

# A Study on the Influence of the Re-organization of National Universities as Corporations on Education and Research, University-Industry Relations and University Management

(summary<sup>1</sup>)

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## Abstract

We conducted a questionnaire survey of the faculty with a major in natural science in national university corporations throughout the country on how the incorporation of Japanese national universities in 2004<sup>2</sup> affected education and research at a university, academic cooperation with industry, and university management. As a result, the prevailing view among them is that the conditions of education, research, and university management are deteriorating by the incorporation of national universities, although only academic cooperative activities with industry have been energized by acquiring external funds.

In the future, it will be necessary to further study the incorporation of Japanese national universities from the point of view of international competitiveness in science and technology, equal opportunity for higher education, succession of research in the fields unfit for economic rationality, and preservation of local vitality.

## Keywords:

national universities in Japan, influence of incorporation, education at university, research at university, academic cooperation with industry, university management

## 1. Introduction

The objective of this paper is to investigate the influence of the incorporation of national universities in Japan exerted on education and research, university-industry relations, and university management. Consequently, the paper aims to raise the issues of the re-organization of the national universities as corporations (hereinafter referred to as “*incorporation*”) in 2004.

For that purpose, we made a questionnaire survey on natural scientists of national university corporations on how the reorganization of the national universities in Japan as corporations in 2004 affected education, research, academic cooperation with private enterprise and university management, on their views about the future government policy, and on essential problems of the *incorporation*. With the analyzation of its results, we will clarify the consequences of the *incorporation* and illuminate its problems.

## 2. Methods and materials

We decided to make a questionnaire survey on the faculty with a major in natural science in the national universities in Japan for the following two reasons.

- (1) The questionnaire includes the relative questions to university's cooperative activities with industry, and the greater part of them is engaged by natural scientists.
- (2) One of the main purposes of the *incorporation* in 2004 was to reduce the government's budget for the national universities, and natural scientists are more susceptible to the influence of the budget reduction.

Consequently we randomly selected 58 universities of 68 ones that have natural scientific undergraduate and graduate courses out of the total 86 national university corporations. There are 23,736 faculty members (professors, associate professors and lecturers) with a major in natural science, that is science, engineering, agronomics or medicine, who belong to those 58 universities, and we randomly selected 1,000 faculty members out of them. As a result, we selected 1,000 faculty members in 53 national university corporations. Through this survey we could clarify their present conditions and views after the *incorporation*.

We sent questionnaires on July 28, 2008 and the deadline was set on August 29. The total of respondents is 183 and the rate of response 18%. A profile of respondents is as follows. The faculty of 7 mega-universities which were all imperial universities before the World War II constitutes 27%, the other universities' faculty 55%, and the unknown 18%. As for major, medicine constitutes 22%, engineering 17%, science 14%, agronomics 8%, and the unknown 39%. As for their position at a university, professor constitutes 44%, associate professor 13%, lecturer 5%, and the unknown 38%.

## 3. Results

### 3.1 Evaluation of the Influence of the *Incorporation*

When respondents were asked to indicate whether the *incorporation* had a good or

bad influence on research, education, academic cooperation with industry, and university management, 69% of them indicated that it had a bad or generally bad influence on research, 66% of them on university management, 51% of them on education, and 12% of them on academic cooperation with industry. On the other hand, 24% of respondents indicated that the *incorporation* had a good or generally good influence on academic cooperation with industry, 17% of them on university management, 14% of them on education, and 12% of them on research.

### 3.2 Details of the influence of the *incorporation* on research

As for the influence of the *incorporation* on research, more than half (51%) of respondents indicated that their research fund which is allocated by a university itself (hereinafter referred to as “*Fundamental Research Fund*”) was reduced. *Fundamental Research Fund* decreased from 1.5 million yen per year per researcher to 0.72 million yen on average, which means it was down by half. For that reason, the number of the faculty who seeks to acquire competitive research funding (66%) or other external research funds (62%) increased.

