulated by the ministry, were as follows (MEXT, 2020d):

- Graduates' employment rate and percentage of bachelor's degree recipients proceeding to graduate schools.
- Those awarded doctoral degrees, compared with the intake of doctoral students.
- Efforts made to improve education and quality assurance of learning outcomes.
- Proportion of young researchers in the full-time faculty.

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success, based on a four-grade scale from the best as "a" to the worst as "d."



- So-called “top 10% of citation” papers, compared with the block fund.<sup>4</sup>
- Research output per full-time faculty member.
- Grants-in-aid for Scientific Research awarded per full-time faculty member.
- Commissioned and joint research projects per full-time faculty member.
- Personnel and salary management reforms.
- Diversity environment development.
- Accounting management reforms.
- Donations and other miscellaneous revenues per faculty member.
- Facility management reforms.

Each criterion was made objectively operational by including numerical metrics. Even the qualitative items were quantified by employing point systems. Meanwhile, controlling the criteria was carried out by a small committee set up by the ministry. These experts checked all of the metrics and calculated an assessment score for each HEI.

The aforementioned list of criteria is quite striking. Formula funding is indeed a common practice for higher education financing in industrialized countries. Yet, it only addresses education and research. Apart from the shortcoming intrinsic to formula funding, there is another critical question: How constructive is it to gauge all of the HEIs on a single set of criteria? This will not be able to do sufficient justice to an individual institution’s strengths. It may also limit the diversity of higher education and eventually curtail the source of creativity in the university’s teaching and research.

Generally, shortcomings concomitant to formula funding can be offset by combining it with performance/target agreements such as contract-based agreements between the government and individual institutions (Jaeger, 2009; Claeys-Kulik & Estermann, 2015). In contrast to the numerical approach of the formula, these agreements can make performance-based funding, in qualitative terms possible. They can also be framed in a tailor-made fashion, taking each HEI’s specificities/profiles into account. Moreover, they can include future-oriented innovative projects based on long-term visions. However, the MTOs, which should be comparable to these performance agreements, along with their assessment (i.e., the NUCE), do not live up to their missions and thus fail to serve as counterweights to quantification.

Meanwhile, the expectations of the MEXT on uniform quantification have been high. For example, the amount earmarked for this initiative was JPY 70 billion (ca. USD 630 million) at the outset, JPY 85 billion (ca. USD 770 million) in the following year, and JPY 100 billion (ca. USD 900 million) in the third year. Likewise, the range of distribution was expanded from 85%–115% to 80%–120% (MEXT, 2020b; MEXT,

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<sup>4</sup> This index is only applied to Category 3 universities.

2020f). In this context, it is worth mentioning that, parallel to this tendency, the budgetary size of the categorization was downsized from JPY 25 billion (ca. USD 220 million) in FY 2020 to JPY 20 billion (ca. USD 175 million) in the following year (MEXT, 2020f). Obviously, the policy weight shifted toward uniform quantification. This shift is likely to carry on, given that the voices supporting this initiative are only growing in government circles.

