

Introduction

The Asia Pacific Science & Technology Management Seminar has been held each year since 1995, and this is its 10th anniversary year. The goal of this seminar is for experts in science and technology (S&T) management, policy and strategy formulation to exchange ideas, to deepen common understanding and to improve their ability to deal with issues such as specialized areas that are emerging within regions, and the need to be prepared for the future. These goals have not changed in the past ten years. Rather, the Asian presence in the global economy has grown even more significant, and it is widely recognized that S&T is one of the main factors of this growth. Therefore, it can be said that these goals have become even more important.

The theme of the 9th seminar held last year was “Management Cycle in Strategic R&D Programs.” S&T strategies have improved in each country and region, with many superb presentations, leading to rising interest in recognizing strategies in the process chain of “plan, do, check and action.” The Q&A session also was one of the most substantive in recent years, which is why the Planning & Steering Committee made efforts to establish a theme that would go beyond the theme of the previous years. As a result, the theme was “Regional Innovation Policies for Growth in the Asian Pacific Area,” continuing the debate from last year. The background of strategic research and development (R&D) is ideas that target growth in the countries and regions that administrate R&D along a management cycle. This concept appears to have gained the approval of many participants. There are two meanings of “region,” domestic region and international region. If a country can be considered a unit in an international region, then some countries can be considered a unit in a domestic region. Moreover, Taiwan, the site for this year’s seminar, is treated as a region based on international circumstances. The Planning & Steering Committee identified the meaning from the contents of the papers through the presenters’ awareness of problems, rather than by focusing on one of the two meanings of “region.” As with innovation policies at national level, we focused on international innovation policies in which many countries and regions participate. Internationally, for example, the EU made the European Research Area (ERA) the fundamental concept of the 6th Framework Program, and they have the concept of making Europe into a single research area. It will certainly take a long time for Asia to achieve this level. However, this concept, which aims for the ideal, was set as a theme.

The minimum unit for the two or three types of regional policy mentioned earlier is the domestic region. If we take Japan as an example, we originally started according to the Technopolis concept, with regional development centering on science and technology. In recent years, the goal is to form an intellectual cluster in regions based on technology innovations using the 2nd S&T Basic Plan that covers 2001 to 2005. Next, we are improving regional S&T policies based on effective technology transfer. Here, the roles of local governments and universities are vital. This is the example of Japan, but most countries seem to put these regional innovation policies into practice.

Meanwhile, how do we define “clusters” mentioned above? Although there are various interpretations of what clusters are, according to M. Porter, a frontline researcher in this area, “clusters are geographic concentration of interconnected companies and institutions in a particular field.” If this is the case, then this need not be limited to one country. In reality, there is the “Golden Triangle” in Asia, formed by Indonesia, Malaysia and Brunei.

The OECD has produced research reports on clusters, wherein their success and limiting factors are analyzed. Japan has many suggestions from the National Institute of Science and Technology Policy (NISTEP), and has released reports with strong potential for application. They cite factors as industry-university links, support of the central government and initiatives and/ or support of local governments, excellence of science and critical mass of scientists, skilled personnel, and so forth. These have also been mentioned in OECD’s reports. In addition, the NISTEP also highlights “leaders or visionaries.” Such talents are rarely stipulated for domestic regional policy, and even more rarely stipulated for international regional policy. This is why examples of success in international regional development are uncommon.

Finally, I would like to explain the word “innovation.” Our usage of this word is not just for

technology innovation limited to product and process development, but is close to Schumpeter's definition including organizational reform and market outlet development, and can be broadly interpreted. Moreover, I believe that this is within the framework of the National Innovation System (NIS). Regional development here is within this type of framework. Within the NIS, there are two main directions for launching from seeds, the results of scientific research, and starting out from the needs of the economy and society. Almost all original NIS started from seeds. However, R&D in Japan has reinforced its focus on needs such as attaching importance to claims. However, recently, there are many needs orientations in the Mode 2 argument, and the view that NIS should be designed and should function as such is strong. The OECD is a good example.