On the other hand, 72% faculty members indicated that the decrease of *Fundamental Research Fund* affected their research activities. In particular, the content of the influence was as follows:

- ▶research themes were rendered to a small scale for lack of funds (53% of all respondents);
- ▶research themes were changed to others from the most favored ones (28%);
- ▶the period of research projects was extended (21%).

Especially, the cases of downsizing of research reached more than half and it has become increasingly difficult to address a large-scaled research. As for “others” (34% respondents), most of respondents indicated that the researches which a researcher needs to address during a long period have decreased, in other words, the quality of research has been changed. It was also indicated that the time appropriated to paperwork-forms to fill in to acquire external research funds has increased, and by contraries, the time allocated to research and education has decreased.

### 3.3 Details of the influence of the *incorporation* on university management

As for the influence of the *incorporation* on university management, most of respondents indicated that it was affected (91%), and just 7% of them indicated that it

was not affected. In particular, the content of the influence was as follows:

- ▶ decision making has become quick (44% of all respondents);
- ▶ decision making has not been changed (36%);
- ▶ decision making has become slow (16%).

When the respondents who indicated that decision making has become quick were asked more specific situation, a greater part of them indicated that the trend towards top-down decisions has grown stronger (31 cases). Others indicated that it has become difficult to allow enough time for discussion at a faculty meeting which means that rough-and-ready decisions were made (10 cases). As for the concrete situation in which decision making has become slow, respondents indicated that it takes more time in ascertaining president's or trustee's intention or in decision-making for the confusion introduced into the administration because of refusing the departments' request (5 cases). They also indicated that the number of meetings or committees has increased (5 cases). In the former case, the enhancement of the administration's function has conversely caused delays in decision making. On the whole, the *incorporation* has exerted several influences on their decision making.

Secondly, in terms with the change in the contents of decision making, the responses of "it has become worse" reached more than half (54%), then "it has not been changed" (27%), and in the last place "it has become better" (17%). As for the concrete situation in which it has become worse, respondents indicated that because of top-down decision making, the requests of the faculty or the departments are often refused, the discussion is not enough, decision making is often made without any knowledge of the real situation of education or research site, and there are many other specific situations such as lack of accountability, autocratic tendency of the administration, and lack of communication between the administration and the departments (38 cases), meaningless decisions are made from the top down (4 cases), the person in charge often leads us by the nose for his or her specific personality (3 cases), communications among the faculty have broken up because of top down system (2 cases), university management has been rendered to management-first or profit-first (8 cases), the idea of university was lost because of laying too much emphasis on acquiring external funds (4 cases), and decrease of Management Expenses Grants from the government to the national university corporations may turn against basic research or revolutionary new research projects (3 cases).

On the other hand, as for the concrete situation in which it has become better, respondents indicated that a president demonstrates leadership (6 cases), and making decisions has become quick (3 cases). It is revealed that both cases of "it has become

worse” and “it has become better” were affected by top-down system.

In addition, as for the changes for university’s accounting system, it was indicated that firstly it was not changed (38%), secondly using money has become difficult (36%), and in the last place using money has become easy (23%). As for the concrete situation in which using money has become difficult, a lot of universities experienced that expense management process has become troublesome and paperwork and form-filling has increased (12 cases), and tighter controls and over regulations have become abundant and degrees of freedom have decreased (11 cases), it has grow difficult to use *Fundamental Research Fund* because of the subdivision of expense items, for example “expenses for students” or “expenses for faculty members” (8 cases), flexibility in using *Fundamental Research Fund* was lost because of severe inspection of delivered goods (3 cases), the introduction of a new web accounting system has increased faculty members’ paperwork by contraries (5 cases), a carrying-over of research funds has become difficult and moreover a payment limit has been advanced to the end of February (4 cases), and purchasing on the web has not yet been permitted and as a consequence it has obliged faculty members to purchase more expensive items (1 case).

On the other hand, as for the concrete situation in which using money has become easy, respondents indicated that the expense items of Management Expenses Grants which were distributed on the basis of the number of students to the national university corporations by the Ministry of Education, Culture, Sports, Science and Technology (hereinafter referred to as “*MEXT*”) have been unified and consequently expendable items such as academic conference participation fees or travel expenses have increased (18 cases).

