

Few loose observations from the Swedish and Japanese universities

Alfred E. Szmidt*

After working for 18 years at a Swedish university and for four years at a Japanese one I become interested in comparing certain aspects of their governance and funding systems.

Below, I present some of my loose observations on this subject. I believe that my background allows me to observe the current changes in the Japanese academic system from somewhat different perspective.

In general the Swedish system may be viewed as the final extreme form of the currently reforming system in Japan. Although the current reform of the Japanese university system is intended as an improvement it also has, in my opinion, its pitfalls some of which can be gleaned from the Swedish system.

Unlike Japan, at Swedish universities a large fraction (often 60-80%) of research and teaching staff (assistant and associate professors, professors) is practically self-employed, typically on three years contracts sponsored by research grants. On many occasions I could observe how this unstable employment situation has negatively affected research efficiency and progress because a substantial portion of working time of individual researchers had to be devoted to fund raising rather than research.

In Japan, individual researches are expected to obtain external funds to finance their research. Typically this includes equipment, chemicals and travels. Most of these funds come from monbushou, a governmental main sponsor. In Sweden the situation is different. Although, similar to Japan, individual researches are also expected to obtain external funds, the scope of this funding is much broader as it also includes the subsistence of students, junior staff members and rents (the buildings housing universities in Sweden often do not belong to the university and individual research groups must pay rents for the room space they occupy).

As far as I can see, the current changes at the Japanese universities do not involve their governance system. However, there is a certain risk that with

time even this domain may become affected. This is why I would like to briefly describe potential problems I saw in Sweden. At the Swedish university I worked the research-education related decisions and management-employment decisions are made by entirely separate bodies. In other words, research and teaching staff has very little to say when it comes to making administrative decisions. In contrast, in Japan both types of decisions are made in a close collaboration between teaching and administrative staff, which in my opinion is more sound and efficient. About 15 years ago, all legislative and executive powers of individual laboratories (in Sweden they are called departments) lied with laboratory *boards*, which were elected every four years. Such *boards* included representatives of all types of laboratory members *i.e.* researchers, teachers, technicians and students and all important decisions related to employment and financing had to be approved by the *board*. Each laboratory had a *head person* (also elected every four years) whose role was to carry out tasks decided by the *board*. All this has changed in subsequent years and by now the *boards* are either dismantled or reduced to advisory bodies with no legislative or executive powers, all of which have been transferred to the laboratory *head persons*. I personally view this situation as potentially dangerous because it deprives laboratory members of any direct influence upon management of their working place.

Financial stimulus is another factor often associated with reforms. Some time ago, to stimulate PhD programs my former university introduced a 'bonus' system in which individual laboratories were rewarded with a substantial financial award for each successfully completed PhD program. Unfortunately, the way these 'bonuses' were later used was rather peculiar. As I mentioned earlier, the scope of external funding is very broad in Sweden as it also includes student's subsistence. So in practice, supervisors had to raise all funds necessary for a successful PhD program including subsistence costs of a student, overhead costs, the costs of equipment, rents, chemicals *etc.* as well as provide scientific advice in the course of the program. However, the awards given by the

*Alfred E. Szmidt, 九州大学(〒812-8581 福岡市東区箱崎6-10-1)

university administration were managed by the *head persons* who invariably used them to cover administrative costs. In the course of my work in Sweden I supervised six successfully completed PhD programs, but I have never received even a fraction of the awards they raised.

Competition in science is certainly a very positive factor. However, to take full advantage of it efforts must be made to ensure that it is fair. The present changes in the university system in Japan are likely to increase competition among individual researchers. Unlike some other countries such as *e.g.* the US where grant applications to the major sponsors are usually evaluated by *external referees* (in a fashion similar to that used by international scientific journals) many Swedish foundations have '*fixed*' *evaluation committees* whose members seldom change. Over the years I worked in Sweden I saw many examples of unfair allocation of grant money, which I believe was direct result of the 'fixed' character of the evaluation committees. Furthermore, the limited size of the evaluation committee precluded expertise in all fields of research carried out at different universities. Referee system of evaluation is essentially free of this predicament as it employs a wide range of experts.

As far as I can see the direction of change in the Japanese university system is to gradually shift universities to self-financing bodies similar to those I saw in Sweden.

While in my opinion certain shift in this direction may stimulate education and research effort I believe that such change has to be accompanied by concomitant changes in the research grant system. In Sweden, individual researchers have a wide array of sponsors to choose from. This includes several government sponsors and a very large number of private sponsors. In addition, Swedish researchers have few limits regarding the number of grant applications they can make every year. In contrast, in Japan the number of grant sponsors is far smaller and the number of grant applications, which can be submitted by individual researchers is very limited indeed. Furthermore, successful applicants are barred from applying again before their current grant (s) is/are completed. In my opinion the present situation may have adverse consequences for the future progress of Japanese science.

One aspect of the current university reform in Japan, which also worries me is the ability of especially senior staff members to adapt to the new realities. In the past, Japanese universities had fairly hierarchical structures where professors wielded often an absolute power. One of the consequences of the

ongoing reforms is loosening of the formal structures. For instance, at the Kyushu University individual laboratories are no longer representing formal entities. As a result, research activities are now carried out by various groups led by different researchers holding PhD degrees. In this new situation former powers of professors can no longer apply as individual powers are becoming responsible for both conducting and funding their research. Unfortunately, on numerous occasions I observed that some professors had difficulty to recognize and accept the ongoing change.

Another aspect of the Japanese university system which as far as I can see has entirely escaped any change is the status of younger researchers, usually holding Assistant Professor positions. Most members of this group are skilled and experienced researchers and teachers, yet they are barred from actively contributing to the university governance and education process. I was very surprised to learn that for instance they are formally not allowed to teach or supervise students. Even though in practice many of them to successfully perform such functions. This is very different from the European universities where junior researchers are much more involved in the governance and education. I believe, that allowing such involvement in Japan would considerably improve the quality of education and research.

Is big always better? A clearly discernible trend in Sweden and Japan is a growing tendency to create large research centers. This trend is also reflected in the preferences of the sponsoring institutions, which often encourage big grant applications. As a result, in both countries many centers, usually formed by merging several laboratories, were established. Supporters of this trend argue that such centers substantially improve the quality and efficiency of science. In my opinion, this is not necessarily so. As the history of science shows, many great discoveries were made by individuals working alone or in ordinary sized laboratories. Furthermore, the large size implies significant increase of the administrative burden, which is usually shouldered by researchers themselves, which in turn often significantly reduces their ability to carry out research. The centers are usually focused on relatively narrowly focused research topics, which for various, not always purely scientific reasons, enjoy popularity among scientists and politicians, which negatively affects other, less popular but nevertheless important, fields of science. Finally, as the lion part of grant money goes to such centers, researchers working outside them often face difficulties in finding sponsors.