

No. 1037

Autonomic Management of a University

by

Hideaki Takagi

May 2003

Autonomic Management of a University

Hideaki Takagi

Vice President, and
Professor, Institute of Policy and Planning Sciences
University of Tsukuba
1-1-1 Tennoudai, Tsukuba-shi, Ibaraki 305-8577 Japan
Phone: +81-29-853-2005; Fax: +81-29-853-6310
E-mail: takagi@sk.tsukuba.ac.jp

Abstract

With few exceptions, Japanese universities have been *Ivory Towers*, separated from the external world. Recently, however, they have been faced with several major challenges. First, all national universities are becoming independent administrative institutions in the year 2004; at the same time, professors will no longer be government employees. Second, universities are expected to sustain the nation's economic growth by transferring their knowledge and technologies to industry. Third, students show less academic interest than before. We discuss how the University of Tsukuba copes with these difficulties by its unique management style with the cooperation of its staff members. Many skills developed for running private firms are very useful as they are newly accepted in academia. After all, communication with respect for individuals is the key to managing a nonprofit organization such as a university in this challenging environment.

* The views expressed in this paper are solely the author's personal views, and are neither those of the University of Tsukuba nor those of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan.

This paper is to be presented in the *Oxford Round Table* held at St. Antony's College in the University of Oxford, Oxford, England from July 6 through July 11, 2003.

1. Change from Good Old Days

There are approximately 650 universities and colleges in Japan. It is rather easy to choose a set of major research universities from among them. These include the so-called seven *ex-imperial universities* (Hokkaido, Tohoku, Tokyo, Nagoya, Kyoto, Osaka, and Kyushu), several additional national universities (Tsukuba, Hitotsubashi, Tokyo-Kogyo, Hiroshima), and two private universities (Keio and Waseda). Although there are other universities which boast distinguished performance in specific areas, the above set can be thought of as representative of Japanese universities. They are usually highly ranked in many aspects such as the amount of grants-in-aid for scientific research awarded from MEXT, external research funds, paper citation indices, quality of graduates as well as applicants, and so on.

The national universities in Japan have been enjoying favorable treatment given not only by the government but also by the society. Some of these are as follows.

(1) Independent operation

Japanese universities have operated more or less independently. For example, the MEXT Minister automatically appoints as university president the person who is elected by the teaching staff members. Professors write papers without much consideration about their relevance to the benefit of society. Teachers are not evaluated by students. While people at large occasionally applaud scientific achievements by university researchers (such as Nobel prizes), the industrial world only appreciates the supply of students (bachelors and masters, not doctorates) produced each year. Companies train their newly-hired employees on the job and develop products in their own laboratories.

(2) Secure organization and budget for education and research

When a national university plans to create a new organization such as a department or a research center, it seeks head count and financial support from MEXT. There follows a rather long approval process. Once approved, however, the organization is rarely told to discontinue regardless of its performance. The budget to cover the cost of education and research activity for each university is based on the number of students and the number of teaching staff. In addition, some organizations such as centers for research on specific subjects receive their operating budget. The

above-mentioned set of research universities receives relatively affluent and constant support without much competition.

(3) Complete job security

All permanent staff members in the national universities are employed by the government with job security until a fixed retirement age. The retirement age is determined by the staff themselves in each university (subject to the approval of MEXT); currently it is set to between 60 and 65 years depending on the university. Once hired as a national government employee (for example, as a research associate immediately after obtaining a Ph.D.), he/she is never fired except for the commission of a crime even if the employee produces few research results.

While university staff was happy in their cloistered academic environment, the economy in Japan entered a long-lasting recession in the early 1990s after the prosperity of the 1980s. As a means to create new industries, to achieve internationally competitive economic power, and to build a nation with sustainable development, some economists and politicians appealed for the close collaboration of industry, universities, and the public sector. In its recent plan, Japan aims to be a nation that produces highly capable professionals and is built on creativity in science and technology. The universities are expected to play a primary role in the knowledge-based society of the 21st century in Japan.

In June 2001, *The Policy on the Structural Reform of National Universities* or so-called *Tohyama Plan* (after the MEXT Minister Atsuko Tohyama) was presented. It consisted of three tasks:

- (1) Reorganization and merger of national universities
- (2) Prompt transition to a new *national university corporation*, and
- (3) Introduction of the principle of competition through third-party evaluation.

This manifest was a surprise to most university people, since none of the items had been considered seriously before. The changes experienced by the national universities since the introduction of the plan seem to be following its precepts.

2. Challenges

In this section, we describe several challenges that the Japanese national universities are facing.

2.1. National University Corporations

At the beginning of the year 2002, there were 99 national universities in Japan. On October 1st, 2002, two mergers occurred; Yamanashi University and Yamanashi Medical University merged into the new Yamanashi University, while the University of Library and Information Science became a part of the University of Tsukuba. Thus there are 97 national universities at present, and 10 more mergers are expected during the year 2003. At the time of this writing (May 2003), the *National University Corporation Law* is being discussed in the Legislature. If this law is enacted, all national universities will become independent administrative institutions called *national university corporations* in April 2004. This is the first major reform of the Japanese university system to occur after World War II. The merits of this reform are said to be enhanced autonomy and independence of universities and expanded discretion of top management in each university.

At the same time when the national universities become corporations, their employees become equivalent to workers in the private sector. While this transition removes many regulations and facilitates a flexible working style, some employees are afraid of losing privileges such as job security and monotonically increasing salaries.