### **3.4 Details of the influence of the *incorporation* on education**

As for the influence of the *incorporation* on education, the response of “it has affected on education of students” reached more than half (62%), far exceeding the reply of “it has not affected on education of students” (36%). The detailed content of the influence was as follows:

- ▶as for the expenses for education and tutoring of students, the responses of “ there were no changes” were the most (53%), in the second place come the responses of “they decreased” (34%), and the responses of “ they increased” come last (8%);
- ▶as for the time appropriated for education and tutoring of students, the responses of “it has decreased” (44%) exceeded the ones of “it has increased” (33%);
- ▶as for the reasons why time has decreased, the responses of “affairs except education

and research such as paperwork, miscellaneous duties and administration services have increased” come first (25 cases), secondly “paperwork and form-filling for evaluation, questionnaire survey and working papers have increased” (17 cases), and last “committees and meetings have increased” (11 cases);

- ▶ as for the reasons why time has increased, the responses of “number of the faculty have decreased” (6 cases) come first, secondly “a teaching load has increased” (5 cases) and “education has come to be emphasized” (5 cases), next, “a new teaching method or program has been adopted” (4 cases), and last “time for supporting students other than classes has increased” (2 cases).

### **3.5 Details of the influence of the *incorporation* on academic cooperation with industry**

As for the influence of the *incorporation* on academic cooperation with industry, 42% of respondents indicated that it was not changed, secondly “it has been made easier” (29%), next “don’t know because of lack of cooperative research activities before and since the *incorporation* in 2004” (20%), and last “it has been made more difficult” (8%).

When the respondents who indicated that cooperation with industry has been made easier were asked more concrete category of the cooperation, the responses of collaborative or contract research come first (75%), secondly “technology transfer through patent licensing (38%), thirdly “donations for education and research” and “dual employment” (both 23%). Furthermore, the reasons why cooperation with industry has been made easier are as follows:

- ▶ “a system, organization, or support staff for collaborative activities with private enterprises has been improved” (18 cases);
- ▶ “regulations were loosened” (6 cases);
- ▶ “research funds have been able to be used in the next fiscal year” (3 cases).

As for the quantitative influence on collaborative activities with industry, the responses of “almost no changes have occurred” come first (26%), next “don’t know because of lack of academic cooperative activities with industry before and since the *incorporation*” (23%), and last “as academic cooperative activities with industry may increase or decrease each year, one cannot identify those activities as on the increase or on the decrease (22%), only 1% respondents indicated that those ones are on the decrease. With regard to more concrete category of the cooperative activities, the responses of collaborative or contract research come first (81%), secondly “donations for education and research” (28%), thirdly “technology transfer through patent licensing” (23%). As for the research funds derived from academic cooperation with industry, “as

academic cooperative activities with industry may increase or decrease each year, one cannot identify those activities as on the increase or on the decrease (35%), secondly “almost no changes have occurred” (25%), next “there has been not a cooperative activity with industry before and since the *incorporation*” (20%), next “those activities are on the increase” (13%), and last “they are on the decrease” (2%).

### **3.6 On the financial policy of MEXT with regard to the national university corporations**

It was reported on the paper in April 14, 2008 that *MEXT* decided the new financial policy that the Management Expenses Grants on the basis of the number of the students of each university would be appropriated based on the evaluation of the performance of each national university corporation with regard to the level of education and research of each faculty or department and improvements of university management by National University Corporation Evaluation Committee since 2010. When the respondents were asked their opinion about this *MEXT*'s new financial policy, 45% of them indicated that they are not in favor of the *MEXT*'s new financial policy, 25% of them were generally unfavorable, 22% generally favorable, and 6% favorable.