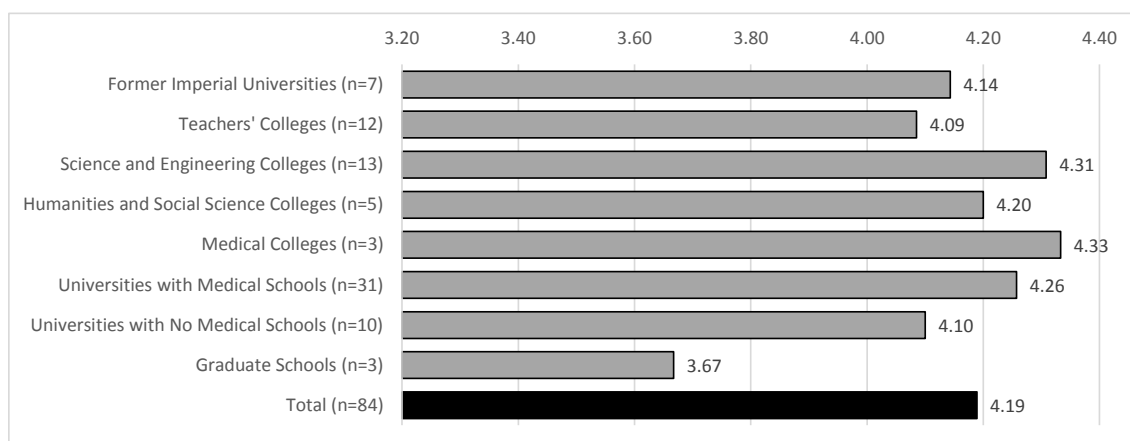
## 5. Reactions of HEIs

In order to consider how much the incorporation of 2004 corresponded to the NPM principles, we have thus far shed light on its structural and procedural aspects. Equally important is determining how the HEIs actually perceived the reform. To this end, there have been surveys conducted by the Center for National University Finance and Management (CUFM) (a NIAD-QE predecessor) between 2006 and 2014, in which the presidents and chief financial officers of the national HEIs were asked about the NUCE (CUFM, 2007; CUFM, 2010; CUFM, 2012; CUFM, 2015).<sup>5</sup> In this study, we mainly rely on the 2014 survey, which fell during the second business term (FY 2010-15).

### 5-1. Effectiveness of Management by Objectives

First, the survey inquired how effective they regarded the management by objectives implemented in the NUCE. The presidents of 84 of the 86 national HEIs responded on a five-grade scale ranging from 1 (“Ineffective”) to 5 (“Effective”), with 3 representing “Neutral.” The responses were then combined by institution type (see Figure 1).<sup>6</sup>

**Fig. 1** Effectiveness of Management by Objectives



<sup>5</sup> To date, there are no surveys of the HEIs' views on categorization or universal quantification.

<sup>6</sup> The Japanese national HEIs can be typologized into eight groups through criteria such as size, disciplinary and professional orientation, affiliation of the medical school/university hospital, etc.

Overall, the results were positive, with a majority of the presidents in favor. This differed from the prior expectation that the HEIs would not think highly of this management method because they would not welcome tighter control by the ministry. Interestingly, the positive attitude seems to be more distinct among the medical colleges, science and engineering colleges, and universities with medical schools, although no statistically significant differences were observed through a chi-square test of their cross-tabulation. This is probably because these colleges were more confident in the management by objectives approach. However, the opposite tendency was found among the graduate schools, teachers' colleges, and universities with no medical schools. In fact, the only respondent who chose "Ineffective" was the president of a teachers' college.

It can be assumed that financial issues were behind these tendencies. It should be noted that the incorporation reform in 2004 had brought the national HEIs financial straits. With the backdrop of colossal deficits in the governmental budget, the ministry had prescribed an across-the-board cut of all block grants by 1% annually throughout the first business term (FY 2004-09). Additionally, the HEIs with affiliated hospitals were saddled with the so-called management improvement coefficient, which meant an automatic cut of 2% annually during the same period. This measure was a significant blow for every national HEI. However, perhaps the research-led HEIs managed to weather the hardship better because they could rely on other income sources such as third-party funds. In contrast, the colleges that were small in size and/or equipped with less external funding were squarely affected. This financial disparity among the institution types is presumably reflected in the fact that the teachers' colleges and universities with no medical schools generally responded negatively.

## 5-2. Satisfaction with NUCE

Next, the NUCE itself was discussed in the survey. At the time of the 2014 survey, the HEIs had already received the NUCE results on their performance in the first business term. Specifically, the presidents were asked the following four questions:

