CHAPTER 3

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PROSPECTIVE AND RETROSPECTIVE EVALUATION SYSTEMS IN CONTEXT: INSIGHTS FROM JAPAN

INTRODUCTION

Research evaluation in Japanese universities has relied upon prospective evaluation of competing research proposals until very recently. Over the past decade, the process for evaluating and selecting among competing research proposals, which I henceforth refer to as prospective peer review, has evolved so that in 2006 it is more transparent and based upon expert input than it was in the mid 1990s. However, because each program usually has its own peer review process and the number of government programs that might provide competitive funding is quite large, potential applicants face a variety of peer review systems.

Despite the improvements in prospective peer review, two troubling questions remain: First, does the Japanese system of research funding and prospective peer review still encourage young researchers to follow the leads of senior professors, and thus discourage innovative, pioneering research? Second, the distribution of competitive research and development (R&D) funding (which accounts for roughly half of total R&D support in universities) remains highly skewed in favour of a few elite universities, as shown in the Appendix. Does this reflect an equally skewed distribution of talent or a tendency for the peer review system to allocate funding on the basis of institutional status and reputation?

The inequality in funding is a central issue in the recent effort to implement a retrospective evaluation system. This system is aimed at providing objective measures of individual researchers’ performance that might be used in promotion decisions and that would encourage individual researchers to be more productive. But another purpose is to differentiate between a group of approximately thirty research oriented universities that will continue to receive substantial government funding in the hope that they will become world class research centres, and a larger group of education oriented universities where research will be viewed as a subsidiary activity and will be funded accordingly. Such differentiation is a common
aim of national research evaluation systems, most explicitly perhaps in Australia (see Gläser and Laudel, this volume) and the UK.

Japan is implementing its retrospective system slowly, and it is not expected to result in differentiated budget reductions until 2010. However, already second and third tier universities are complaining that they should not be judged by the same criteria as elite universities. A key question about this new retrospective system, then, is: Are its results pre-ordained by the skewed results of the prospective system and by equivalent discrepancies in the distribution of general purpose funding? Known as unei koufu kin (literal translation: operational and administrative subsidies), this Japanese equivalent of block grant funding is also skewed in favour of the same elite universities, particularly, as shown in the Appendix table 3, the seven state universities designated as imperial universities in the pre-war era. Only a portion of the general purpose funding supports research, but the table nevertheless shows the overall disparity in distribution. If the results of retrospective evaluation are indeed pre-ordained, what additional purpose does it serve?

In attempting to deal with these questions, it is crucial to understand how evaluation systems and processes function in their broader institutional context, especially the funding and control of academic systems and reward systems, as the contributions to this volume make clear (see also Whitley 2003). Accordingly, in this paper, I summarise the key features of the post-war Japanese research system and the role of prospective evaluation in it before considering the likely impact of retrospective evaluation on the direction and organisation of research in the future. Thus, the following section describes the Japanese university research system and the role of prospective peer review, including a detailed description of the prospective evaluation process and the principal funding sources. Next, I outline the retrospective review system that is in its first years of trial implementation, while the final section offers some tentative remarks about coordinated reforms that might improve the climate for innovative science in Japan and other countries.

UNIVERSITY RESEARCH AND PROSPECTIVE PEER REVIEW

The University Research System

In 2004, the Japanese system of higher education consisted of 87 national universities and 4 national academic research institutes under the Ministry of Education, Sports, Culture, Science and Technology (MEXT); 80 prefectural, municipal and local government universities; and 542 private universities. In total, the universities accounted for about 14% of Japanese R&D in 2002, with government research institutes (GRIs) contributing a further 9.5% (NSB 2006). National universities conducted about 75% of this research and graduated 78% of all science and engineering doctorates in 2004 (MEXT 2004). A significant proportion (55%) of the research activities carried out in the national universities is supported by ‘outside sources.’ This percentage is around 50 in the private universities that fund a larger proportion of research from tuition fees. The most important of these