The reasons why they were unfavorable were as follows:

- ▶“assessment criteria are ambiguous”, “a fair evaluation cannot be expected to be made”, “a precise assessment is impossible considering the great amount of cost for paperwork” (38 cases);
- ▶“principle of market mechanism or achievement-oriented evaluation system is far removed from the way university should always be”, “university does not seek economic profits”, “*MEXT* confound education with management”, “*MEXT*'s policy is contrary to the essential quality of education” (13 cases);
- ▶“*MEXT*'s policy will increase the disparities among universities”, “regional universities will become impoverished all the more” (12 cases);
- ▶“as assessments are made for short-term results, the ability to address long-range research will be diminished”, “basic research will move into decline”, “cultivation of large-scaled human resources will be difficult” (10 cases);
- ▶“if there is a sufficient fundamental allocation, we will approve of an allocation on a merit base, but under the condition that present situations contradict it, most of regional universities will not be able to survive”, “further reduction of Management Expenses Grants will deny the existence of regional national universities” (7 cases);
- ▶“considering the results several decades from now, there is no way except allotting on the basis of the number of the students of each national university” (3 cases).

The reasons why they were generally unfavorable were as follows:

- ▶“assessment criteria are not clear”, “an accurate assessment is very difficult of education and research, especially so of education” (12 cases);
- ▶“*MEXT*'s policy will increase the disparities among universities and weigh on the management of regional universities”, an allocation too weighted on the basis of achievements will impede the progress of education and research of the universities which receive a small portion of Management Expenses Grants from the government” (4 cases);
- ▶“universities must not been managed just on the results of evaluation, and they should be an independent entity” (3 cases).

The reasons why they were generally favorable were as follows:

- ▶“*MEXT*'s policy will activate and provide an impetus to universities” (6 cases);
- ▶“a weighted allocation will have the effect of enhancing competitive consciousness and we need competitive consciousness” (4 cases);
- ▶“although we need keep the level of *Fundamental Research Fund*, more allocations to priority areas must be made” (3 cases);
- ▶“excessive equalitarianism will waste financial resources”, “*MEXT*'s policy will save the government budget in the end” (3 cases).

The reasons why they were favorable were as follows:

- ▶“if Management Expenses Grants were allotted in proportion to the self-reliant efforts of each faculty, faculty autonomy will see resurgence” (1 case), “as we are now in the times of university open admission, it is necessary to drastically curtail the fixed number of students and faculty of each national university in order to raise academic standards” (1 case).

### **3.7 On the financial policy of MOF with regard to the national university corporations**

It was reported on the paper in May 20, 2008 that the Fiscal System Council of Ministry of Finance (hereinafter referred to as “*MOF*”) issued a tentative plan that with regard to Management Expenses Grants allotted to the national university corporations, if the tuition fee of national universities was increased to the level of that of private universities”, 270 billion yen would be saved<sup>3</sup>, and if the cost for the education of national universities which exceeds the level of university establishment standards were curtailed, 250 billion yen would be saved. That tentative plan was laid on the basis of an approach that the government should be prudent to cover the cost for education at a university by tax revenue, because it is not compulsory education, and so it is more



appropriate and effective measure to provide student loan to furnish equal opportunity in higher education. When the respondents were asked their opinion about this *MOF's* new financial policy, 69% of them indicated that they are not in favor of the *MOF's* new financial policy, 19% of them were generally unfavorable, 6% generally favorable, and 3% favorable.

The reasons why they were unfavorable were as follows:

- ▶“it is the government’s responsibility to foster excellent human resources”, “education is the foundation of future Japan, and its cost should be borne by society as a whole”, “fostering human resources can be equivalent to accumulating national wealth” (38 cases);
- ▶“*MOF's* new finance policy will lead to a situation that an excellent student is unable to enter college for destitution”, “it will destroy equal opportunity for higher education” (22 cases);
- ▶“present student loan system is insufficient to meet students’ needs”, “student grant system should be established<sup>4</sup>” (13 cases);
- ▶“*MOF's* new finance policy shifts attention away from higher education by focusing upon national finance crisis”, “it treats educational issues only in terms of cost-effectiveness” (10 cases);
- ▶“*MOF's* new finance policy will bring greater burden on students and their families” (10 cases).