2.2. Partnership with Industry

It is imperative to create new industries that are internationally competitive and can sustain development. Universities are expected to return the results of their research to the taxpayers. This imposes a big change of emphasis on the leading researchers in universities. Many researchers started their careers in the 1960s, when the collaboration of universities with industry was severely criticized in universities which were still under Communist influence. On the other hand, people in industry did not have high expectations for technology transfer from the university, because industry was able to develop new products by studying technologies in advanced countries, especially those in the United States. Now that Japan is in the forefront of the world economy, there are no existing models for industry to follow. Also, as the advancement of technology is more rapid and riskier than ever, this encourages a change from self-contained research and development schemes to alliances with outside partners. In particular, collaboration with universities is strongly promoted as a source of new

technologies.

2.3. Degradation in Student Skill

In the year 2000, about 740,000 students proceeded to higher education in Japan (universities, colleges, and junior colleges), which consisted of 49% of the 18 year old population. Thus Japan is entering the stage of *universal access* according to the classification of Dr. Martin Trow, Professor Emeritus of UC Berkeley. At the same time, the number of subjects covered in the entrance examinations has decreased significantly in order to attract more applicants. Inevitably both have contributed to degradation in the academic skills of students. Recently several studies have revealed that many students in economics departments show poor mathematical capability, that some students in medical schools have not learned biology in high school, and that some engineering majors have not taken physics. More importantly, these students lack the discipline and willingness for self-study.

Some people assert that the degradation has resulted from a failure in middle education that has decreased the hours of learning in elementary and middle schools, although MEXT does not agree with this thesis. In any case, this lack of preparation means that professors must devote more time to teaching students at the undergraduate level.

3. Management of the University of Tsukuba

The general trends in the Japanese national universities described in the preceding section also apply to the University of Tsukuba. Fortunately, however, the University of Tsukuba has an advantage over other universities for historical reasons as well as due to its geographical location. In this section we indicate how the University of Tsukuba deals with the issues discussed above through its unique management style with the cooperation of its staff members.

3.1. Background

The University of Tsukuba was established in October 1973 in the center of Tsukuba Science City. This is an area approximately 60 kilometers northeast of Tokyo that was developed in the 1970s as a research park by relocating more than 40 national research institutions from the Tokyo area and inviting many research laboratories of the private sector as well. Formerly, the university was the Tokyo University of Education, whose

origin can be traced back to the Pedagogical School started in 1872. Now it is a full-fledged university covering humanities, social and natural sciences, agriculture, engineering, medicine, arts, and physical education. The University of Tsukuba was established having three features: (a) openness to the external world, (b) separation of educational and research organizations, and (c) centralized management. These features, very unique for a national university, were conceived based on an in-depth examination of the national university system at that time. Many lessons have been learned during the thirty years of the university that are useful in the formation of the new National University Corporation regime.

3.2. Centralized Management and Distributed Operation

Unlike most universities in which each department has management priority that is more or less independent of the university headquarters, the University of Tsukuba has a single management system covering the whole university. Under the president, there are five vice-presidents in charge of university-wide education, research, student life, medical affairs, and administration, respectively. The daily operation of each graduate school and cluster of colleges is delegated to their respective deans. In the management system of a university corporation, a board of directors is formed with financial responsibility. As far as education and research aspects are concerned, the University of Tsukuba has been managed along the lines of a university corporation since its inception. Thus we will not see any drastic changes in these aspects.

3.3. Competition versus Balance inside the University

It is always difficult to divide money for researchers in different areas. For example, how does one compare bio-technology and Indian philosophy in terms of benefiting the human race? For a university corporation the total budget is given to the university as a whole without specifying its usage, while its distribution to each unit of the university is subject to managerial discretion. Thus management takes the new responsibility of budget allocation inside the university, which may introduce disagreements among the units. The University of Tsukuba has some experience in such a competition-based budget allocation. Currently a significant portion of the university budget is set aside for time-limited research projects proposed by

staff members. The proposals are reviewed by peer researchers inside and sometimes outside the university. As a result financial support is awarded on a competitive basis. On the other hand, a certain level of funding should be maintained for the inheritance of culture and exploration of basic knowledge that is often found in the humanities and basic science areas.

3.4. Hub in the Tsukuba Science City

A great advantage of the University of Tsukuba is its location in the center of Tsukuba Science City where approximately 27% of Japan's national research facilities and 40% of its budget and employees are concentrated. Also many laboratories of private companies are located there. This is a perfect place for developing new technologies through collaboration. One disadvantage is that Tsukuba is somewhat far from Tokyo, the center of business in Japan, while the local economy is not strong. Taking advantage of its geographical location, the University of Tsukuba is planning to launch a new graduate school major in materials science exclusively operated by researchers from the National Institute for Materials Science in Tsukuba in the year 2004. Such an alliance is expected to promote the exchange of knowledge and people, and it is the first such attempt in Japan. The university plans to expand this sort of allied graduate school major in other areas such as space and environmental sciences in the near future. Thus we hope to be not only the academic but also the technological core in the Tsukuba Science City as well as in Japan.

4. Concluding Remarks

Managing a nonprofit organization such as a university is different from running a private firm in many aspects. The most evident difference is that there may not be a single criterion for the performance evaluation of the university agreed upon by all involved. Promotion or a raise in salary may not be a crucial incentive for researchers. They may not be willing to shift their research area in accordance with market needs. First of all, where is the market and who are the customers? Who are they working for?

In spite of these differences, my personal experience indicates that the leadership of top management is a key to the successful operation of an organization, whether it is a private company or a university. Clearly setting organizational goals, decisiveness in management, and persistent

communication with all types of employees (professors, technicians, and clerical workers) are the leader's job inside the university. Good communication with MEXT is equally important in order to maintain the autonomy of the university within the framework of a national university corporation. I believe that many people skills and organizational management skills that have been developed for running private firms are very useful as they are newly applied to academia.