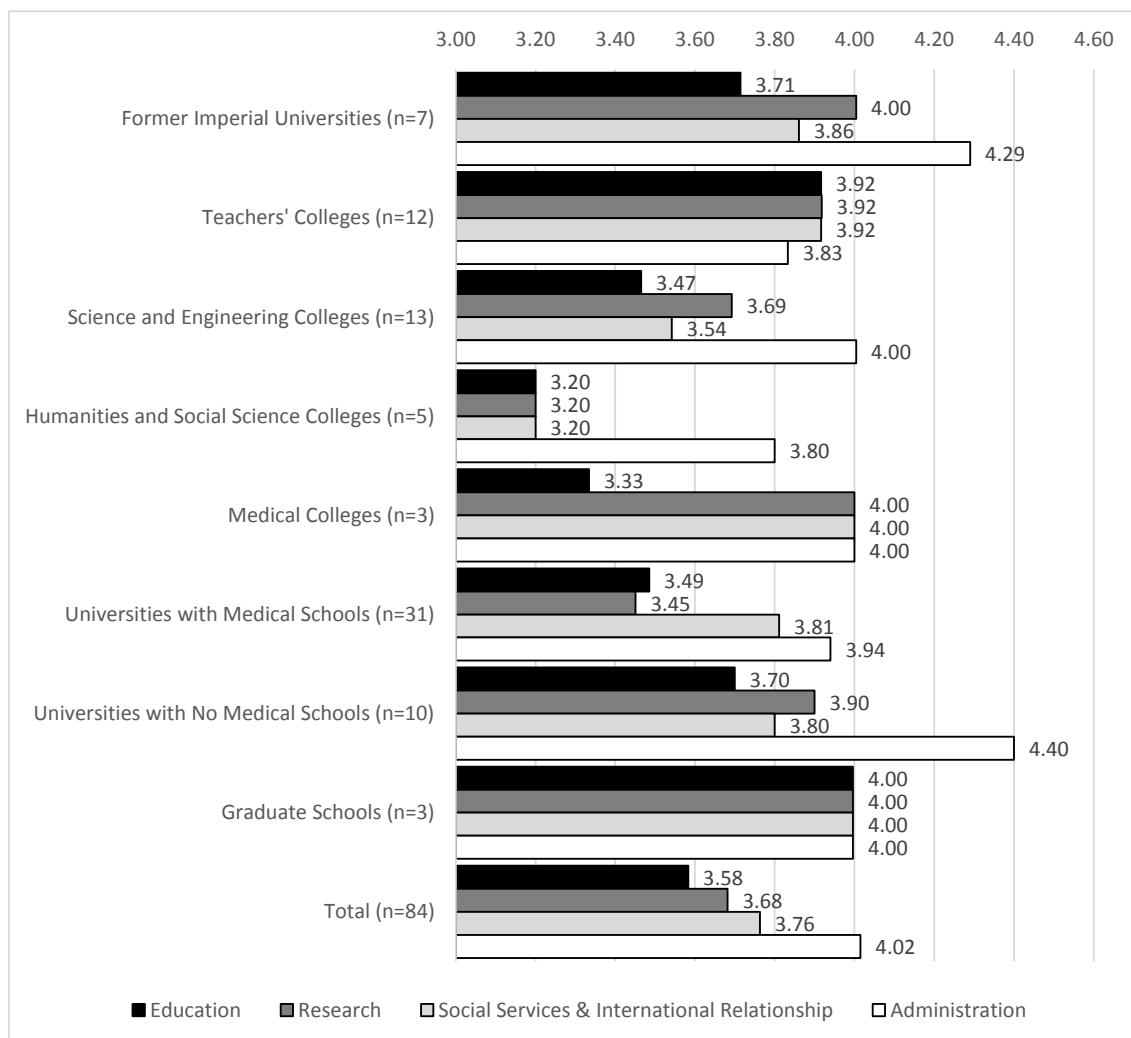
1. How satisfied were they with the results?
2. How useful did they think the results would be for improving the management of their institutions?
3. How accurately did they think the subsequent changes in the block grants reflected the NUCE results?
4. How much did they want the results to be reflected in determining the block grants in the future?

In the first question, the presidents were asked about each of the domains of education, research, social services and internationalization, and administration. Again,

there were 84 respondents who gave their input on a five-grade scale ranging from 1 (“Unsatisfied”) to 5 (“Satisfied”), with 3 representing “Neutral.” The responses were then combined by institution type (see Figure 2).

This figure shows that the presidents were not particularly happy about education and research, whereas their satisfaction was high regarding administration. Behind this, there are two possible reasons. First, it should be noted that, generally, the outcomes can be more easily quantified in administration than in education and research. We can also assume that the evaluations by the NUCE reviewers were more objective in nature. Second, the HEIs presumably felt pressured to push through streamlining, especially in administration, as the aforementioned annual block grant reduction inexorably considered.