The reasons why they were generally unfavorable were as follows:

- ▶“Japan should think great deal of nurturing human resources as a nation poor in natural resources”, “*MOF's* new finance policy will lead to weakening of national strength” (5 cases);
- ▶“drastic curtail of the budget of the national university corporations should be discussed after the major improvement of present student loan system or the establishment of new student grant system” (5 cases);
- ▶“keeping up of equal opportunity for higher education is the basic role of the government” (3 cases).

The reasons why they were generally favorable were as follows:

- ▶“we have no other choice than accepting *MOF's* new finance policy because of national finance crisis, but other ineffectual items of the budget should be saved as well” (3 cases) ;
- ▶“beneficiaries-pay-principle is applicable for higher education because the cost for higher education is ever rising for the decline in academic ability of students” (1 case).

The reasons why they were favorable were as follows:

- ▶“in order not to decrease the number of national universities, there is no other choice than *MOF*'s new finance policy” (1 case);
- ▶“national university corporations should accept the decrease of Management Expenses Grants so as to financially go independent” (1 case).

### 3.8 On the essential issues of the *incorporation*

When respondents were asked on the essential issues of the *incorporation*, their responses were as follows:

- ▶“*incorporation* aims to decrease expenses of national universities as its overarching imperatives, it never takes the ideal future of higher education into account and so it lacks a long-term vision” (33 cases);
- ▶“*incorporation* adversely dwindled independency and degree of freedom at national universities”, ”restructuring ended up in the air and national universities remain order-takers of *MEXT*”, “after the *incorporation*, the management of national universities has not changed” (26 cases);
- ▶“the introduction of Western style competitive principles is breaking up advantages of national universities in Japan and will lead to pressure of competition, achievement-oriented evaluation system, and destruction of humanity” (17 cases);
- ▶“*incorporation* was implemented as a measure to decrease the fixed number of government employees and to curtail public funds to higher education” (14 cases);
- ▶“*incorporation* caused a loss of activities and distinguishing features of regional or small-scaled universities”, “resources are too concentrated in mega-universities or universities located in metropolis” (11 cases);
- ▶“*incorporation* means a lack of basic principle of the state in education, incomprehension for higher education, absence of ideas, and deprivation of norms” (8 cases);
- ▶“the management of national universities is left to the faculty who are nonprofessionals in it” (8 cases);
- ▶“ as expenses were reduced, faculty members’ paperwork increased and educational and research activities were impaired” (7 cases);
- ▶“faculty autonomy has become a mere façade, university management is controlled by a small number of leaders, and we need the bottom-up decision-making system as well as top-down one” (7 cases).

## 4. Discussion and Conclusions

Generally speaking, the *incorporation* was made in terms of financial policies without serious speculation on how Japanese higher education system ought to be. As a result, with regards to research, the distribution of Management Expenses Grants was curtailed against unspectacular disciplines of research, and regional and small-scaled universities.

In relation to the management of universities, the increase of faculty members' paperwork accompanied with the decrease of expenses exerted an unfavorable influence on education and research. As a nonprofessional of management, they have been drawn into a quagmire of confusion of the situation of national universities. And on the other hand, the national universities were not necessarily fully privatized. They were completely controlled by the National University Corporation Law and as a consequence, the degree of the freedom of their management has rather receded compared with that of the previous national universities. These are the significant problems of the *incorporation* pointed out by a large majority of respondents.

The incorporation of the national universities in April 2004 included the following four aims:

- 1) re-organization of national universities from national affiliated organizations into independent legal entities to which rights and obligations could be attributed;
- 2) abolition of Special Account for National School and establishment of the system of Management Expenses Grants which was to be reduced by 1 % every year since the following year of the *incorporation* as part of the administrative and financial reform of the government;
- 3) realization of drastic reduction of the payroll of government officials by making the whole staff of the national universities into non-government officials as part of the administrative and financial reform of the government;
- 4) introduction of the idea of management and competition into the operation of the national universities by rescinding the government's "convoy system" under which national universities had long been sheltered, reduction of cost, clarification of each national university's role and reduction of the total number of the national universities.

