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## **New Trends in the Innovation Policy of Japan**

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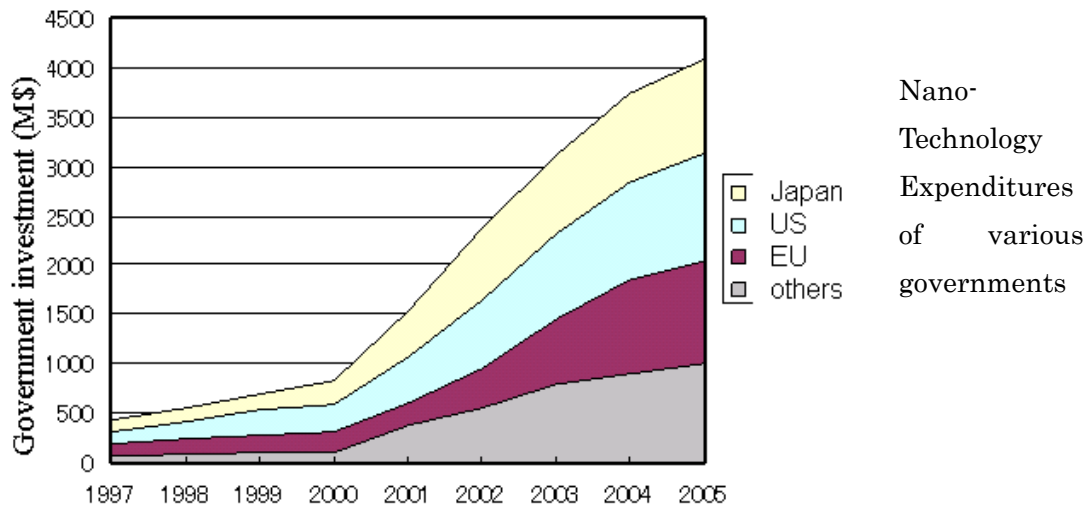
## New Trends in the Innovation Policy of Japan

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### 1. The era of “innovation”

The world is said to have entered the “era of R&D mega-competition” in the beginning of the 21<sup>st</sup> century. This means that it has been noticed that the science and technology policy of a government possesses a significant influence on the future of the country. According to the report submitted by the American Academy of Science, “Rising above the gathering storm”, it is said “85% of measured growth in US income per capita was due to technological change”.



In 2004 when the 2<sup>nd</sup> period of Bush administration started, so called “Parmisano report” was announced by the Council on Competitiveness in the US with title “Innovate America”. This is thought to have triggered the world to enter the era of “innovation”. EU and Asian countries soon followed the trend in US. According to my observation the reason why “innovation” was so quickly accepted by the world was because the word “innovation” has some extra meaning than just R&D. In case of innovation the difference is the tint of “changing the society” in addition to the technological change.

In order to remain competitive in the world in R&D budget, every country has started to feel it necessary to explain to the public and justify their policy. It seems to have become more important for the government to express the intention to “return the R&D outcome to the public”.

Looking into “Rising above the gathering storm” report issued in the US it is understood that the high ratio of R&D investment of such countries as northern Europe, Korea and Japan relative to the GDP of each country, respectively, and high growth rate of BRICs countries are the major reasons which had led the US to plan “the national innovation initiatives”.

## 2. Different background to affect Japanese policy on innovation

Therefore, in the innovation plans of various countries so far “competitiveness” has been the major background concept on which the whole plan is based. In case of Japan, however, there is another aspect, differing from the other countries. Namely, the key words “the youth” and “challenge”. According to recent polls taken by institutions related with the youth, Japanese high and junior high school students do not have optimistic views for the future. The ratio of having dreams for the future is 89% in China, and 63-65% in US, Korea, and France. Japan is the only exception. Only 35% of students in Japan have hopes for the future. They also express their views that their parents do not have dreams either.

As far as the relative success in economy is concerned, in relation with the indications of industrial competitiveness, Japan has been remaining among the other successful OECD countries and hence there are no reasons that her young people should loose the dreams in the future. In every developed country, there was once a period when the youth lost dreams. In the US it was in the 1960s and 1970s just after the Vietnam War. I understand that such projects like NASA and the Peace Corps were planned in order to activate dreams among the youth in the US. I see the current situation in Japan overlapping with the period in the US 40 years ago. Simply, Japanese youth seem to be facing the situation that they cannot easily find something worth devoting their lives to.

### 3. New factors introduced in the innovation plan

In the recent plan authorized in June 2007 by the Japanese cabinet “innovation 25”, it is stressed that Japan should contribute to solve the problems shared commonly by the human kind and hence they are difficult as well as important ones. The Japanese premier then, Mr. Shinzo Abe, called many countries to cooperate with each other for the final goal to reduce emission of global warming gas to half of the present level by the target year 2050, i.e., the plan “Cool earth 50”, including the US, China, Russia, India as well as EU countries. The present premier Mr. Fukuda made clear his intention to succeed this standpoint in his speech when he visited the US shortly after his inauguration. This attitude of the Japanese government seems to be quite significant in the sense that it is backed by the “cabinet decision” and has been explicitly pushed forward as the plan of “cool earth 50”.

My personal view is that this decision of Japanese government will be acquiring the support from the youth gradually in spite of the fact that the plan is creating some skepticism among industries.

### 4. Challenging topics

According to my personal views, examples of attractive research topics to the youth proposed in the “innovation 25” publicized by the cabinet July 2007, are as in the following,

- sustainable earth, preventing climate change, new energy technology, recycling technology, no gas emission car, high speed-no gas emission train;
- health: preventive medicine (life free from fear of disease), emerging infectious disease;
- frontier science: understanding the origin of life and universe;
- amenity towns and our lives harmonious with the nature;
- safe and sustainable transportation.

### 5. Roles of the government

Although a future need has a value from the aspects of the society, it is not necessarily the case for industry because it is not clear whether it pays in an economic sense. The major role to promote innovation for the future is achieved by the non-governmental organizations, private sectors, universities, etc. However, regarding technological research in relation to

environmental problems, a difficult problem is that the economic merit is invisible at least in the beginning unless economic incentives are provided intentionally by the government.

The incentives can be introduced in various ways through various channels. For example, it could be through a future prediction of some tax such as carbon tax. It could be a formation of a research group with a small fund for certain research topic. It could be a setting of a new type of regulations. The incentives may be introduced at differing stages in the process of “innovation”. But once a new measure is announced, it has the immediate effect to let research efforts initiated as far as the plan is firm.

The role of government is, therefore, to set visions and measures in order to “transform the societal values into economic values”. The role seems to be relatively important in the current innovation policy of Japan.