**Fig. 2** Satisfaction with the First NUCE Results



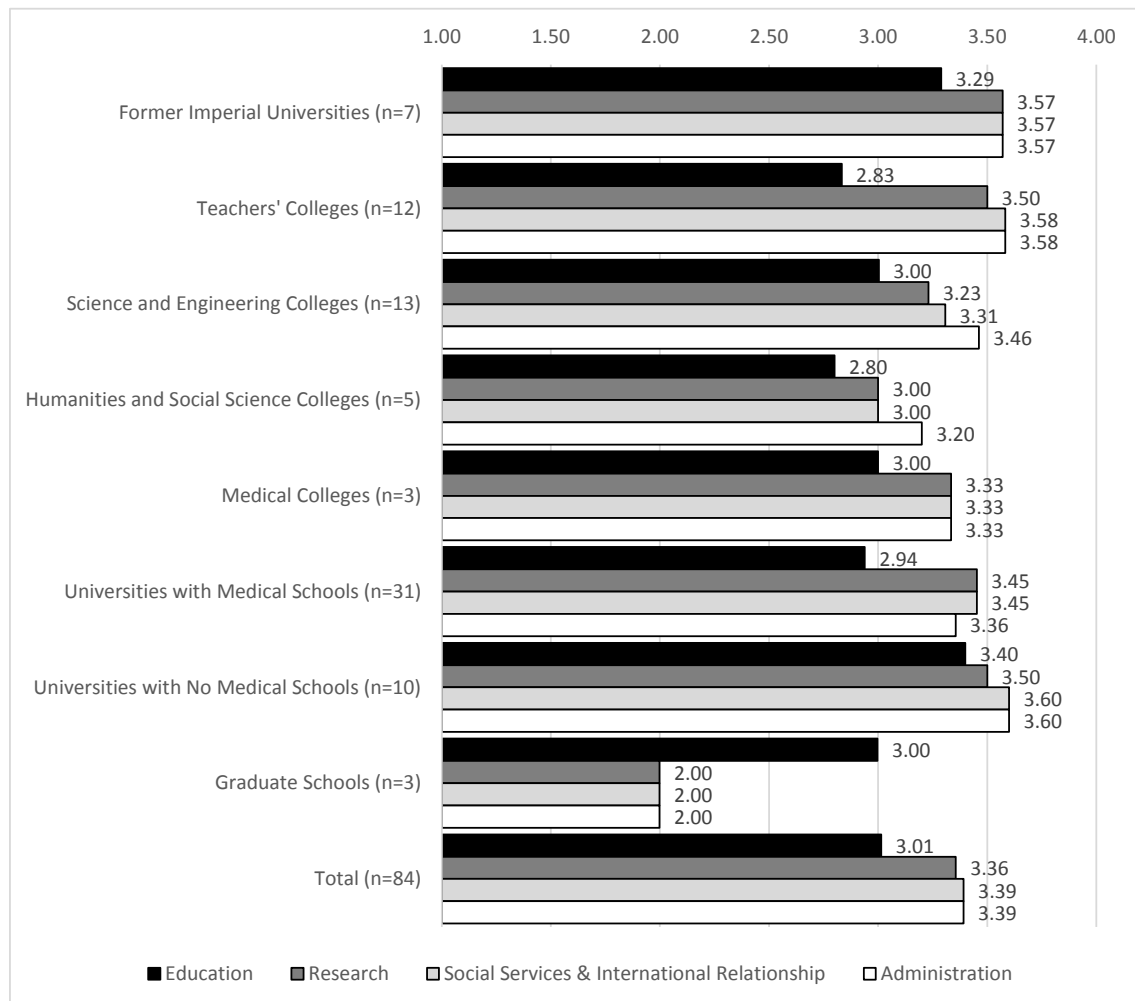
As shown in Figure 2, there were differences among the institution types. However, they were not statistically significant after conducting a chi-square test of their

cross-tabulation. Interestingly, the teachers' colleges and graduate schools were more content with the results of education and research than the other types. In contrast, the teachers' colleges were least satisfied with administration of the four domains. Meanwhile, the humanities and social science colleges were least satisfied with education and research. These findings might be due to the lack of differentiation in the NUCE results, as mentioned in Section 2. For example, all of the teachers' colleges had been graded in the first business term's NUCE as "Good," both in education and research. Some of their presidents probably felt favored by such lack of differentiation. Conversely, the humanities and social science colleges probably wanted a more distinct expression of their track record, instead of being lumped together with the others.

### 5-3. Usefulness of the First NUCE Results for Improving Management

In this question, there were 84 respondents who gave their input about each domain. Here, a four-grade scale ranging from 1 ("Useless") to 4 ("Useful") was employed (see Figure 3).

**Fig. 3** Usefulness of the First NUCE Results



Overall, we can confirm a similar tendency as in the aforementioned satisfaction rates. The results of education and research were not that useful, while those of administration were more helpful. Interestingly, the findings about education were lower than those of any other domain. The reason might be that (as some respondents stated) the evaluation results were so general that almost all of the institutions were “Good.” This made it difficult for the HEIs’ leadership to draw meaningful suggestions. By contrast, in research and administration, the presidents were positive. This was surely based on the fact that the results were more differentiated in both domains, as Table 1 shows.