The confusion of education and research situation and grave accusation of the faculty of each national university originated from the fact that above-mentioned essentially separated four aims were materialized at the same time with the *incorporation* as a turning point.

The establishment of a national university as a corporation, one of the above four

elements, had been considered inside the government when the organization system of an imperial university was being worked out in the latter half of eighties. And all the more after since when the Constitution of Japan which states academic freedom was established after the World War II, it has become the issue to be settled as soon as possible.

But essential subjects lie in the fact that the *incorporation* arose from the product of a compromise between *MOF* and Ministry of Internal Affairs and Communications which intend to effectuate the above second and third aim, and *MEXT* which wishes to avoid the complete privatization of the national universities by all means. It could be presumed that the above fourth aim was added by *MEXT* itself in the process of this compromise.

The ultimate object of *MOF* is to privatize the national universities through materialization of the above second and third aim. In the final analysis, the essential subjects will lead to the question of whether we could make an assertion of national university's significance of existence against such opinion as is held from the point of view of national finance, or to what degree we could do. In that case, the reasoning of our assertion is as follows:

- 1) rising cost of education will lead to further deepening of the birth dearth and scholarship system, especially student loan system cannot stem this tide;
- 2) privatization of national universities and decrease of their total number (hereinafter referred to as "*Priva. and Dec.*") will lead to degeneration of research activities and international competitiveness in the fields of science and technology;
- 3) *Priva. and Dec.* will lead to recession of equal opportunity for higher education and destabilization of our society;
- 4) *Priva. and Dec.* will lead to degeneration of research activities in such fields as do not fit in with economic rationality or competition and could damage succession of culture in Japan;
- 5) *Priva. and Dec.* will lead to degeneration or extinction of national universities located in several regions, and could lose regional activation and damage succession of regional culture.

It seems very possible that the above five elements could be realized in the near future. So it means that argument over the *incorporation* should be presented with a central focus on these five elements.

Among other things, there were a large majority of respondents who asserted that introduction of the idea of management and competition into the operation of the national universities caused the confusion of education and research, and exerted bad

influence on them. It is highly important for us to further study the validity of this assertion at the research and education site of each national university in the future.

## Notes

1. This paper is an abridged version of “A Study on the Influence which the Transformation of National Universities from National Affiliated Organizations into Independent Legal Entities in Japan has had on Educational and Research Activities, University-Industry Collaborations and University Operations”. This is a Japanese version and available at [http://www.ilc.tsukuba.ac.jp/rehp/jp/hp/survey\\_h21/reserch\\_houjinka.pdf](http://www.ilc.tsukuba.ac.jp/rehp/jp/hp/survey_h21/reserch_houjinka.pdf)
2. Since 1872, national universities in Japan had been established by the central government. They had just been affiliated organization of the Ministry of Education from a legal standpoint. In April 2004, every national universities were reorganized as corporations as part of administrative and financial reform of the government. They have become independent legal entities to which rights and obligations could be attributed.
3. Tuition fee of national universities in Japan is only slightly cheaper than that of private ones in point of fact as for arts and humanities. For example, University of Tokyo (one of 86 national university corporations in Japan) requires ¥751,200 for the first year in 2010 and then ¥469,200 each year thereafter. Keio University, the country’s premier private school, costs ¥1,243,350 for the first year in 2010 and ¥790,000 every year after that for a literature degree. These costs do not include supplementary fees that universities require. This is the case with a literature and the like. In the case of science and engineering departments, the gap is widened to about ¥670,000 and will see the largest to ¥2,460,000 for a medical department.
4. Scholarship system in Japan is actually student loan system. There are no grants except for some special programs adopted by individual universities. Japan Student Services Association (JASSO) was established by *MEXT* to offer student loans. There are two types of loans that JASSO offers, one with a maximum interest rate of 3 percent, and one that is interest-free.