In any event, there is the regional hierarchy described earlier for both the seeds side and the needs side. For example, there is joint R&D using clusters in domestic regions on the seeds side, and R&D directed and supported by central government at national level. Moreover, there is joint international development in forms that are independent of the national framework. Recently, there has been particular focus on needs-oriented regional development. To resolve the serious issues common to related regions, there are attempts at cooperation and support that go beyond regions. Specifically, these include industrial advancement, industrial promotion, environmental measures and recognition of common regional needs. These have shifted from domestic regions to become national policy, and there are further attempts to develop international cooperation. There are certainly not many such examples, as they are still in their infancy. However, it may become a core task in the near future for this seminar, which advocates Asia Pacific science & technology management.

Based on this concept, we structured three sessions from the lecture summaries submitted, as shown below.

- I. Policy & role of government: Targeting at mainly regional development policies of central government based on the above-mentioned stratification of the meaning of "region." During this Session, there were many arguments on the role of government.
- II. Local development & global networking: Examples in a global framework, without a set time frame, even if started in one region of one country. The goals, seeds, needs and methods launched in this region where there is strong commonality that crosses national boundaries.
- III. Regional perspectives: Seeking future aspects, issues, methodologies and concepts based on current conditions for regional development as shown above.

I believe that the above considerations of the Planning & Steering Committee have been fully reciprocated. In addition to the keynote addresses, appropriate examples for each country were given, and long-term viewpoints, superior strategies and international breadth were covered. Furthermore, research was described at this seminar not only by government experts, but also by S&T policy researchers, and there was an abundance of valuable suggestions on the formation of theories and concepts. I would like to express my gratitude for the superb presentations given by the speakers, the active participation in the discussions by the participants, and the excellent chairing of each session by the moderators. In addition, there were two keynote addresses, three presentations in Session I, five presentations in Session II, and four presentations in Session III. There were 39 people from 12 countries and one region who participated.

For the optional Study Tour on Day 3, we first visited the Taiwan Science & Technology Information Center (STIC), our cosponsoring organization. Dr. Meng, the Director General of STIC, described in detail the center's overall activities, and his staff then introduced individual activities such as evaluation and S&T indicator development. We then toured the facilities of STIC. With respect to S&T policies, the Center has gathered extensive, detailed information on policy, as well as individual fields such as biotechnology and nanotechnology. In addition, they conducted advanced analysis of indicator development and model testing. Moreover, papers and reports were submitted according to government requests. It appeared that substantial activities are being conducted by STIC, which makes it worthy of its namesake. There was an active Q&A session after the explanations, making this an important visit.

Next, we visited Nankang Software Park, which is continuing to develop in the eastern part of Taipei, and we toured TECO, a major home electronics company, which was inside the park. This business has developed from motor manufacturing, Japanese companies have transferred technologies to it, and the company itself has become a modern business that manufactures leading home electronic appliances. They

also conduct digital content personnel training. After the tour, a Q&A session was held in a lecture hall. There were wide-ranging questions from business characteristics and management to future of contents businesses, and there were many straight-to-the-point questions on capitalization and technologies. The responses were very articulate, and the participants seemed satisfied.

On the way to Nankang Software Park, we also toured some historic sites. In addition, during the bus ride, we exchanged information on the Q&A sessions of the lectures, as well as policies and the actual state of S&T. Some participants were relieving themselves of fatigue from their long journey, and I believe that the goals of the international seminar were fully realized.

I would like to thank the STIC, its Director General, Dr. Meng, and all his staff who worked dedicatedly to hold this seminar after offering to hold it at short notice last year, for conducting a high-quality seminar.

Finally, I would also like to express my appreciation to the Ministry of Education, Culture, Sports, Science and Technology who supported this seminar, the Japan Science and Technology Agency for their assistance, and the Japan International Science & Technology Exchange Center, who acted as the Secretariat.

Sincerely,

Fujio Niwa, Chairperson
Planning & Steering Committee
10th Asia Pacific Science & Technology Management Seminar