It should be noted that, in this question, substantial differences were observed as statistically significant among the institution types, based on the chi-square test of their cross-tabulation ( $p < .01$ ). In this regard, relatively small-sized institutions, such as the colleges of science, engineering, humanities, social and medical sciences as well as graduate schools (except for teachers’ colleges), estimated the NUCE’s usefulness less favorably than larger institutions. Some institutions, as their presidents stated, even decided to establish new organizations or reshuffle existing ones for better efficiency or for remedying their weaknesses pointed out in the NUCE. Among the relatively larger institutions, there were more positive views about the usefulness. For reference, the ratings of “Useful” at former Imperial Universities<sup>7</sup> and universities with no medical schools in each domain are shown in Table 3.

**Table 3** Proportion of Responses of “Useful” in Two Institution Types

	Former Imperial Universities	Universities with No Medical Schools	Total
Education	42.9%	60.0%	26.2%
Research	57.1%	60.0%	44.0%
Social Services and Internationalization	57.1%	70.0%	47.6%
Administration	57.1%	70.0%	45.2%

#### 5-4. Linkage Between the First NUCE Results and the Block Grants

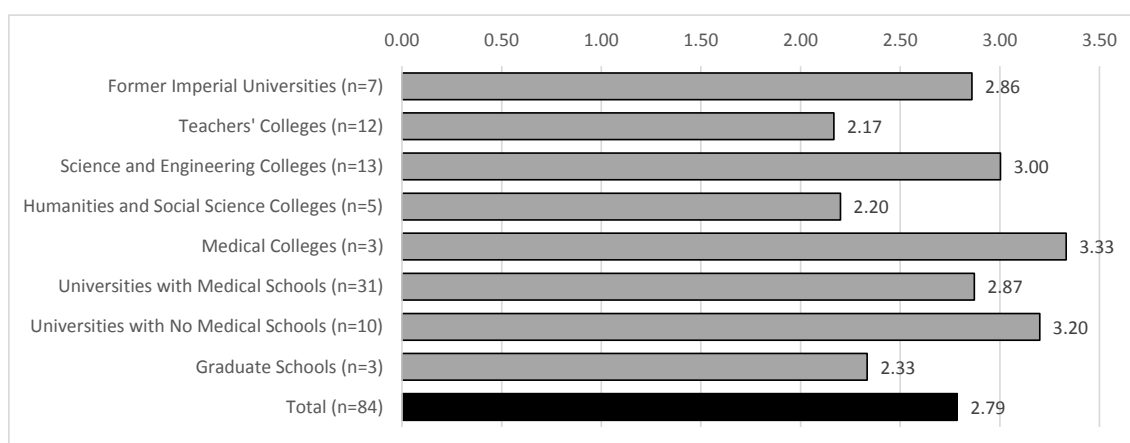
Asked if they were satisfied with the way the first NUCE results were reflected in the block grants, the 84 presidents responded on a five-grade scale ranging from 1 (“Unsatisfied”) to 5 (“Satisfied”), with 3 representing “Neutral” (see Figure 4).

It is noteworthy that the average score for all of the respondents was 2.79. This indicates that the national HEIs saw no appropriate balance between their NUCE

<sup>7</sup> There are seven prestigious large-scale universities whose origins lay in the pre-war universities of imperial founding. They form the top tier of the Japanese higher education system.

results and the amount of the block grants. This discontent was particularly pronounced among the teachers' colleges, humanities and social science colleges, and graduate schools, whose ratings were approximately 2.0. In fact, among these institutions, no president declared to be "Satisfied" or "Fairly Satisfied." Interestingly, dissatisfaction among the teachers' colleges was not conspicuous, compared with the others.

**Fig. 4** Satisfaction with the Block Grants Reflecting the First NUCE Results



The following comments by some of the respondents indicate the background of the HEIs' reactions:

- Some institutions end up favorably in the achievement measurement simply because they intentionally created flexible targets.
- Regardless of the NUCE results, we suffer from the continuous cut of the block grant by 1% every year. Additionally, the ministry abolished other grants such as the one for promoting good practices in education.
- Among the total amount of the block grant, the sum dependent on the NUCE results is almost negligible and falls short to incentivize managerial reforms.
- It is unclear whether the NUCE results were reflected in determining the block grants in a fair manner.

Although these complaints were particularly striking among the teachers' colleges, similar negative views were (more or less) common across institution types.

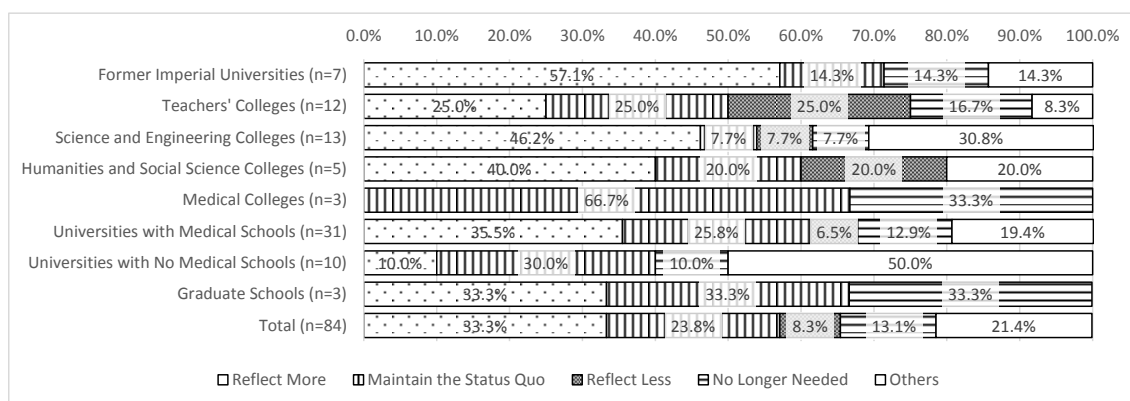
#### 5-5. Desirable Influence of NUCE on Block Grant Reallocation

As for the question of how much they believed the NUCE results should be reflected in determining block grant reallocation in the future, the 84 respondents chose one of the following answers: "Reflect More," "Maintain the Status Quo," "Reflect Less," "No

longer Needed,” and “Others.” Figure 5 describes the cross-tabulation between the eight institution types and their choices.

On the one hand, there was a group of institutions that wanted closer reflection. This group consisted of former Imperial Universities, science and engineering colleges, and humanities and social science colleges. They were apparently more confident in surviving in a contestable business environment created by performance-based funding. On the other hand, the teachers’ colleges, medical colleges, and graduate schools were of the opposite opinion. This finding indicates that the smaller institutions found themselves in a relatively disadvantageous position in resource reallocation.

**Fig. 5** Requests for How Much the NUCE Results Affect the Block Grants



In this context, some comments from the former Imperial Universities, science and engineering colleges, and humanities and social science colleges are telling:

- A reallocation system would be appropriate that, after securing the basic budget for each HEI, would add a performance-based sum, which would be calculated on the point-adding principle.
- Each HEI’s outstanding strategic efforts should be honored in this reallocation system, but the baseline should be separately secured.

Interestingly, the stance of the teachers’ colleges, medical colleges, and graduate schools, despite their relatively precarious standing, did not differ much in this regard. Obviously, the principle of performance orientation had prevailed so much that it was difficult for them to raise outright objections to the seemingly irrefutable cause. They perhaps assumed that it might be beneficial to them, depending on how the principle was specifically applied. Note the following comments:

- The government should encourage HEIs to be ambitious in setting strategic objectives. Additionally, performance evaluations should be based on their achievement of these goals by more transparent criteria. The results should also be



more fairly reflected in reallocation. These conditions are fundamental if the current system should be kept in place in the future.

- Short-term assessments are unsuitable for performance in education and research because operations in these domains take considerable time to bear fruit.

Regardless of what stance they took on the competitive environment, the HEIs basically agreed on how to remedy the shortcomings of the current reallocation system. First, they believed that the ministry should allow them to set challenging targets in the business term, after which a longer perspective is desirable for evaluating such ambitious objectives. Hence, the ministry should refrain from a hastily cutting off the block grants just because the HEIs failed to meet certain targets in one year.

The issue of the overall burden was also addressed in the survey. It should be noted that the School Education Act prescribes every national HEI to achieve accreditation at the interval of no more than seven years. Additionally, the same act states that every institution is obliged to conduct an in-house performance evaluation on a regular basis and to make the results public. In the survey, there was a chorus of complaints. For instance, 53 of the 84 respondents stated that the preparations for the mandatory evaluations were not cost effective, and they requested that the ministry streamline the entire evaluation framework to ease the workload for the HEIs.

Thus far, we have examined what the national HEIs thought of the NUCE and its financial consequences. We may state that the presidents' views are moderate, neither strongly positive nor extremely negative. This is particularly true for the core fields of education and research. However, the fact that their satisfaction of the NUCE's financial consequences lay under the average is worth emphasizing (see Figure 4). This indicates that the mechanism of performance measurement and resource allocation does not satisfactorily work in the eyes of the presidents. It also confirms that the NPM principles have not been sufficiently put into practice in the incorporation reform.

## 6. Conclusion

At the turn of the 21<sup>st</sup> century, Japan carried out a reform under the deregulation of higher education. In 2004, the reform bestowed the national HEIs with the legal status of independent corporations, and the business term system was introduced for ex-post evaluations of the HEIs' performance. Thus, this study focused on the performance measurement and resource allocation of HEIs in Japan, and what the reform specifically brought about. Based on the findings, it is questionable how much the ideas of NPM were realized through this reform.

First, a workable mechanism for ex-post evaluations was not established. The NUCE, which was supposed to play a key role, fell short of its expected mission due to the inconsistency of the structure and the ambiguity of the evaluation criteria. As a result, this evaluation scheme did not have a significant influence on the determination

of resource allocation. Meanwhile, the other two initiatives of performance-based funding (i.e., categorization and uniform quantification) met the NPM principles halfway at the most. Specifically, both approaches were too regulatory and did not leave enough room for discretion to the HEIs. Not only in their architecture, but also in their procedure, both were not characterized by management of objectives, but of operations. Striking is the strong reliance on detailed numerical metrics and the frequent monitoring of their progress. This aspect was particularly pronounced in uniform quantification. Additionally, the metrics were determined and prescribed to the HEIs by a group of experts appointed by the ministry who carried out monitoring and made judgments. This indicates that the ministry's regulatory power remained substantially intact and the autonomy granted to the HEIs was limited. Moreover, both approaches lacked perspectives for future developments.

Previous research has agreed that the realization of NPM principles does not mean a retreat of the state from controlling higher education. Instead, it is simply a new form of state control (Bogumil, Jochheim, & Gerber, 2015). Either way, one of the NPM tenets is to enlarge the agents' freedom for more discretion. In this regard, it is safe to state that Japan's post-incorporation system was not primarily characterized by NPM. Specifically, the regime of the minute ex-ante regulations prior to the reform essentially continued under a different guise. Why did the reform in Japan become stagnant halfway, despite the models in Great Britain and other European countries? At the time, under the buzzword of "small government," quantitative downsizing of the public service sector had absolute priority, which put aside reviewing and reshuffling the competences of the ministerial bureaucracy (Ōsaki, 2011).

In Japan, with the new business term of the national HEIs due to begin in FY 2022, the mode of higher education financing has become a topic of public discussion. Given the discussions thus far, the opinion in favor of stronger performance orientation continues to prevail. This is particularly important because the performance orientation in HEI funding is still fairly weak. Meanwhile, regarding the universal quantification initiative, changes in the block grants resulting from redistribution have remained within a range of  $-0.5\%$  to  $+0.7\%$ , even in FY 2020, when the initiative had been emphasized (MEXT, 2020b).

Finally, it remains uncertain whether the trend in favor of stronger performance orientation will continue in the medium or long run. In this context, researchers have noted that NPM, when applied to public management, does not necessarily work as expected (Dunleavy, Margetts, Bastow, & Tinkler, 2006). As for higher education, there is already a discussion underway about the alternatives to NPM such as network governance or the public value model (Ferlie, Musselin, & Andresani, 2009; Broucker, De Witt, & Verhoeven, 2018). However, what will happen in Japan? Given the considerable backlog in accomplishing the NPM concept. Japanese higher education may still follow this approach or it will carefully watch the situations in European

countries and critically re-examine NPM as a whole. Anyway, the academic standard of the Japanese HEIs will greatly depend on which route they will select.

\* The views in this study are the authors' and they do not represent those of the NIAD-QE, to which they belong.

#### Compliance with Ethical Standards

**Conflict of Interest:** On behalf of all of the authors, the corresponding author states that there is no conflict of interest.

**Ethical Approval:** This study does not contain any research with human participants performed by the authors.

**Data Availability:** The data in this study is available from the corresponding author (upon reasonable request).

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